Abstracts of Proceedings

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OCAR1

Large cardiac rhabdomyoma in two infants; good response to medical management: A brief report

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Background: Rhabdomyomas are rare tumours in children often associated with tuberous sclerosis. They are usually diagnosed during antenatal period as an incidental finding.
Case presentation: The first case is a 2.5-month-old who was diagnosed to have rhabdomyomas at gestational age of 24 weeks. Electrocardiogram revealed left axis deviation and multiple premature atrial contractions. Echocardiography showed massive tumour occupying the right ventricular cavity. Tuberous sclerosis was seen on magnetic resonance imagery. He was commenced on Everolimus with obvious regression of tumour. The second case is an 8-month-old male who was referred to us for cardiac evaluation. Echocardiography showed two masses of rhabdomyoma. He was also placed on Everolimus but was lost to follow up.
Conclusion: Rhabdomyomas are rare tumours of the heart which respond well to chemotherapy.
Keywords: rhabdomyoma; tuberous sclerosis; everolimus; echocardiography

OCAR2

Primary hypertension among apparently healthy secondary school students in Osogbo, south-western Nigeria

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Introduction and Objectives: Hypertension in young children is defined as systolic or diastolic blood pressure (BP) greater than or equal to the 95th percentile for a given age, gender or height on repeated BP measurements. Incidence of hypertension with its complications among young persons, is globally on the rise. The objective of the study was to determine the prevalence of primary hypertension among apparently healthy secondary students in Osogbo, Nigeria.
Materials and methods: A school-based cross-sectional study involving 404 students selected from 6 different schools in Osogbo. Six BP measurements were taken at different visits using auscultation method after a negative urine dip stick test result in every subject. Anthropometry was also done while those with persistently elevated BP had electrocardiography, echocardiography and renal scans.
Results: Of the 404 students studied, 14 students (3.5%) had hypertension while 25 (6.2%) had prehypertension. All students with elevated BP had normal renal scans. However, 7 (29%) of the 24 students who had echocardiography and electrocardiography done, had evidence of left ventricular hypertrophy.
Conclusion: Hypertension with evidence of target organ damage exists among adolescents in Osogbo. All were due to primary hypertension.
Keyword: Primary hypertension, Nigeria, Secondary School.

OCAR3

Point prevalence of hypertension among school children using mercury sphygmomanometer and oscillometric device in Ilorin, Nigeria

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Introduction: Oscillometric devices are preferred method for measurement of blood pressure in younger children. Despite their widespread use, due to global phase-out of mercury containing devices, the issue of uncertainty in their accuracy has remained a draw back. Thus, this study compared the point prevalence of hypertension among school children using the mercury sphygmomanometer and oscillometric device (Omron 705 IT®).
Methods: A total of 1745 school aged children were recruited across threelocal government areas in Ilorin using systematic random sampling method. Each pupil had two serial BP measurements done with a mercury sphygmomanometer, which was followed by two BP measurements using a validated oscillometric device (Omron 705 IT®). The data were analysed using SPSS version 25.

Results: Mean age was 8.77 ± 1.97 years. Males were 872. For mercury sphygmomanometer, the prevalence of systolic prehypertension, and hypertension were 6.2% (109) and 163 (9.3%) respectively while the prevalence of diastolic prehypertension and hypertension were 71 (4.1%) and 95 (5.4%) respectively. For Omron 705 IT®, the prevalence of systolic prehypertension, and hypertension were 148 (8.5%) and 315 (18.1%) respectively while the prevalence of diastolic prehypertension and hypertension were 71 (4.1%) and 117 (6.7%) respectively. Prevalence of systolic prehypertension and hypertension using Omron was higher than mercury sphygmomanometer ($\chi 2$ =315.790, p<0.0001). Prevalence of diastolic prehypertension and hypertension using Omron was higher than mercury sphygmomanometer ($\chi 2$=77.671, p<0.0001).
Conclusion: Prevalence of prehypertension and hypertension was higher using the oscillometric device.
Keywords: Hypertension, children, oscillometric, mercury sphygmomanometer.

OCAR4

Serum electrolytes, urea and creatinine profile of children with congenital and acquired heart diseases in Kano, Nigeria- a preliminary report

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Background: The evaluation of electrolyte, urea and creatinine profile is important in children with both congenital and acquired heart diseases. This is because imbalances of these parameters maybe associated with significant morbidity and mortality.
Aim and objectives: This study aimed to assess the electrolyte, urea and creatinine profile of children with congenital and acquired heart diseases. Specific objectives include determination of the prevalence of abnormal serum sodium, potassium, urea, creatinine and estimated glomerular filtration rate (eGFR) in children with congenital and acquired heart diseases.
Materials and Method: This was a cross-sectional study conducted at the Paediatric Cardio-pulmonology Clinic of AKTH, involving children with both congenital and acquired heart diseases. The biodata of the children were obtained and their anthropometry measured. Results of their recent serum electrolyte, urea and creatinine were reviewed and the eGFR was calculated using the Schwartz formula.
Results: A total of 45 children were studied, out of which 37 had congenital heart diseases while 8 had acquired heart diseases. There were total of 15 males and 30 females giving a male to female ratio of 1:1.5. VSD and ASD were the commonest congenital heart diseases followed by TOF while DCM was the commonest acquired heart disease. The mean age, weight and height were 4.5±3.7years, 13.9±10.0kg and 95.3±24.8cm respectively. The mean serum urea, sodium, potassium and creatinine were 4.3±2.9mmol/L, 135.6±5.4mmol/L, 4.4±0.8mmol/L and 51.0±19.6µmol/L respectively (no significant difference in children with congenital and acquired heart diseases). The mean eGFR was found to be 76.1±31.9ml/min/1.73m2 in all the children (no significant difference in children with congenital and acquired heart diseases P=0.680), however 80% of the children had abnormal eGFR (less than 90 ml/min/1.73m2).
Conclusion: Abnormal eGFR was found to be high in children with both congenital and acquired heart diseases attending the Paediatric cardiopulmonology clinic of AKTH, Kano. This highlights the need for routine screening in all children with both congenital and acquired heart disease.
Keywords: Congenital heart disease, Acquired heart disease, Children, Kano

OCAR5

Arterial blood pressure in children with sickle cell anaemia and controls: a comparative study

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Background: Sickle cell anaemia (SCA) is a common disorder among indigenous people of north-eastern Nigeria. It is characterized by recurrent bone pain from occlusion of blood vessels by sickled RBCs. Hypertension in children with SCA is rare and when present may be secondary to other disease process and more rarely essential hypertension.
Objectives: To compare the arterial blood pressure (BP) of children with SCA in steady state with age- and sex-matched controls.
Methods: The study design was cross-sectional. Minimum sample size of 44 was determined using Taylor's formula. Subjects were recruited systematically as they present at Paediatric Haematology Clinic when they met the inclusion criteria. Controls were apparently healthy HbAA children attending follow up at Paediatric Outpatient Clinic. Anthropometry and BP were measured and recorded appropriately. BP was classified using published normative data.
Results: A total of 54 SCA children in steady state and 159 normal children as controls were studied. The ages of both the SCA and controls ranged from 3 to 14 years, with median age of 8 years. Of the 54 SCA children, 28 (52%) were males and 26 (48%) were females giving a ratio of 1.1:1. Mean PCV of the SCA children was 22%.Although 8 of the SCA children were hypertensive,

there was no significant difference in the mean systolic BP (95.6mmHg) of the SCA patients compared to controls (99.1mmHg) p= 0.078.

Conclusion: Hypertension is common among SCA children, there is a need to routinely measure their BP at follow up for effective management and to avoid complications.

Keywords: Arterial blood pressure, sickle cell anaemia, North-Eastern Nigeria.

OCAR6

Challenges in the management of Infective Endocarditis and factors influencing outcome

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Introduction: The diagnosis and treatment of infective endocarditis (IE)remains a challenge in many parts of the world, with huge impacts on outcome. We set out to document the challenges encountered in the management of the disease, in a paediatric cardiology practice in north central Nigeria, and their influence on outcome.

Methods: This was a prospective study where children with a diagnosis of definite or possible IE were recruited over a period of 18 months using the modified Duke criteria. Demographic and clinical data, laboratory and echocardiographic findings were documented and analysed using STATA 14.0.

Results: A total of 31 children were recruited with 16 (51.6%) males and a mean age of 10.9 (95% CI 8.7-13.0) years. Mean duration of illness before presentation was 42(range 4-180) days. History of previous antibiotic use was elicited in 18 (58.1%) children.Fourteen (45.2%) children were diagnosed with definite IE. Rheumatic followed by congenital heart disease were the predominant underlying cardiac illnesses. One child had dilated cardiomyopathy and another a structurally normal heart. Vegetations were present in 12 (38.7%) while blood cultures were positive in only six (19.4%) children.

Eighteen (58.1%) patients died. Death was more frequent in those with older age, lower fractional shortening, and longer duration of illness but the differences were however not statistically significant (p=0.40, 0.21 and 0.33 respectively). Mortality was also not associated with prior antibiotic use (p=0.50), type of underlying heart disease (p=0.25), presence of vegetations (p=0.88) nor positive blood culture (p=0.57).

Conclusion: The case fatality rate for IE in our practice remains unacceptably high. Challenges to its management such as late presentation, delayed diagnosis, prior antibiotic use, cost of treatment and poor ventricular function among others, may have a negative impact on outcome but more data from large multicentre studies are needed. Curtailing the availability of over the counter medications and a high index of suspicion by health workers would promote earlier diagnosis and treatment.

OCAR7

Clinical profile of children with acute rheumatic fever in Jos, Nigeria

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Background and Objective: Rheumatic heart disease (RHD)is the most common acquired heart disease among children in developing countries and occurs from repeated episodes of rheumatic fever (RF), an abnormal immunologic response to Group A ß hemolytic streptococcal sore throat. Recent studies in Nigeria have reported that RF is rare with only advanced RHD cases presenting to hospital. We therefore set out to document the cases of RF seen in children over a nine-month period and here present the clinical profile of the disease in our centre.

Method: Clinical and laboratory data of all children prospectively confirmed to have RF using the2015 revision of the Jones criteria were compiled. The presence of RHD was also documented. Descriptive statistics were generated using StataÒ 14.0

Results: Thirty-one children with RF were seen, ranging in age from 5-16 years (mean 11.4 years). Nineteen (61.3%) were females (F:M ratio1.6:1). The most common presenting complaints were difficulty in breathing in 16 (51.6%) and cough in 5 (16.1%). Carditis (in 26 patients, 83.9%) was the most frequent major Jones criterion, followed by polyarthritis in 10 (32.3%) and polyathralgia in 9 (29.0%). Two (6.5%) children had monoathralgia but none had monoarthritis. Chorea was present in only one (3.3%) child. The most common minor criteria were raised ESR in 21 (67.7%), and fever in 9 (29.0%) cases. Twenty-two (73.3%) children had a history of preceding sore throatwhile10 (35.7%) had past history suggestive of RF. Fifteen (48.4%) children had established RHD with RF, nine of whom were already known to the team.

Conclusion: Rheumatic fever is not rare in our practice, but a high index of suspicion is needed to identify it. The 2015 revision of the Jones' criteria provides a more sensitive tool in the diagnosis of RF in our environment. Adequate knowledge of the complications and correct treatment of sore throat among health workers and the public will prevent progression to RF and RHD.

OCAR8

A retrospective review of the echocardiographic reports of children undergoing non-cardiac surgery in a tertiary health centre in North-western Nigeria

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Background: The risk of cardiac anomalies, both acquired and congenital, is high in children undergoing non-cardiac surgeries. These cardiac anomalies are associated with increased risk of peri-operative complications.
Objectives: This study aimed to determine the common indications as well as the common echocardiographic findings in children undergoing non-cardiac surgery in AKTH, Kano.
Materials and Methods: This was a retrospective descriptive study. The echocardiographic records of 25 children that underwent non-cardiac surgery in AKTH over a 4-year period (from January 2015 to December 2018) were retrieved. The data obtained was analysed using SPSS version 20 and the result displayed using frequency distribution table and bar-chart.
Results: There were 14 males and 11 females, with male to female ratio of 1.3:1. The ages of the patients range from 5 days to 8 years (median age of 8months). The commonest indication for echocardiography was orofacial cleft (cleft lip and/or palate), followed by adenotonsillar hypertrophy. The overall cardiac anomaly was found in 28% of the patients, with the highest anomaly being atrial septal defect (ASD).
Conclusion: The prevalence of cardiac anomaly is high in children with non-cardiac surgical conditions.
Keywords*:* Echocardiography, children, non-cardiac surgery, North-western Nigeria.

OCAR9

Knowledge gaps among Rheumatic Heart Disease post-surgical patients and the impact of education

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Introduction: Rheumatic heart disease (RHD)is totally preventable by the appropriate management of streptococcal sore throat and rheumatic fever (RF), but in Africa, many patients present with advanced disease. We sought to identify RHD knowledge gaps among post-surgical RHD patients and to evaluate the impact of education provided about the disease.
Methods: As part of the "Kick rheumatic heart disease out of Plateau State" project, a focused group discussion (FGD) was conducted among post-surgical RHD patients. Baseline knowledge of sore throat, RF and RHD was assessed. After a lecture on RHD, their knowledge was reassessed; content analysis was done using codes and themes.
Results: Fifteen females participated in the FGD. Many attributed sore throat to eating hot foods, taking cold drinks and said it could result in fever; one said it was a bacterial infection. After the lecture, Group A ß hemolytic streptococcus infection was the only cause mentioned, while RF and RHD were named as complications.
Before the lecture, RF was attributed to an infection that may have been present at birth, to heart failure or in one instance to a genetic problem. One participant had never heard of RHD and many said sore throat could be treated with potash solution, saltwater gargle or over-the-counter drugs. After the lecture, RF as a complication of sore throat was the most common response. Majority said they would now go to the hospital if they had a sore throat while others said avoiding cold drinks would suffice.
Conclusion: Our cohort of post-surgical RHD patients demonstrated significant misconceptions and knowledge gaps, which the information provided in lecture form, served to improve. Education of RHD patients/relatives about the disease should be a continuous process and the ready availability of culturally relevant educational materials will facilitate this.

OCAR10

Infective endocarditis due to Acinetobacter Baumannii in an infant with complex congenital heart disease: a case report

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Background: Infective endocarditis due to Acinetobacter baumannii is rare in children, however associated with significant morbidity and mortality. Congenital heart diseases are among the major risk factors for infective endocarditis.
Objective: The aim of this is to report a rare case of Acinetobacter baumannii infective endocarditis which is associated with significant morbidity and mortality.
Methods: The case record of the patient was retrieved and the details of the biodata, history, physical examination and laboratory investigation including echocardiography were reviewed.
Results: We report a case of infective endocarditis in an infant caused by Acinetobacter baumannii. The patient is a 2month-old infant with complaints of recurrent cough and breathlessness since birth which worsened 2 days prior to admission, associated with fever. There was difficulty in breastfeeding and occasional forehead sweating with associated darkening of the lips, palms

and soles. She has been failing to thrive since birth. Significant findings on physical examination include respiratory distress with hypoxia, pyrexia, severe wasting, tachycardia, tachypnoea, tender hepatomegaly, widespread coarse crepitations, displaced apex beat and a pan -systolic murmur. Full blood count was suggestive of sepsis, blood culture yielded Acinetobacter baumannii, chest x-ray revealed dextrocardia with cardiomegaly and increased vascular markings while transthoracic echocardiography showed complex congenital heart disease with vegetation. The patient was commenced on intravenous antibiotics and supportive managements, however died while on admission.

Conclusion: We report a case of infective endocarditis caused by *Acinetobacter baumannii* in a 2 months old infant with complex congenital heart disease, which is associated with significant morbidity and mortality. This highlights the needs for routine screening for IE in infants with congenital heart disease.

Keywords: Infective endocarditis, Acinetobacter baumannii, infant, complex congenital heart disease.

OCAR11

Impact of unoperated congenital heart diseases on the nutritional status of children in Abuja

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Background: Congenital structural heart disease is a high catabolic state in the milieu of decreased nutrient intake. Both cyanotic and acyanotic heart diseases have deleterious effects on the heart.

In developed countries, cardiac defects are promptly repaired but in resource-limited nations, the repairs are often delayed due to lack of facilities. Thus, these patients are either living with chronic heart failure or are dependent on chronic therapy.

Objective: To determine the prevalence of malnutrition among children with unoperated structural heart defects.

Method: A cross sectional study of children with known structural heart diseases attending the Paediatric Cardiology Clinic was done. Their anthropometric measurements were taken following standard procedures and venous blood obtained for serum protein.

Results: Fifty children (M:F=1.17:1), aged 7 weeks to 10 years were enrolled; 7 with complex heart diseases while the remainder had simple heart diseases, occurring either singly or in multiple.

The prevalence of malnutrition (weight-for-height z<-2) was 34%, out of which 64.7% belong to the severe acute malnutrition category (weight-for-height z<-3). Mean weight of patients with solitary heart diseases was higher than those with multiple heart diseases: 11.98±7.02 vs 8.16±5.14 kg, p <0.05.

The median weight-for-height z score was -2.44 (IQR, -4.75 to 0.71) as against -1.59(IQR, -3.92 to 0.74). 16.0% had hypoproteinemia of < 60g/l while 8% had hypoalbuminaemia of <30g/l.

Conclusion: The prevalence of malnutrition among children with unoperated congenital structural heart diseases is high. Active nutritional support is recommended to prevent and treat malnutrition in this category of children.

Keywords: Malnutrition, Congenital heart disease, Nigerian children

OCAR12

Acute Rheumatic Fever in a tertiary hospital in Southwestern Nigeria: A five-year review (2015-2019).

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Introduction and Objectives: Acute Rheumatic Fever (ARF) remains an important health problem in the developing and some parts of the developed world. The annual incidence worldwide is estimated at five to 51 per 100,000 in the high-risk group. This study aimed to document the prevalence and trend of ARF in our institution.

Methods: This is a retrospective review of ARF cases recorded at the Paediatrics department of Lagos University Teaching Hospital, Nigeria. Cases of ARF diagnosed according to the revised Jones criteria were recorded from 2015 to 2019.

Results: Twelve children presented with ARF during this period giving a total prevalence of 0.63 cases per 1,000 hospital visits / year. The highest prevalence of 1.5 per 1,000 hospital visits was recorded in 2019 and the lowest prevalence was 0.30 per 1,000 in 2018. Age at diagnosis ranged from six to 15 years with a mean of 11.3 years and female to male ratio was 1.4:1. The most and least common manifestation of ARF were carditis (n=90.9%) and chorea (n= 8.3%), respectively. Eighty percent of patients with carditis had developed rheumatic heart disease on follow up.

Conclusion: Cases of ARF are present in Lagos, Nigeria and a notable surge was documented at our centre in the last one year. Carditis is a common manifestation and rheumatic heart disease is a common sequela of ARF. Despite the possibility of a focal outbreak, the trend of increasing prevalence ought to be closely monitored.

Keywords: acute rheumatic Fever, Rheumatic Heart Disease, Lagos, Nigeria.

OCAR13

Congenital heart disease and associated comorbidities among children with down syndrome in the Niger delta region of Nigeria

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Introduction and objectives: Congenital heart defects (CHD) in children with Down syndrome is a common association. This study aims to describe the pattern of CHD and associated comorbidities seen in children with Down syndrome in the Niger Delta Region of Nigeria.

Materials and methods: This was a descriptive cross-sectional study conducted in Uyo, Akwa Ibom State during a cardiac mission. Children with phenotypic features suggestive of Down syndrome and a prior diagnosis of CHD had transthoracic echocardiogram performed by a team of paediatric cardiologists. The data was analysed with STATA 14.0 Statistical package.

Results: Thirty-five children with physical features suggestive of Down syndrome were seen, all of who had CHD. They had a mean age of 5.8 months at diagnosis and 25.8 months at presentation. The most common heart defects detected were atrioventricular septal defects in 28.6% of cases. The most common comorbidity noted was heart failure in 17(48.6%) of them followed by failure to thrive in 7(20.0%). Although 14(40.0%) children were on a pulmonary vasodilator (sildenafil), only 5 (15.6%) children had features suggestive of pulmonary hypertension on echocardiography, all with atrioventricular septal defects (AVSD). The presence of pulmonary hypertension was more prevalent in children on sildenafil (p=0.006) but was not significantly associated with the child's age, socioeconomic status, gender, wasting or stunting.

Conclusion: AVSD is the most common CHD seen among children with Down syndrome in our study and is frequently associated with pulmonary hypertension.

Keywords: Down Syndrome, Comorbidities, Congenital heart Disease, Niger Delta

OCAR14

The Kick Rheumatic heart Disease out of Plateau State Project

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Background: Rheumatic Heart Disease (RHD) is a major health problem in Nigeria but is not formally recognised as a public health priority. RHD prevention and control efforts could be greatly enhanced if appropriate educational and advocacy tools were made available. We set out to produce culturally relevant information, education and communication materials (IECMs) targeted at the lay public and patients/families with RHD, in three languages (Berom, English, Hausa).

Methods: Advocacy visits to key stakeholders (community leaders, the State Ministry of Health (MoH), media organizations, health workers) to mobilize support for the project were undertaken. Patients with RHD and their families were mobilised during routine clinic visits or via telephone calls. Focus group discussions (FGDs) aimed at identifying misconceptions/ knowledge gaps about sore throat and RHD were conducted in the three languages, among RHD patients/ family members and in two local communities, to ensure these were addressed in the proposed IECMs.

A team of cardiologists worked with other health care professionals (HCP) to draft a training manual containing key messages to be conveyed through the IECMs. The project team worked with media practitioners to produce the IECMs and field-testing was done to evaluate their impact on the target populations and their acceptability.

Results: Posters and educational leaflets were developed in English and Hausa, while audio jingles were produced in Berom, English, and Hausa. Preliminary field-testing showed significant differences in pre- and post-test scores in terms of knowledge about RHD.

Conclusion: culturally appropriate educational materials can be useful in disseminating information and improving knowledge about RHD.

PCAR1

A 4-year review of patients managed for rheumatic fever and rheumatic heart disease in Ahmadu Bello University Teaching Hospital Zaria

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Introduction and Objective: Rheumatic heart disease occurs as a sequel to acute rheumatic fever. Many cases

of acute rheumatic fever however, go undiagnosed as many patients present with otherwise common symptoms and in the absence of overt carditis may not be detected without high suspicion. Most cases present late following development of valvular damage.

Materials and Methods: A retrospective study was done using information collected from patient records from the Paediatric cardiology ward and clinic of Ahmadu Bello University Teaching Hospital Zaria over a 4-year period from March 2015 to February 2019.

Results: Fifty-one patients (6.6% of patients seen in the cardiopulmonary unit)were diagnosed with rheumatic heart disease, 6 had acute rheumatic fever while 45 had rheumatic valvular heart disease. The mean age was 10.7 ± 3.2 years. There was a slight female preponderance M: F 1:1.3, most patients (88%) presented late already having valvular injuries. Most patients had mixed mitral valve disease. The clinic dropout rate was 39% while the mortality rate was 25%. All patients received medical management while only 3.9% received surgical management.

Conclusion: The outcome of patients managed for rheumatic heart disease still remains poor despite it being a preventable and curable disease. There is a need to increase awareness, diagnosis and available treatment of rheumatic heart disease.

Keywords: Rheumatic Heart Disease, Acute Rheumatic Fever, Carditis

PCAR2

Impact of rheumatic heart disease educational jingles on knowledge and attitudes of the lay public in Jos, Plateau state, Nigeria.

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Background: Rheumatic heart disease (RHD) is highly preventable but still a major health problem in many countries. Raising public awareness about RHD could help reduce its burden. We sought to evaluate the impact of educational jingles about RHD on the knowledge base of the lay public in Jos metropolis

Method: To field-test educational jingles developed as part of the 'Kick RHD out of Plateau State' Project, we administered a simple questionnaire comprising 10 multiple choice questions assessing knowledge and attitudes of respondents to/about sore throat, rheumatic fever and RHD, to respondents before and after listening to a jingle in any of three languages (English, Hausa, Berom). Pre- and post-test scores were compared using the paired t-test, while scores between and within language groups were compared using ANOVA or the student t-test.

Results: Of 147 respondents, majority (104 – 70.7%) were females (p<0.001). Fifty-seven (38%), 44 (29.9%) and 46 (31.3%) respondents listened to the English, Hausa and Berom jingles respectively. The overall mean pre-test score [3.48 (±1.82)] did not differ significantly by language (p=0.72) or gender (p=0.1). The overall mean post-test score of 5.76 (±2.61) was also similar between genders (p=0.59) and language groups (p=0.26) but was significantly higher than the pre-test scores, both overall and by language group (p<0.0001 in each case).

Conclusion: The educational jingles had a significant impact on the knowledge base of the sample population and therefore could be a vital tool in raising awareness of the lay public in the fight against RHD.

PCAR3

Use of visual and auditory tools in evaluating knowledge about rheumatic heart disease: The kick RHD out of Plateau example

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Background: Rheumatic heart disease (RHD) is a disease of important public health implications for many communities in the developing world. Poor health literacy on the determinants of the disease has been one of the main drivers of the problem. We evaluated the health knowledge of lay people in a Nigerian community using visual and auditory tools in order to identify gaps in knowledge, attitude and practice.

Materials and Methods: This was a qualitative study that evaluated the health literacy of 103 people living in the suburban communities in Jos, Nigeria. An assessment questionnaire was used to investigate their health literacy bordering on their knowledge, attitudes and practices with respect to sore throat, rheumatic fever (RF) and RHD before and after administering the educational chart or jingle in a local language (Hausa). The pre and post-test results were then computed for each individual and the mean change in scores calculated using the paired t-test. SPSS version 23 was used in all statistics. Significance testing was set at p=0.05.

Summary of findings: Sixty three percent of the respondents were females while the mean age was 47.6±19.2 years.

The mean pre-test score was 2.78 on a scale of 10 for the visual tool while the mean post-test score was 4.90 (r=0.3, p=0.04). For the auditory tool (jingles), the mean pre-test score was 3.3, while the mean post-test score was 5.2 (r=0.45, p= 0.002). The mean change in score was 2.1±2.8 (95% CI 1.4 to 2.9, p<0.001) for the visual tool and 1.8±2.2 (95% CI 3.3 to 5.2, p=0.01) for the jingle.

Conclusion: Both tools significantly improve baseline knowledge about rheumatic heart diseases in lay community though the poster appears to have a larger effect.

Community engagement is key to addressing public health problems in developing countries.

Keywords: rheumatic heart disease, community engagement, communication tools

PCAR4

Pentalogy of Cantrel with Cranioschisis and Facial Abnormality: An extremely rare association

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Pentalogy of Cantrel is a rare multiple congenital anomalies syndrome that is characterized by 5 major defects. The defects include midline supraumbilical abdominal wall defect (omphalocele), lower sternum defect, anterior diaphragm defect, diaphragmatic pericardium defect and heart defect (ectopia cordis and intracardial defect). In extreme cases, the condition is not compatible with life. The prognosis is even worse when it is associated with other complex anomalies.

The exact cause is not completely understood. It occurs sporadically in the majority of cases with variable clinical expressions, though it has been linked to some chromosomal anomalies such as Trisomy 18 and some X-linked disorders. Both complete and incomplete expressions have been reported.

We hereby report a case of incomplete manifestations of Pentalogy of Cantrel with rare associations (Cranioschisis, cleft lip and palate). The challenges encountered in making diagnosis (both prenatally and postnatally) as well as treatment are hereby discussed.

Key Words: Pentalogy of Cantrell, Cranioschisis, Cleft lip and palate.

ODEM1

Infectious skin disorders encountered in children attending the dermatology clinic in a tertiary care hospital in southern Nigeria

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Introduction and Objectives: Infectious skin disorders (ISDs) are commonly seen among children. They constitute an important cause of morbidity among preschool and school age children. The aim of the study was to determine the prevalence and types of ISDs seen among children attending the Dermatology clinic in UPTH, Port Harcourt, Nigeria.

Materials and Methods: A prospective descriptive study of consecutive children presenting to the Dermatology clinic in UPTH over a three (3) year period (January 2016 –December 2018) was done.

Results: A total of 486 children aged 1month to 18 years were seen in the Dermatology clinic over the 3-year period. ISDs were diagnosed in 206 (42.4%) of these children. The mean age of children with ISDs was 7.49±5.8 years with a male to female ratio of 1:1. Fungal skin infections were seen in 76 (36.9%) patients. Parasitic skin infections were diagnosed in 62 (30.1%) patients. Bacterial and Viral skin infections were observed in 35 (17%) and 33 (16%) children respectively. The most frequent ISDs according to aetiologic group were: Scabies in 62 (30.1%), Verruca Vulgaris in 24 (11.7%), Tinea corporis in 20 (9.7%) and Impetigo in 9 (4.4%).

Conclusion: The prevalence of Infectious skin diseases is high among children attending the Dermatology clinic in UPTH with scabies being the commonest. Greater efforts should be geared towards the prevention, early diagnosis and prompt treatment of these ISDs to limit the morbidity associated with them.

Keywords: Infectious skin disorders, Children, UPTH.

ODEM2

Prevalence and pattern of transmissible skin diseases among primary one school pupils in Kumbotso L. G. A, Kano State

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Introduction: Transmissible skin diseases (TSDs) are common diseases of children. School entrants are naïve to the school environment, which is known to be an ideal place for the spread of infectious diseases because of the large number of young people of different ages in close contact with one another.

Objective: To study the prevalence and pattern of transmissible skin diseases in this group of children

Subjects/Methods: A descriptive cross-sectional study was carried out, among 1152 primary one school pupils in Kumbotso L.G.A., Kano, Nigeria. Multi-stage sampling method was used to select the pupils who were given structured questionnaires to be filled by their parents/guardians. General physical examination and anthropometric measurements were also carried out. The diagnosis of TSDs was mainly clinical.

Results: The overall prevalence of TSDs was 36.3%. Fungal infections were the commonest (32.5%), while scabies, bacterial and viral infections accounted for 3.2%, 2.5% and 1.3% respectively. Thirty-six (8.6%) of

the pupils had more than one infection. Multivariate logistic regression analysis demonstrated that male gender, [OR 2.16(1.62-2.87), p<0.05]; being in public schools [OR 2.08(1.06-4.10), p<0.05]; overcrowding [OR 1.41(1.04-1.91), p<0.05]; and keeping of animals at home [OR1.34(1.01-1.80), p<0.05] remained positive predictors of TSDs. Good hair hygiene [OR 0.05(0.01-0.10), p<0.05] and good nail hygiene [OR 0.35(0.17-0.69), p<0.05] were found to be protective against the development of TSDs.
Conclusion: Transmissible skin diseases are common in school entrants. This is likely to be a reflection of the community where the children reside.
Keywords: Transmissible skin diseases, School entrants, children, Kano Nigeria.

PDEM1

Atopic dermatitis in children attending a dermatology clinic in Southern Nigeria

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Introduction and Objectives: Atopic dermatitis is the most common chronic relapsing skin disease in children. It affects 10-20% of children worldwide and commonly occurs in families with a history of asthma, allergic rhinitis and food allergies. The aim of the study was to determine the prevalence and clinical profile of atopic dermatitis in children attending the dermatology clinic in UPTH.
Materials and Methods: A retrospective review of the case notes of all children diagnosed with atopic dermatitis over a three (3) year period (January 2016 – December 2018) was done.
Results: Among the 486 children seen in the dermatology clinic over the study period, 69 (14.2%) were diagnosed with atopic dermatitis. There were 31 (45%) males and 38 (55%) females; M:F=1:1.2. The mean age of the study subjects was 6.5±5.7 years. Fifty-four (78%) had a positive family history of atopy. Nineteen (28%) patients were diagnosed in infancy while 37 (54%) were diagnosed by 5 years of age. The most common clinical features were macular rash (88%) and pruritus (96%). Commonly affected sites were the cubital fossa (76%), popliteal fossa (64%), axilla (61%) and face (22%).
Conclusion: Atopic dermatitis is a common inflammatory skin disease posing a significant burden on the patient's quality of life and healthcare resources. Prompt diagnosis and treatment will help to limit morbidity associated with the condition.
Keywords: Atopic dermatitis, Children, UPTH.

PDEM2

Childhood vitiligo: Experience at the dermatology clinic in a tertiary care hospital in Southern Nigeria

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Introduction and Objectives: Vitiligo is characterized by depigmentation of the skin resulting from destruction of melanocytes. It often results in negative psychosocial consequences such as low self-esteem, anxiety and stigmatization. The aim of the study was to determine the prevalence, clinical pattern and outcome of treatment of vitiligo among children presenting to the dermatology clinic at UPTH Port Harcourt.
Materials and Methods: All children diagnosed with vitiligo at the Dermatology clinic in UPTH over a three (3) year period (January 2016 –December 2018) were reviewed. Their clinical profile and treatment outcome were analyzed.
Results: Out of the 486 children seen at the dermatology clinic during the study period, 24 (4.9%) had vitiligo. Eleven (46%) were males while 13 (54%) were female; M:F=1:1.2. The mean age of the study subjects was 8.9 ±4.2 years. The average duration of symptoms was 13 months. Non-segmental vitiligo was more common (78%) than segmental vitiligo (22%). All the study subjects had normal thyroid function tests, fasting blood glucose and full blood count. The most common treatment agents given were topical steroids (67%) and topical tacrolimus (33%). Four (17%) of the study subjects achieved progressive repigmentation after 1 year of therapy. Seven (29%) of the patients were lost to follow up.
Conclusion: Childhood vitiligo is a source of psychosocial distress in affected children and their families. Its management is often a tough challenge with variable outcome.
Keywords: Vitiligo, Children, UPTH,

PDEM3

Pemphigus foliaceus in a 6-year-old Nigerian boy: A case report

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Background: Pemphigus foliaceus (PF) is a chronic, blistering disease characterized by autoimmune activity against desmogleins -the intercellular adhesion structures of the epithelial cells of the skin. PF is commonest among adults in the Middle East & South America, only few cases have been reported in the sub-Saharan region.

Aim: To report a rare case of Pemphigus foliaceus in a 6 -year-old Nigerian boy
Case summary: We report the case of a 6-year-old male who presented with a two weeks history of generalized, pruritic skin eruptions and 4 days history of fever. He had 2 episodes of similar eruptions over the past 2years. On examination, he had maculopapular, vesicular, pustular and scaly skin with weeping lesions, crusts, areas of erythema and hyperpigmentation involving 70% of the body surface but spared the palms and legs. There was no mucosal involvement. Findings on histology of skin biopsy were consistent with PF. Skin swab culture yielded moderate growth of *Staphylococcus aureus* and *Streptococcus pneumonia*. He received prednisolone, chlorpheniramine, mupirocin, emollients, IV ampiclox and genticin with remarkable clinical improvement.
Conclusion: PF is rare among children in the sub-Saharan region but should be suspected in a child with recurrent generalized maculopapular and vesicular body rashes with mucosal sparing.
Keywords: Pemphigus, Pemphigus foliaceus, Children, Sub-Saharan Africa

PDEM4

Prevalence and pattern of skin disorders among children attending paediatrics outpatient department of aminu kano teaching hospital, kano

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Introduction: Skin disorders are common among children, most especially the infections and infestation as the immunity is not fully developed during childhood.
Objectives: This study aimed to document the prevalence and pattern of skin diseases among children who attend the Paediatric Outpatient Clinic of the Aminu Kano Teaching Hospital (AKTH) Kano, Nigeria.
Methods: It was a cross-sectional study. The study population included children aged between 6 weeks and 14years from the study area. The subjects were recruited consecutively. Data obtained from the patients included age, gender, clinical features, and diagnosis.
Result: Two hundred and twenty-three children aged 6weeks to 14 years were enrolled into the study. There were 110 males (49.3%) and 113 females (50.7%) with Male to female ratio of 1:1.1. Fifty-five children (24.7%) had skin disorders. There were 14 specific skin diagnoses made among the children, which were further classified into 3 broad categories. The leading categories were infections and infestations accounting for 18.3% of children ($p < 0.001$). Seborrheic dermatitis (3.1%), dermatophytoses (2.7%) were the commonest specific diagnoses observed.
Conclusion: Prevalence of skin disorders among children attending POPD of Aminu Kano Teaching Hospital is 24.7%. Infections and infestations were the leading categories observed. Seborrheic dermatitis and dermatophytoses were the commonest specific diagnosis.
Key Words: Skin disorders, Children, Kano.

OEND1

Glycogen storage disease type III presenting as recurrent seizure disorder in a second twin: A case report

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Background: Glycogen storage diseases (GSDs) are group of genetic autosomal recessive metabolic disorders resulting from deficiencies of enzymes of glycogen metabolism occurring in the liver, muscles or kidneys. Various types and sub-types exist based on genetic classification presenting with symptoms and signs of hypoglycaemia, hepatomegaly and myopathy depending on severity, and age of unset. A high index of suspicion is required for diagnosis of GSDs.
Case summary: Eighteen months old girl who was apparently healthy with normal development had been without any abnormality until about 12 months when she had the first episode of febrile seizure treated with sodium valproate consequent upon which she remained seizure free for a month. Subsequently she became sluggish, less physically active compared to her former self with associated repeated afebrile seizures.The main examination finding was distended abdomen with hepatosplenomegaly. She had sudden onset of status epilepticus, which was only aborted with diazepam and a glucose infusion. Intra-ictal incident glucose level was 1.4mmol/l.
Biochemical investigation revealed deranged liver enzymes, normal serum cortisol, C-peptide, Insulin, urea and electrolytes, and normal EEG. Liver biopsy and genetic study confirmed a diagnosis of glycogen storage disease type III. After dietary management with feeding gastrostomy, the child did very well, is seizure free and off antiepileptic therapy.
Conclusion: This case highlights the occurrence of symptomatic seizures due to factors other than epilepsy; and the importance, in the correct clinical setting, of considering alternative, and sometimes treatable, causes of seizures other than idiopathic seizure disorder.

OEND2

GM1 Gangliosidosis in a Nigerian child; A case report

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Introduction and Objective: GM1 gangliosidosis is a

rare autosomal recessive lysosomal storage disease characterized biochemically by deficiency of β-galactosidase enzyme activity and clinically by a wide range of neurovisceral, ophthalmologic and dysmorphic features. There was a report of GM2 gangliosidosis from an African American Child, but we have not come across any report of similar condition among African children.

Materials: The clinical presentation, investigation findings and management of the index case were retrieved and reported.

Results: S.A, a 1-year-old boy presented with skin rashes noticed at birth, delayed achievement of milestones, with regression in achieved milestones, recurrent diarrhea and progressive weight loss. Marriage is consanguineous.

Examination showed coarse facial features with hyperpigmented macules and well-demarcated patches resembling Mongolian spots. Child had hepatomegaly with bilateral hydrocoele. He had a head lag with widened anterior fontanelle. He was globally hypotonic and hyporeflexic.

Fundoscopy showed bilateral cherry red spots macular deposition and left optic atrophy.

Enzyme assay of β- galactosidase activity was 1.1 (reference value of 100-400µmol/gprt/hr).

Management included counselling parents and other supportive measures.

Conclusion: This is probably the first reported case of confirmed GM1 Gangliosidosis in a Nigerian child. Inborn errors of metabolism should be considered in the differential diagnosis of infants and young children presenting with delayed and or regression of achieved developmental milestones.

Keywords: GM1 Gangliosidosis, β- galactosidase, storage diseases.

OEND3

Cushing syndrome and end stage renal failure: A case report

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Introduction and Objective: Cushing Syndrome, a rare condition with increased glucocorticoid production can affect renal function directly by its effect on glomerular and tubular functions or indirectly through the cardiovascular system. The aim is to report a case of Cushing Syndrome complicated by End Stage Renal Failure.

Materials: The clinical presentation, investigation findings and treatment of the index case were retrieved from the patient's folder.

Results: Miss M.O a 16-year-old student with history of excessive weight gain of 7 years, recurrent abdominal pain of 1 year, vomiting of 3 weeks and headache of a day duration. Not on exogenous steroids, attained menarche at 12 years. Amenorrhoeic for 21months at presentation. Examination revealed 'moon-face' appearance, supraclavicular pad of fat, striae and hirsutism. Her body mass index was 39.2kg/m², waist:hip ratio 1.15:1 and blood pressure200/130mmHg. A diagnosis of Cushing syndrome with hypertension was made. Evaluation revealed renal failure. She and her parents were counselled. She was given antihypertensives and tabs Ketoconazole 200mg twice daily, awaiting renal replacement therapy. Serum cortisol levels: 20.0 micrograms/dl (morning) and 16.4 micrograms/dl (midnight). Glomerular filtration rate was 4.78mls/min/1.73m², serum glucose and abdomino-pelvic scan were normal.

Conclusion: This case was reported because of the need for increased awareness on early presentation, diagnosis and management of Cushing Syndrome.

Keywords: Cushing Syndrome, Renal Failure, Hypertension.

PEND1

Glycogen storage disease associated with cardiomyopathy:A case report

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Introduction: Glycogen storage disease is a metabolic disorder affecting 1 in 43,000 births. The incidence in Nigeria is however unknown. The commonest glycogen storage disease is the type 1 GSD also called Von Gierkes disease were the body cannot breakdown glycogen due to deficiency in the enzyme glucose – 6 - phosphatase. Type I GSD unlike Type 11 GSD (Pompe's disease) is not usually associated with heart abnormalities.

Case presentation: A 3-year-old boy with recurrent episodes of cough and difficulty in breathing over one year. Cough was wet, productive of frothy sputum, difficulty in breathing was initially on exertion later at rest. There is no history of bluish discoloration of his lips or mucous membranes. There was associated history of progressive abdominal and leg swellings.

Examination revealed a child with normal height and weight, in moderate respiratory distress, with round head, full cheeks, generalized lymphadenopathy, and hepatomegaly.

Results: Investigations showed moderate anaemia, raised ESR, hyperuricaemia and hyperlipidaemia.

Chest x-ray findings of a globular heart with increased pulmonary vascular markings.

Echocardiography revealed dilated intrahepatic veins with dilated cardiac chambers and functional aortic and mitral incompetence with mild pericardial effusion.

Liver biopsy showed enlarged hepatocytes comprising sinusoids leading to mosaic pattern with ground glass appearance. Stain for PAS show granulari positivity in the hepatocytes. Enzyme activity test was inconclusive. Features were consistent with metabolic disorder-glycogen storage disease.

A diagnosis of metabolic disorder-glycogen storage dis-

ease was made.
Child was placed on dietary modification and anti-failure regimen and has done well in the last 5 years, off anti-failure drugs, hepatomegaly has subsided remarkably.
Conclusion: GSD though not commonly diagnosed in this clime should be considered in patients with cardiomyopathies.
Keywords: Glycogen Storage disease, hepatomegaly, cardiomyopathy

PEND2
Beckwith-Wiedemann Syndrome- an uncommon presentation in two consecutive siblings in UCH Ibadan

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Background: Beckwith-Wiedemann Syndrome is a congenital overgrowth disorder. It is the most common of the overgrowth syndromes, occurring in 13,700 live births. Basic features are exomphalos, macroglossia, and gigantism. It is diagnosed by clinical features and genetic testing; in developing countries especially Nigeria, genetic testing is not within reach of the average citizen.
Objective: To describe the challenges of management and prevention of Beckwith-Wiedemann Syndrome.
Case Presentation: Two siblings who were delivered preterm, at one-year interval presented with macrosomia, macroglossia, low set ears and Omphalocoele. Mother had four recurrent spontaneous abortions, while father is a farmer with a positive history of regular exposure to herbicides. Both of them had supportive management throughout admission, which included treatment for sepsis, phototherapy for jaundice, dressing of omphalocoele, and correction of recurrent hypoglycaemia. They both died in less than 2 weeks. Genetic testing was not done in the patients and parents due to the cost.
Conclusion: These cases highlight the problems in management of patients with Beckwith Wiedemann syndrome. Genetic testing in every member of this particular family would have been highly informative and would have led to proper genetic counselling.
Keywords: Beckwith-Wiedemann syndrome, Genetic testing, Challenges

OGEN1
Infant and young children feeding practices and nutritional status in a semi-urban community in Sokoto

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Introduction: Optimal infant and young children feeding practices is cornerstone to adequate nutrition and child survival. It has been a challenge in our community and has contributed to poor nutritional status, increasing infant morbidity and mortality rates.
Objectives: The study describes the feeding practices and nutritional status of infant and young children in a semi-urban community in Sokoto.
Materials and Methods: A cross-sectional study conducted in Gwiwa, Wammakko LGA, Sokoto state between April and June 2019. Mothers with children aged 24 months and below were interviewed on their ward feeding practices using structured interviewer questionnaire. The weights and lengths were measured to determine the nutritional status of the children. Data was analyzed using SPSS version 23.0.
Results: One hundred and sixteen (51.3%) of the respondents were aged 15 – 24 years and 132(58.4%) were of low socio-economic class. Fifty-one (22.7%) of the mothers commenced breastfeeding within the first hour of the delivery and 38(16.8%) of the children were exclusively breast fed for 6 months. One hundred and eighteen (52.2%) of the mothers studied introduced their children to complementary feeds at 6-8 months of age with home-made cereal gruel in 106(46.9%) of the respondents. The mean age of cessation of breast feeding was 17.4(±3.5) months. The nutritional status was normal in 150(66.4%) with wasting, underweight and stunting in 76(33.6%), 62(27.4%) and 44(19.5%) of the children.
Conclusion: The infant and young children feeding practice is suboptimal with poor nutritional status in this community. Efforts should be geared towards improving these feeding practices in our community.
Keywords: Infant, Feeding, Practice, Nutritional, Status.

OGEN2
Unusual involvement of the tongue with cystic hygroma in an 11-month-old infant: case report

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Introduction: Cystic hygroma is a congenital lymphangiomatous benign tumour, involving the head and neck commonly, but rarely associated with lymphangioma of the tongue. The principal goal of management is restoration or preservation of function and aesthetic integrity of the affected areas, as a result of which ablation is done in most cases.
Aim: To describe an unusual presentation of cystic hygroma with extensive tongue involvement and the non-

surgical intervention instituted.
Case Report: An 11-month-old boy presented to our EPU with 3 weeks history of gradual enlargement and protrusion of the tongue to the extent he could no longer close the mouth or retract the tongue. There was associated submandibular fullness, drooling of saliva and difficulty in feeding but no respiratory difficulty. Examination revealed generalized papulitic rashes, markedly enlarged, thickened, desiccated and indurated bluish tongue protruding outside the oral cavity, 4cm beyond gum margin. He was not in any respiratory distress. There was a firm to fluctuant, non-tender, multilobulated, cystic swelling in both anterior triangles of the neck, having no differential warmth and measuring 8cm by 10cm, across angles of both mandibles. Radiograph showed no mediastinal extension. Ultrasound scan of the neck revealed multiple cysts of varying sizes. A diagnosis of cystic hygroma with lymphangioma of the tongue was made. Child was placed on steroid and he had periodic ultrasound guided intralesional sclerotherapy with bleomycin, with good clinical response.
Conclusion: We recommend that infants with tongue lymphangioma combined with a cervical cystic hygroma should have non-surgical treatment modality considered first rather than surgery.
Keywords: cystic hygroma, lymphangioma, tongue, sclerotherapy

OGEN3

Socio-demographic and household level risk factors for Severe Acute Malnutrition in pre-school children in North-Western Nigeria

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Introduction and Objectives: Severe Acute Malnutrition (SAM) is associated with significant morbidity and mortality and is disproportionately distributed mainly in developing countries.
The prevalence of SAM in north-western Nigeria is significantly higher than the national average. In this study, we aimed to identify risk factors for SAM in this region of Nigeria. Identifying such risk factors would help adapt local preventive strategies and provide insights for broader SAM control programs in other high-burden country settings.
Materials and Methods: We performed secondary analysis of data collected from a previous study and compared baseline sociodemographic and household level risk factors in a cohort of 1011 children aged between 6 and 59 months who either had SAM or were well-nourished children. We defined nutritional status using World Health Organization (WHO) reference standards and investigated the association between SAM and identified risk factors using multivariable logistic regression model.
Results: Children aged between 12 and 23 months (AOR 2.82, 95% CI 1.90 to 4.17) and those from polygamous households (AOR 1.96, 95% CI 1.37 to 2.81) had a significantly increased odds of developing SAM. Post-primary maternal and paternal education and being on the main family diet reduced the odds of having SAM.
Conclusions: Our findings suggest the need to develop optimal complementary feeding nutrition programs and promote adult education in our community. Cultural and feeding practices in local polygamous households would need to be further investigated to understand the association between polygamy with SAM.
Keywords: Severe acute malnutrition, North-western Nigeria, Risk factors

OGEN4

Pattern and determinants of clinical outcome among children with Severe Acute Malnutrition from internally displaced persons camp in Benue State, Nigeria

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Introduction and Objectives: Over the last couple of years, there has been numerous farmer-herdsmen clashes with resultant displacement of families and loss of means of livelihood. The food shortage and consequences are beginning to manifest in dimensions leading to the upsurge in admission of Severe Acute Malnutrition (SAM) patients. This study is to determine the pattern of admission and outcome amongst children with SAM.
Materials and Methods: A retrospective hospital-based study was done from March 2018 to March 2019.Data was collected using a structured questionnaire.
Results: Out of the 58 children admitted with SAM,45 (77.6%) were discharged, 4(6.9%) died and 9(15.5%) discharged against medical advice. Mean age at admission was 30.45±16.57months.The mean duration of stay was 9.97 ± 6.93 days. Fifty-three (91.4%) of the parents were subsistence farmers. The commonest complaints on admission were body swelling 31(53.4%), fever 40 (69.0%), weight loss 26(44.8%) diarrhea 36(62.1%) and cough 19(32.8%) respectively. Severely malnourished children were in the age group 12-23 months 15 (25.86%)and a WHZ < -3 score was statistically significant with a $p<0.05$.Those with wasting on admission had a higher discharge rate and was significant with $p< 0.021$.Out of the 58 children, 32(55.2%) of the patients presented with oedema but this was not a significant

determinant of outcome.
Conclusion: Treatment outcome of SAM in this study is within the SPHERE standard with <10% mortality and 75% discharges. It showed that three-fourths of the children were discharged.
Keywords: Pattern, Severe Acute Malnutrition, Outcome

OGEN5

Assessment of Breastfeeding Techniques in Enugu, South-East Nigeria

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Introduction and Objectives: Breastfeeding is an unrivalled way of providing ideal food for the growing infant. Good breastfeeding technique is important in ensuring adequate milk delivery and preventing breastfeeding problems. Exclusive breastfeeding rate is quite low and requisite skills regarding proper positioning and attachment of an infant while breastfeeding appears lacking among mothers in Nigeria. This study was undertaken to assess breastfeeding techniques of mothers attending the well child clinics of two tertiary hospitals in South East Nigeria.
Materials and Methods: A cross-sectional descriptive study of 396 Mother /Child pairs attending the well child clinics of two tertiary hospitals in Enugu (Enugu State University Teaching Hospital and University of Nigeria Teaching Hospital). An interviewer-administered, well structured proforma was used to collect data. Mothers were observed closely as they breastfed and scored using WHO criteria. Data was analysed using SPSS version 22.
Results: Most mothers (357; 90.2%) attended ante-natal care and 365 (92.2%) of the deliveries were assisted by health workers. Only 194 (49%) of mothers practiced good breastfeeding techniques. Maternal age (20-30years) ($p < 0.001$, OR 0.464), attendance to ante-natal clinics ($p < 0.001$; OR 8.336), orientation about breastfeeding techniques before and after delivery ($p = 0.001$) and maternal level of education ($\chi 2 = 13.173$, $p = 0.001$) but not parity ($p = 0.386$; OR 1.192) were significantly associated with good breastfeeding techniques.
Conclusion: Gaps still exist among mothers regarding breastfeeding skills. Increased awareness creation and regular demonstration of breastfeeding techniques are paramount.
Keywords: Breastfeeding, Technique, Child, Mother, Enugu

OGEN6

A new variant of microsomal triglyceride transfer protein (MTTP) in a child with Abetalipoproteinaemia responding to nutritional therapy

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Introduction and Objectives: Abetalipoproteinaemia is a rare genetic cause of fat malabsorption resulting mainly in impaired growth and developmental delay.
The objective of this study was to report a case of Abetalipoproteinaemia and highlight the importance of nutritional therapy in amelioration of the clinical symptoms.
Materials and Methods: This is a case report of Abetalipoproteinaemia in a 5-month-old. The case was studied at Red Cross war memorial children's hospital, South Africa in June 2018. Written informed consent was obtained from the mother prior to the reporting of the case.
Case Presentation: A five-month-old female born to consanguineous parents presented with poor weight gain, recurrent episodes of frequent loose stools, abdominal distention and developmental delay. Gradient gel electrophoresis of lipoproteins showed undetectable levels of apoB- containing lipoproteins, while the fat-soluble vitamins were all below the normal physiologic limits. Massively parallel sequencing of lipid genes with targeted analysis of monogenic hypocholesterolaemic genes revealed that the proband is homozygous for a new pathogenic variant of MTTP gene (variant: c. 1342_1344+ 1 delAAAG) in keeping with a diagnosis of Abetalipoproteinaemia. She was placed on a low-fat diet which included medium chain triglyceride for energy balance, essential fatty acids, high doses of fat-soluble vitamins (ADEK) supplementations, oral iron, folate, zinc and multivitamins. She improved remarkably with resolution of her symptoms.
Conclusion: Nutritional modification with low fat diet, essential fatty acid and high dose fat soluble vitamins supplementations improved patient's quality of life with amelioration of the symptoms.
Keywords: Abetalipoproteinaemia; fat malabsorption, nutritional therapy

OGEN7

Infant and Young Child Feeding Practices in Dutse North-Western Nigeria

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Introduction and Objectives: Nutritional problems are still common worldwide, especially in developing countries. Adequate feeding of infants and children is the main strategy for combating malnutrition in children. In Nigeria the rates of exclusive breastfeeding (EBF) and adequate and safe complementary feeding (CF) are low. This study set out to assess the practice of EBF and the introduction of CF in Dutse, Nigeria.
Materials and Method: The study was conducted in Rasheed Shekoni Specialist Hospital, Dutse, between April and June 2019. It is a public referral hospital in the state. Questionnaires were used to collect data from mothers of children 2 to 36 months old, who were brought to the Paediatric department for minor illnesses. Children with severe illness needing hospitalization, and those with chronic illnesses were excluded.
Results: Seventy-nine children were studied. Their ages were between 2 and 36 months, 40 (50.6%) were males and 52 (65.8%) resided in the urban area. The rate of exclusive breastfeeding was 45.6% (36). Breastfeeding was stopped between 13 and 24 months in 73.7% of them, while 15.8% were breastfed for more than 24 months. Complementary feed was started after 7 months in 14 (17.7%) children. Fortified pap was the CF used in 43 (54.4%) of them. Majority (63.3%) accepted the CF easily. Nine (11.4%) reported food restriction which included vegetables, fruits, fish, egg, chicken and meat.
Conclusion: The rate of EBF is still low. Certain nutritious food items were excluded from CF of some children.
Keywords: feeding practices, breastfeeding, complementary feeding, children, Nigeria.

OGEN8

Barriers to early initiation of breastfeeding in neonates born in the University College Hospital, Ibadan

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Introduction: Early initiation of breastfeeding is expected to improve child outcomes. Several problems are known to hinder this early initiation.
Objective: This study reviewed the time of initiation of breastfeeding among mothers delivering in UCH and factors responsible for delayed initiation.
Materials and Methods: 210 mothers who delivered in the labour ward were interviewed in the postnatal wards to determine time of first breastfeed and where this was not within the first hour, the reasons for the delay.
Results: The mean age of the mothers was 31.30 years, 38.8% were nulliparous. Mode of delivery was SVD in 47.1%, while 50.1% were via Caesarean Section (C/S). Over half (57.2%) of mothers did not initiate breastfeeding within the first hour of birth. Mean time to initiation was 3.71 hours.
Majority (31.7%) of the mothers who did not initiate breastfeeding early felt they were too weak,19.8% felt it wasn't convenient and 29.3% felt they couldn't because they had C/S.
There was strong association between C/S delivery and delayed initiation of breastfeeding ($p = 0.005$).
Conclusion: The most important factor limiting the initiation of breastfeeding within the first hour of birth is delivery via C/S. Women being prepared for elective or even emergency C/S should therefore be counselled on early initiation of breastfeeding to curtail the delays after delivery.
Keywords: Breastfeeding, Barriers, Outcomes

PGEN1

Nutritional status of HIV infected children in Aminu Kano Teaching Hospital Kano, Nigeria

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Introduction: The Human immunodeficiency virus (HIV) is a slowly replicating lenti virus. The HIV virus has two subtypes: HIV 1 and HIV 2. HIV/AIDS is a global health problem, with an estimated 36.9 million people globally living with HIV at the end of 2017, among them 1.8 million were children less than 15 years. Most of these children live in sub-Saharan Africa. Nigeria has the second largest HIV epidemic in the world. In 2017, 220,000 children less than 14 years in Nigeria were living with HIV AIDS.
Objectives: To determine te nutritional status of HIV infected children under 14years attending Paediatric infectious disease clinic (PIDC) AKTH.
Methods: This was a cross-sectional study involving children aged 0-14 years of Aminu Kano Teaching Hospital Kano. Two hundred and twenty-one HIV-infected children were recruited using systematic sampling from PIDC clinic of AKTH and equal number of non-HIV-infected comparison group were consecutively recruited from POPD clinic of AKTH. A child was regarded as undernourished if his/her weight or height or BMI is lower than expected for age by two standard deviations (SD) using the WHO standard growth charts. Outcomes were analysed with SPSS version 24.
Results: A significant association between HIV seropositivity, severe underweight, severe wasting and severe stunting was observed (p value <0.01).
Conclusion: HIV infection is associated with under-

nutrition in children in AKTH Kano.
Keywords: Children, HIV, Kano.

PGEN2

Congenital chylous ascites in a 3 months old infant in Zaria: A case report

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Introduction: Congenital chylous ascites characterized by the accumulation of chyle in the peritoneal cavity is a rare condition caused by malformation of the lymphatic channels.
Materials: The clinical presentation, investigation findings and treatment of the index case were retrieved from the patient's folder and reported.
Results: A 3-month-old girl presented with progressive body swelling involving the abdomen and lower limbs of 2 months duration and difficulty in breathing of 6 weeks duration. Child had in addition poor weight gain since birth.
Examination revealed respiratory distress with pitting pedal and sacral oedema, abdominal distension with distended anterior abdominal wall veins and massive ascites. Abdominal paracentesis yielded milky coloured aspirate.
Abdominal ultrasound scan showed massive ascites. Ascitic fluid triglyceride level was 540mg/dl. CT scan of the abdomen showed normal abdominal organs with massive ascites.
Child was managed conservatively with parenteral nutrition, lower limbs oedema regressed with reduction of abdominal girth from 44 cm to 40cm over a 10-day period.
Conclusion: This case was reported to highlight the presentation and management of congenital chylous ascites in low resource setting.
Keywords: Congenital chylous ascites, parenteral nutrition, abdominal paracentesis.

PGEN3

Intussusception in children under five years of age in Enugu Nigeria

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Introduction and Objectives: Intussusception, the invagination of a segment of the bowel into a distal segment, occurs predominantly in infants worldwide. Following documentation of increased incidence after introduction of the first rotavirus vaccine (Rotashield, it has become a standard recommendation to maintain surveillance for intussusception as the newer rotavirus vaccines are introduced into EPI. Nigeria plans to introduce rotavirus vaccine in 2020. Pre-vaccine introduction surveillance will serve as a baseline data of intussusception in Nigeria.
Materials and Methods: From 2013 to 2017, prospective enrolment of under five children with intussusception was done following the WHO protocol and using the WHO case report form. Only children who met the Level 1 Brighton criteria case definition were enrolled. These children were monitored until discharge/death and clinical features and outcome were recorded.
Results: A total of 64 cases were enrolled, with age range of 3 to 42 months (median: 6months, IQR: 5-9 months). Majority were within 4-6 months and 96% were $\leq$12 months old. There were 42 males and 22 females (male to female ratio, 1.9:1). Duration of symptoms before presentation ranged from 2 hours to 15 days (median:72hours). Fifty-three patients (89%) had abdominal ultrasound while 7 (11%) had successful hydrostatic reduction. Majority (83%) had surgery andcase fatality rate was 9%.
Conclusion: Intussusception occurred mostly in infants but well beyond the proposed age for rotavirus vaccination in the population studied. Late presentation and surgical intervention were common. This pre-vaccine introduction data provides a baseline for assessing intussusception occurrence post-vaccine introduction.
Keywords: Intussusception, children, rotavirus vaccine, hydrostatic reduction, Nigeria

PGEN4

Clinical presentation of children with acute malnutrition seen in Murtala Mohammed Specialist hospital, Kano, Nigeria

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Introduction: Children with acute malnutrition (AM) may present with various life-threatening complications. Identifying these children, recognising and treating associated complications promptly and correctly reduce the high mortality associated with the condition. It is therefore important to know the presenting features and complications.
Method: The study was descriptive cross-sectional, conducted between December 2018 and March 2019 at the department of paediatrics, Murtala Mohammed Specialist Hospital Kano. Children 2 to 60 months old, who were admitted into Paediatrics Ward of the hospital for acute malnutrition based on World Health Organization classification were included in the study. Children with chronic illnesses such as sickle cell disease and cerebral palsywere excluded.

Research Ethics Committee of the institution approved the study. Informed consent was obtained from the care givers.
Questionnaire was used. Relevant history and physical examination were done for each child at admission. Anthropometric measurements were done using standard methods. Bed side blood glucose and haematocrit measurements were taken at admission. Critically ill children were resuscitated based on the hospital's protocols before inclusion in the study.
Data was analysed with Microsoft Excel (2006) software.
Result: Eighty-six children participated in the study. There were 38 (44.2%) males, majority (68, 79.1%) of them resided in the urban area. Majority of the children (30.2%) were 19 to 24 months old. Fever was found in 30 (38.5%) while only 3 (3.8%) had axillary temperature below 35^{o}C.Dermatosis was present in 45.3% of them. Dehydration and hypoglycaemia were present in 75.5% and 17.9% of them respectively. None of them had haematocrit below 12%.
Conclusion: Fever and dermatosis are common presentation of children with AM. Common complications are dehydration and hypoglycaemia.
Keywords: Acute malnutrition, wasting, children, Kano.

PGEN5

Prevalence, Pattern and Risk Factors of Severe Acute Malnutrition in Children below 6months Old in Jos, North Central Nigeria

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Background: Severe Acute Malnutrition (SAM) in infants of less than 6 months of age (U6m) is a serious public health concern globally especially with declined rates of exclusive breastfeeding. With challenges in the use of the standard anthropometric parameters and higher mortality in these infants than in older children, it is pertinent to document the burden, pattern and risk factors for of SAM in U6m.
Objective: This study aimed to determine the prevalence of SAM in U6m, the pattern and the determinants of malnutrition using weight-for-length (WFL) Z score and mid-upper arm circumference (MUAC), and also to determine the correlation of MUAC and WFL in detection of SAM in U6m.
Methodology: Infants six weeks to <6months were recruited. Socio-demographic and nutritional data were collected using a researcher administered questionnaire. WFL z scores <-3 and MUAC <11.5cm were used to define severe acute malnutrition.
Results: Of the 233 infants aged<6months, mean age was 90.0-/+38.3days. Females accounted for 52.8%. Nineteen (8.5%) were born with low birth weight and 11.7% were preterm deliveries. Males had higher mean length for age and weight for age than females but MUAC showed no significant difference.
Prevalence of SAM was 2.6% by MUAC and WFL parameters but MUAC identified more SAM subjects in those <3months while WFL identified more in older children. Concordance between MUAC and WFL was poor. Both MUAC and WFL showed more female children than males with MAM.
Lower social economic status was significantly associated with SAM while birthweight, birth order, maternal nutritional status and time of first feed did not affect prevalence of SAM in any of the parameters.
Conclusion: As WFL and MUAC both identified acute malnutrition in different subsets of U6m, it is recommended that both be employed in the screening of acute malnutrition in this age group.

PGEN6

Disease Pattern and Patients Attendance in Paediatric Gastroenterology Clinic of a Tertiary Hospital in Nigeria

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Introduction: Gastroenterology and nutritional disorders are among the major reasons for clinic attendance in developing countries. Knowing the burden and pattern of these diseases in this part of the world will help in formulating targeted preventive measures.
Subjects and Method: Records of clinic visits of children who attended the Gastroenterology clinic of Aminu Kano Teaching hospital from January 2015 to January 2019 were made and analysed. The clinic is run once a week by a team of doctors in the Department of Paediatrics of the hospital. Children who attended the clinic were referred from other health institutions, hospital's paediatrics outpatient unit, or those discharged from the hospital's paediatric ward.
Result: During the 5-year period, 1184 visits were made to the clinic by the patients. The visits were made by 801(67.7%) males with male to female ratio of 2.1:1. The patients' ages ranged from 36 days to 17 years, with median age of 4 years. Age group 1-4 years had the highest (477 [40.3%]) number of children who attended the clinic while the least (69 [5.7%]) was age group of 13 years and above. Hepatic, nutritional and gastroenterologic accounted for 49%, 39% and 12% respectively. Diseases with high frequency of visits were acute hepatitis B viral infection (25.2%), rickets (21.0%) and severe acute malnutrition (10.8%) respectively.
Conclusion: Preventable diseases such as acute hepatitis B viral infection, rickets and severe acute malnutrition were the major diseases seen in the Paediatric gastroenterology clinic.
Keywords: Gastroenterology, children, clinic, disease pattern.

OGEP1

Snake bite in children in Enugu, Nigeria: First aid treatments Versus World Health Organizations (WHO) guidelines for management of snakebite in Africa

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Introduction and Objectives: Snake bite and envenomation is an important cause of death in rural patients in developing countries and remains a public health problem with significant morbidity and mortality in children in developing countries. Recently, the WHO developed guidelines for prevention and management of snakebite in Africa. The aim of this study was to compare the pattern of first aid treatment among children presenting with snake bite/envenomation with 2010 WHO guidelines.
Methods: Data on the first aid treatment given to all children who presented with snakebite at ESUTH teaching hospital over a 7-year period was obtained and compared with the provisions of the WHO guidelines. Data was analysed using SPSS version 22.
Results: Majority (71.4%) of snake bites occurred in the rainy season, at night, involving mostly the lower limbs (85.7%). Most patients (87.5%) received one form of first aid before presentation to a hospital. Topical application of herbal concoctions to the site of the bite (37.5%) was the most common intervention. Only few (14.3%) victims were promptly brought to the health facility following snake bite. Interval from bite to presentation ranged from 1 to 12 hours (median 5hrs43 minutes). None of the subjects received first aid interventions in line with WHO recommendations.
Conclusion: Huge gaps still exist in the first aid treatment given to snake bite victims when compared with the WHO guidelines. Public enlightenment on proper first aid approaches to victims with emphasis on early presentation to health facilities need to be intensified.
Keywords: Snake Bite; First aid treatment; WHO

OGEP2

Nigerian Under-five Health Indices: Findings from the 2018 Demographic and Health Survey

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Background: Demographic and Health Surveys, conducted globally from 1984, contribute data for programme planning and implementation for improved health outcomes. The Nigeria's 2018 DHS was the 6th from 1990.
Materials and Methods: Standard materials and methods used globally for DHS data collection and analysis were employed to collect data from 40,427 households with 41,821 women aged 15-49 years and their 32,657 under-fives out of whom 11,391 were evaluated for malnutrition, anaemia and malaria parasitaemia.
Results: The Under-five and Neonatal mortality rates were 132 and 39/1000 live births respectively; 21% children received all age-appropriate vaccines. In addition, 3%, 24% and 13% were reported to have had ARI, fever or diarrhoea, respectively in the 2 weeks preceding the survey of whom 73%, 72% and 64%, respectively received care from health facilities but only 23% of the diarrhoeal cases received both ORS and zinc supplements. Of the 70.2% febrile children, 13.8% were tested for malaria and 28% received ACT. Of the 12,806 evaluated for malnutrition, 56% were stunted/severely stunted, 9% wasted/severely wasted and 2% overweight. Furthermore, 68% of 11,391 aged 6-59 months were anaemic while 29% of those aged less than 6 months were exclusively breastfed and 11% of those aged 6-23 months had optimal IYCF practices. Of 22, 785 children from households with at least one ITN, 74.1% slept under an ITN the night before the survey.
Conclusion: Nigerian Under-fives have continued to have poor health indices and therefore require effective implementation of the Child Survival Strategies to actualize their right to health.

OGEP3

Outcome of short-term emergency department observation care of children with sickle cell disease and vaso-occlusive crises: Initial experience from Southwestern Nigeria

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Introduction/Objectives: Short-term Emergency Department (ED) observation care may reduce unnecessary hospital admission in patients with sickle pain. The current study highlighted the outcome of this treatment modality of acute pain in children with SCD in Southwestern Nigeria.
Materials and Methods: Children aged 6 months to 19 years with SCD and painful crises managed as short-term ED care from July 2017 to June 2019 were studied retrospectively. The following were reviewed: sociodemographic data, pain score, type of care, length of hospital stay, return rate (proportion that returns to the hos-

pital for retreatment of unresolved pain) and in-patient transfer rate (proportion that required transfer for full admission).
Results: 122 children with SCD were admitted in ED for painful crises during the study period, of which 118 (96.7%) were managed by short-term ED observation care on 167 ED visits. The mean pain score at presentation was 7.4 on a scale of 1 to 10. The median lengths of stay were 9.3 and 11.7 hours during the first and second year respectively. About 50% of the patients were successfully managed without requiring further care. However, 17.5% and 18.1% in the first and second year respectively had short-term ED observation care terminated and converted to full admission. The return rates for acute care within one week for persistent symptoms were 33.4% and 34.7% during the first and second year respectively.
Conclusions: Dedicated short-term or ED observation care has the potential to provide effective and timely management of acute pain in children with SCD.
Keywords: Nigerian, Observation, Outcome, Sickle Cell Anaemia, Short-term ED care

OGEP4

Morbidity and mortality pattern of hospitalized children in a tertiary hospital in a semi-urban setting

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Introduction: Maternal and childhood morbidity and mortality are significant indicators of the healthcare delivery status of a nation.While most advanced countries are more worried about non-communicable diseases such as obesity, most middle- and low-income countries are still battling with preventable diseases like measles, diarrhoea, and pneumonia.
Justification of the study: Preventable childhood illnesses are prevalent in low- and middle-income countries. Therefore, identifying the most common and their pattern is important in strategizing preventive and treatment protocols.
Objectives: To determine the morbidity and mortality pattern and outcome of illnesses in our facility.
Material and Methods: This was a retrospective review of admissions into the Emergency Paediatrics Unit of Federal Medical Centre, Birnin Kudu from January to December 2018. Patients' files were reviewed, and information such as age, sex, diagnosis and outcome were extracted and entered into Microsoft excel.
Results: Five hundred and eighty-seven patients were admitted. There were 326 (55.5%) males and 261 (44.5%) females, with a male to female ratio of 1.3:1.The common diseases were severe malaria (192; 32.7%), typhoid ileal perforation (61; 10.1%), respiratory infections (50; 8.5%), severe acute malnutrition (47; 8%) and sepsis (45; 7.7%).Sickle cell anaemia and diarrhoeal disease accounted for 35 (6%) each. Furthermore, the months of August, October and November recorded the highest admission rates. Majority of the patients were successfully treated and discharged (444; 75.6%) while 46 (7.7%) deaths were recorded.
Conclusion: Preventable diseases such as malaria and enteric fever still constitute a large bulk of admissions.
Recommendations: Use of insecticide treated nets and provision of potable water should be in the forefront of government policies. Non-governmental agencies should redouble the efforts in this direction.
Keywords: morbidity, mortality, hospital admission, children

OGEP5

A 5-year review of the morbidity and mortality pattern in Paediatric Emergency Unit of the Federal Medical Centre Lokoja in North Central Nigeria

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Introduction and objective: The emergency paediatric unit (EPU) of Federal Medical Centre, Lokoja provides in-patient care for children with acute illnesses. A review of the admission pattern and outcome will contribute to the knowledge of common local childhood illnesses and will guide planning for preventive and curative interventions within the facility and the community.
Materials and Methods: A retrospective study looking at EPU admissions and case records of patients from 1st January 2014 to 31stDecember 2018 was conducted. The diagnosis and outcome were ranked, while patients' demographics were analyzed.
Results: A total of 1724 patients were admitted and managed in the EPU during the study period. Males were 1,030 (59.7%) and females were 694 (40.3%) with a M: F ratio of 1.4:1.
The common cases managed and accounting for most admissions were: sepsis, 299 (17.3%); severe malaria, 235(13.6%); acute watery diarrhea, 165 (9.5%); pharyngitis, 134 (7.7%); pneumonia, 119 (6.9%).A total of 169 (9.8%) patients died during the period with sepsis and severe malaria accounting for 56 (33 %) and 27 (15.9%) mortality cases respectively.
Conclusion: The main causes of admission and mortality in our children emergency were infective conditions and are largely preventable.Much still needs to be done to improve and sustain interventions such as vaccination, reduction of overcrowding, level of personal and environmental hygiene and use of insecticide-treated bed nets.
Keywords: morbidity, mortality, paediatrics

OGEP6

The effects of clinical audit on Paediatric patient care at Nisa Premier hospital, Abuja

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Introduction and Objectives: Clinical audit is the systematic evaluation of patient care based on measurable outcome criteria that can be applied to significant number of patients' records for the purpose of improving health systems and overall quality of care. At Nisa hospital, patient management is documented using electronic medical record (EMR). Data was collated from this to achieve the following:
1.To determine the impact of clinical audit on paediatric patient care
2.To highlight areas that need improvement
Methods and Materials: A retrospective review of the EMR of280 systematically sampled paediatric patients seen in March through October 2019 was done. The indicators measured included vital signs, developmental screening, follow-up plan and scheduled visits for chronic cases, immunization, and patient wait time. Patient satisfaction was assessed using questionnaires. We used descriptive statistics to determine patient satisfaction rates and paired *t*-test statistics to determine if significant differences between the means of the indicators pre and post intervention existed.
Results: The mean paediatric patient satisfaction (in and outpatient) rates were 92.5% and 88.2% respectively. There was a statistically significant increase in the overall mean percentages of the rates of documentation of all pediatric clinical indicators of interest from46.37 to 57.68 ($t = 3.2184$, $df = 10$, $p = 0.0092$) among the 280 reviewed patient charts
Conclusion: Paediatric clinical care has improved over time.
Keywords: audit, paediatrics, quality

OGEP7

School health services in Sokoto town, Nigeria

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Introduction and Objectives: School is often the first contact with an environment away from home and children tend to spend significant number of years learning, growing and developing in such environments. The objectives were to assess the status of school health services in selected public and private primary schools in Sokoto town and to compare the extent of implementation of school health services in both categories of schools.
Materials and Methods: A cross-sectional comparative survey of 53 randomly selected public and private primary schools in Sokoto metropolis over an 8-month period using the school health program evaluation scale questionnaire. Data was analyzed using SPSS version 20.
Results: Thirty-nine (73.6%) public and 14 (26.4) private schools were studied. Majority 41 (77.4%) of the head teachers had minimum of bachelor's degree. Thirty (56.6%) of the schools had no health personnel. Commonest health appraisal was routine teacher inspection in 41 (77.4%) schools. The main treatment facilities were first aid box 47 (88.7%) and essential drugs37 (69.8%). Availability of essential drugs was significantly higher in private schools (p=0.02). Care of emergency illness or injury was mainly via first aid treatment 45 (84.9%) with no records kept in 26 (49.1%) of the schools. Method of controlling communicable diseases was mainly by sending children home 40 (75.5%), and significantly higher in private schools (p=0.01). Only 12 (22.6%) schools provided school meals. Thirty-one (58.5%) schools scored below minimum acceptable score and there was no difference (p=0.4) between public and private schools.
Conclusion: School health services were suboptimal in both categories of schools. There is a need to urgently improve health services in schools in Sokoto town.
Keywords: School health services, Primary schools, Sokoto.

OGEP8

Sexual abuse amongst adolescents in secondary schools in Port Harcourt, South-South Nigeria: A rising public health menace

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Background: Child sexual abuse has been implicated in most of adult psychopathologies including depression, post-traumatic stress disorders, eating disorders and even suicide. However, it remains unreported due to stigmatization and cultural expectations in our environment.
Objective: To determine the prevalence and factors associated with sexual abuse amongst secondary school students in Port Harcourt, Southern Nigeria.
Method: This study was a cross-sectional study amongst secondary school students conducted in Port Harcourt from September to December 2018.A structured, self-administered questionnaire was distributed to 1162 sec-

ondary school students selected through multistage sampling technique. Data was analyzed using SPSS version 21.
Results: There were 590 females and 572 males giving a male to female ratio of 1:1.1. They were aged 10 – 20 years with a mean age of 14. 8 ± 2.1 years. The prevalence of sexual abuse was 38.9%. Of these, 51.8% were females whilst 48.2% were males, this gender difference was not statistically significant (χ^2= 0.3, p = 0.588). One hundred and forty-six (32.4%) of these abuses were by exposure to pornographic images, whilst 48 (10.6%) was by forceful sexual intercourse with penetration. Majority (41.9%) of the sexual abuse were first experienced between ages 8 – 12 years. Of these perpetrators, 60% were persons known to the subjects and only 16% were strangers.
Conclusion: The prevalence of sexual abuse and rape found in this study is high, with a changing pattern. Sexual education should be inculcated into the curriculum of the foundation school years in order to educate and protect these vulnerable ones.
Keywords: sexual abuse, adolescents, Port Harcourt

OGEP9
Stakeholders' perspectives on anti-tobacco policies in Nigerian school population and schools

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Introduction and Objectives: Tobacco is associated with grave health and socio-economic outcomes. Its use in the Nigerian school population and schools is gradually becoming an issue of public health concern. Implementation of anti-tobacco programs in schools, with the participation of stakeholders in the school system, has yielded positive health and social outcomes worldwide. The objective of this study was to identify the anti-tobacco perspectives of key stakeholders of the Nigerian school system.
Materials and Methods: A structured self-administered questionnaire was applied to stakeholders in the Nigerian school system at the 2019 Paediatric Association of Nigeria (PAN)/American Academy of Pediatrics (AAP) Workshop on a Tobacco-free School Initiative in Abuja, Nigeria. Information obtained included their professional delineation, knowledge of tobacco, and perceived challenges of anti-tobacco policies in Nigerian school population and schools.
Results: There was a total of 22 stakeholders which included key representatives of PAN, clergy, business community, press, Federal Ministry of Health, Non-Governmental Organizations as well as the Nigerian Medical, Bar, and Youth Associations. Stakeholders were knowledgeable about tobacco and its harmful effects to the body. Lack of implementation of anti-tobacco policies and laws, poor knowledge of harmful tobacco effects among the school population, statutory cultural practices, poor anti-tobacco school health program, limited access to tobacco cessation services, strong tobacco advertisement and lobby, weak anti-tobacco regulatory laws, and poor caregivers' oversight of their wards were the main challenges identified.
Conclusion: Anti-tobacco policies are fraught with multiple individual and institutional challenges. Addressing these challenges is vital to attaining a tobacco-free Nigeria school system.

OGEP10
Factors influencing absenteeism among clinical students of Bayero University Kano, Nigeria

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Introduction: Medical schools admit students with the aim of producing medical doctors competent to offer quality medical care to their communities. Regular class, ward round and bedside teaching are necessary, as experiences and skills are shared with the students during lecture periods which cannot be learnt from standard textbooks. Sometimes these students don't attend school and may lead to poor academic performance, this is absenteeism.
Materials and method: Clinical students of the Faculty of medicine, Bayero University Kano on posting in various departments were recruited using questionnaire. Biodata, student related factors, school related factors, lecturer related factors and society related factors were recorded after consent.
Results: A total of 189 students were undergoing clinical tutelage at the time of study in various departments with response rate of 92.06%.
There were 132 males and 42 females with M: F of 3.1:1. Most were single 160 (88.4%) and up to 84% had been absent within 2 months (lecture/ward round/ clinic) 82 (53.94%) of those absent had accommodation outside campus. More males (89.39%) were absent.
Society related factors were most frequently recorded, with cold weather and traffic holdup having 39% and 34.4% respectively. Student related factors included; being absent to avoid embarrassment by the consultant when late, reading late into the night and waking up late and preparing for exams.
Conclusion: Absenteeism in clinical medical students in BUK is real, causes are multifactorial and some preventable. Provision of accommodation change of attitude of teachers and students are some ways to reduce it.
Keywords: Absenteeism, Clinical students, Bayero University Kano.

OGEP11

A novel oxygen-splitter system that expands the utility of O_2 cylinder or concentrator by up to 700% - A technology report

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Background: Oxygen therapy is indispensable during neonatal respiratory support. Prompt commencement when prescribed is often hampered by limited availability of oxygen cylinders or concentrators at busy SCBUs. Where available, they overcrowd the SCBU creating movement barriers leading to injuries, neonatal infections from high traffic of dirty cylinders and noise pollution from many concentrators. Polite® Splitter System (PSS), a novel oxygen distribution gadget eliminates these barriers whilst enabling one oxygen-concentrator or cylinder to support up to eight neonates, simultaneously.
Aim: To compare outcomes of oxygen prescription in neonates pre- and post-PSS installation.
Methods: Two sets were installed and applied between September-November 2019. Records of newborns who received oxygen therapy, June-August 2019 pre-PSS installation were retrieved. Time delays to oxygen commencement following prescription were assessed in both groups. Incidences of cylinder falls and obstructions were noted.
Results: PSS supported multiple numbers of neonates using one oxygen‑cylinder or concentrator with patient-independent humidification and variable flow rates, sharing total flow up to 15LPM amongst needy neonates as individually required. Six of 105(6%) newborns received oxygen within 10 minutes of prescription pre-PSS installation, whereas 96% (72/75) post-PSS. The median (range) time delay to commencing oxygen therapy post-PSS was 0(0–90) minutes whereas pre-PSS was 74(0–1110) minutes.
Conclusion: Unlike pre-PSS group,100% of post-PSS neonates received oxygen as soon as this was prescribed, leading to prompt therapy initiation. PSS eliminated oxygen cylinder hazards and may possibly reduce rate of infections owing to minimized cylinder traffic. PSS is recommended to enhance prompt far-reaching oxygen to neonates in poor settings.
Keywords: Oxygen therapy, Newborn, polite splitter system

OGEP12

A conceptual framework on the role of backward integration in sustainable access to malaria intervention commodities in Nigeria

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Introduction and Objective: Over the last two decades investments in malaria control from global efforts and the Government of Nigeria is about $2billion with reduction in parasite prevalence to 23% from 42% in 2010. However, there is a threat of reversal of the modest gains due to unmet gaps in the resources needed. The objective of this paper is present backward integration as an option for sustainable funding of malaria intervention commodities in Nigeria.
Materials and Methods: A conceptual framework on backward integration (ownership of the supply chain) as a means of sustainable supply of antimalaria intervention commodities was developed following a critical appraisal of the resource profile and expenditure on malaria. The study analyzed secondary annual data from the National Malaria Elimination Programme, to determine the size of malarial intervention commodity needs for the period 2018-2020; the total resources committed to financing the commodity needs and identifying the financial gap.
Results: The funds needed to implement national malaria interventions, 2018 – 2020, was US$ 1,122,332,318, (₦404,039,634,643), of which the cost financed was US$ 531,228,984 (₦191,242,434,221) or 47.3%**.** This comprised of funding from the; Government of Nigeria,2.5%; Global Fund,26.7%; President's Malaria Initiative, 16.5%; and DfID, 6.2%. The funding gap was $591,103,335 (₦212,797,200,422) or 52.7% of the need. Various funding scenarios, including, advocacy for more external funding, borrowing from banks, increase in domestic resources and backward integration were evaluated for their relative merits and limitation.
Conclusions: The study concluded on the use of backward integration, based on a government-led public private partnership that will enhance local production of malaria intervention commodities that are accessible and affordable using a market-based demand and supply arrangements.
Keywords: Malaria, Backward Integration, Sustainability, Access

OGEP13

Awareness, perception and acceptance of malaria vaccine among women of the reproductive age group in a rural community in Soba, Kaduna State, North-west Nigeria.

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Introduction: Malaria vaccine is one of the novel strategies currently being evaluated for use in malaria control in children under-five.
Aim and objectives: The study aimed to determine the awareness, perception and acceptance of malaria vaccine among women of the reproductive age group in a rural community in Soba Local Government Area of Kaduna State, North-West Nigeria.
Methods: It was cross-sectional and total population sampling was used to select 236 women aged between 15-49 years. The data were collected using an open data kit (ODK-1) mounted on android tablets and entered into International Business Machine Statistical Package for Social Sciences (IBM SPSS) version 23 Software. Binary logistic regression was used to examine the relationship between the predictor and the outcome variables. A p-value of less than or equal to 0.05 was considered statistically significant.
Results: Only 131 (56%) of the subjects ever heard about malaria vaccines. Of these, 95 (72.5%) knew that the vaccine could prevent malaria and 104 (96.8%) believed that the vaccine was necessary for the prevention of malaria. Further, 89 (67.9%) subjects among those aware of the vaccine would voluntarily allow their children to get vaccinated and 93 (71%), would recommend the vaccines for others. Similarly, 98 (74.8%) of those aware of the vaccine would recommend the vaccine for the National Program on Immunisation
Conclusion and Recommendation: The awareness of malaria vaccine in the subjects was low while the perception and acceptability of the vaccine were high. None of the risk factors investigated was independently related to awareness of the vaccine. Public enlightenment and further qualitative studies to explore a context-specific perception of the malaria vaccines are recommended.
Keywords: Acceptance, Awareness, Malaria Vaccine, Perception, Rural, Nigeria

OGEP14

Conference of the Paediatric Association of Nigeria, fifty years post-inception: A feedback from conference attendees

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Introduction and Objectives: The Annual General Meeting and Scientific Conference of the Paediatrics Association of Nigeria has been a yearly event holding in different cities in Nigeria in the past 50 years. A knowledge of the experience of the conference participants will be useful for further improvement in the structuring of this event. This study set out to obtain a brief feedback from participants on their experience attending the Conference of the Paediatric association of Nigeria.
Materials and Methods: A cross-sectional descriptive study was done on participants attending the 50th anniversary of the paediatric conference in Ibadan, Nigeria. There were 133 respondents, who cut across the six geopolitical zones of Nigeria, consisting of paediatric consultants, residents and nurses. The study was done using self-administered questionnaires and data analysed using SPSS version 20.
Results: There were 92 (69.2%) females and 41 (30.8%) males. 42.9% of respondents were consultants. Most, 92 (69.2%) of the participants had attended the conference up to 3 times. The common reasons given for attending the conference were for career growth (53.4%) and information gathering (27.1%). One hundred and six (79.7%) of the participants reported that the abstract presentations in the parallel sessions were their most interesting aspect of the conference. Fifty-two (39.1%) of the participants were satisfied with all aspects of the conference while 6(4.5%) of the participants felt the accommodation arrangements for the conference should be improved upon. Suggestions made by participants of areas to be included in the schedule of activities during the conference included, city touring, aerobics/sports and mentoring activities. While 51(38.3%) of the participants were unable to select the best of the paediatric conferences they have attended, 26(19.5%) affirmed that PAN conference in Abuja 2018 was their best.
Conclusion: A regular appraisal of this yearly event is necessary for constant improvements in all aspects of the conference to suit the needs of its participants and to make it comparable with world class standards.

OGEP15

Perceptions of clients and providers on adopting differential pricing & payment without differential quality of care as business model in the Nigerian public health system

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Introduction and Objectives: Access to health care has remained very poor in Nigeria with over 80% of health expenditure being out of pocket (OOP) payment. With relatively low coverage of the health insurance and taxation resulting in the creation of the basic health care provision fund (BHCPF) cover, there is the need to explore other options of health care financing. This study examined a model based on differential pricing & payment without differential quality of care as business model among clients and providers in the Nigerian public health system.
Materials and Method: Clients and healthcare providers from 4 public hospitals in Abuja voluntarily self-completed pretested questionnaires within 5 months period. Multivariate analysis determining independent responses predictive of outcome and hypotheses testing with parametric, non-parametric statistical techniques: c^2, ANOVA, validity/reliability with Cronbach's Alpha were performed.
Results: A total of 415 participants (204 clients and 211 health care providers) were recruited with m: f ratio 1.1:1. A majority of both clients, 179 (87.3%) and health care providers, 173 (82.0%) supported adoption of the model ($\mathbf{c}^2$=2.667, p= 0.102). The proponents believed that strategic implementation of the model would improve Nigerian health system funding, quality of service, equity, healthcare access, indices, uptake of NHIS, poverty reduction, wealth redistribution, technological advancement, research, and reduction in capital flight. More than 50% believed implementation would be feasible ($\mathbf{c}^2$=26.94, p=0.000) and reliable ($\mathbf{c}^2$=27.29, p=0.000). Multiple regression analysis of the potential predictor variables showed capital flights (t = 13.058, p = 0.000, 95% CI 1.196 to 1.620) and quality of care (t = 2.913, p = 0.004, 95% CI 0.085 to 0.440) as significant. Adjusted R^2= 0.074, F=162.008 and Cronbach's Alph= 0.895 revealed high reliability and validity of the study.
Conclusion: Differential pricing and payment without differential quality of care as business model in Nigerian public health system revealed positive implications. Added values like revenue generation and credence to existing studies from the findings are discussed.

OGEP16

Poisoning in children admitted to a tertiary hospital in North-western Nigeria: A five-year review

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Introduction: The World Health Organization (WHO) estimated that about 3 million cases of poisoning occur worldwide with 99% fatality occurring in developing countries. Knowledge of the epidemiology of childhood poisoning will help in formulating preventive strategies.
Objectives: To determine the pattern and outcome of poisoning among children admitted to the Emergency Paediatric unit of Aminu Kano Teaching Hospital (AKTH) over a five-year period (February 2015 to June 2019).
Materials and Methods: This was a hospital based retrospective study. Records of patients aged 1 month to 13 years admitted into the Paediatric Emergency Unit of AKTH were reviewed. Cases of snake envenomation, food poisoning and outpatients were excluded. Information obtained were-age, sex, date of admission, type of poisoning, route of poisoning, first aid, duration of arrival from ingestion to presentation and outcome.
Results: During the study period, 66 children were admitted for acute poisoning. Patient's age ranged from 2 months to 12 years (mean 2.47 ± 2.304). Most of the patients (74.2%) were in the 1-3 years age range. Thirty-eight (57.6%) were males while 28 (42.4%) were females. Male to female ratio was 1:0.7. Kerosene was the commonest agent involved (37.9%). This was followed by corrosives, drugs, organophosphates, rat poison, carbon monoxide and insecticides. Ninety-seven percent of the patients recovered while 3.0% died.
Conclusion: Health education and strict policies against sale of corrosives and agricultural products are needed for prevention against accidental childhood poisoning.
Keywords: Poisoning, childhood, pattern, outcome

PGEP1

Nigerian adolescent health indices from 2018 Demographic and Health Survey: A call for action

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Introduction: Adolescents (persons aged 10 to 19 years) bear a double burden of childhood and adult diseases during this period of rapid growth and development. They constitute a significant majority of youths (age 10-24 years) who form about a third of the Nigerian population and are expected to double in number by 2025. This paper reviews Nigerian adolescent health indices be-

tween 2013-2018 to identify their health needs.
Materials and methods: Data on targeted adolescents were extracted from the 2018 NDHS for presentation. The 2018 NDHS employed standard methods, materials and analysis tools as described in the report.
Results: Of the total 41,821women and 11,868 men aged 15-49 years interviewed, 8,448(20.2%) female and 2,415(20.2%) male were adolescents aged 15-19 years. Their birth rate was 107 births/1000 women and 19% had begun childbearing, 14% had at least a live birth, 4% were pregnant and 60.5% anaemic. Of the 1,927 married or sexually active unmarried adolescents, 96.3% did not use any contraceptive method, 2.3% applied modern contraception, 0.9% male condoms and 0.1% emergency contraception. Only 11.5% females and 12.2% males had appropriate knowledge about HIV prevention. Similarly, among those who had delivered 57.4% received ANC from skilled providers, 46.7% had over 4 visits, 28.6% had facility delivery and 32.4% post -natal clinic check-up. Younger adolescents, the less educated, rural dwellers and those from poorer families had poorer health indices.
Conclusion: The health indices of Nigerian adolescents are poor. They need effective implementation of existing and new policies to ensure they enjoy their right to health
Keywords: Adolescents, Health indices, Nigerian Demographic and Health Survey 2018

PGEP2

Clinical reasoning assessment rubrics for paediatrics and child health.

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Introduction: Assessment is a process of gathering information that reflect how well a learner is doing against a set of purposes, learning criteria or curriculum. When assessments have been concluded, judgment of the learner's competence in relationship with an intended outcome is performed as evaluation. Clinical reasoning is a complex and interesting tool for medical practitioners and learners to use in making accurate diagnosis to prevent medical errors. In the formative period of medical undergraduate education, providing rubrics to assess the performance of learners will help facilitators and learners understand their progress in clinical reasoning.
Objective: To develop clinical reasoning assessment rubrics for learners and facilitators of learning so that progress of learners can be judged objectively.
Methods: A clinical reasoning summary sheet filled by learners will be assessed for accuracy in thought processes by the facilitators of learning. These will be scored 1 through 5 for each domain of the summary template based on set criteria and the total collated. There will be 10 domains from system (s) involved through to pathologic diagnosis and plan.
Discussion: Assessing the formative learning experience of the learner will help determine achievement and learning gaps, predict performance and diagnose teaching methods of the faculty. This tool can also help generate data on strengths and weaknesses of individual learner and inform appropriate remediation activities before final summative assessment and graduation.

PGEP3

Pattern of discharge against medical advice (DAMA) in the Paediatrics Department of Bingham University Teaching Hospital (BHUTH), Jos Plateau state

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Introduction and Objective: DAMA is a major health problem in developing countries, with the paediatric age group being the most vulnerable, as they have not attained age of consent. The study aimed to document the prevalence and related clinical factors associated with DAMA in the Paediatrics department of BHUTH Jos.
Material and Methodology: A 34-month-review of medical records of cases of DAMA that occurred between January 2017 and October 2019 was done. Information extracted included biodata, diagnosis, duration of hospital stay, reason for discharge and the person who signed for discharge.
Results: Of 2,258 patients admitted into the department, 120 (5%) were cases of DAMA, out of which 82 records were available for analysis. The M:F ratio was 1:1.2. The Paediatric Medical Ward (PMW) had 30 (2%) cases, while 29 (9%) and 23 (5%) cases were from the out-born and in-born SCBU respectively. The request for DAMA in PMW was highest in children diagnosed with severe malaria (27%), while prematurity with complications accounted for the commonest reason in the out-born (55%) and in-born (35%) SCBU respectively. The average number of days spent before discharge was 5 days in PMW, 8 days in out-born SCBU and 4 days in -born SCBU. Signatories for the discharge against medical advice were mainly their fathers (50%).
Conclusion: The prevalence of DAMA was high among the vulnerable paediatric age group. Efforts must be made to stem this growing trend.
Keywords: DAMA, Paediatric, Jos

PGEP4

One-year review of severe malaria in a health facility in North western Nigeria

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Background and objectives: The World health Organization defined severe malaria as the presence of P f*alciparum* in peripheral blood in the presence of any life threatening and fatal complication. In Nigeria, an estimated 300,000 malaria related deaths occur in the country yearly. Disease manifestation is influenced by age, exposure and immune status. Debilitating neurologic sequale was observed to have occurred in 1.5 to 29% of cerebral malaria survivors. This study aimed to review the demographic characteristics, presentation and outcome of patients admitted with severe malaria in a tertiary health facility
Methodology: It was a retrospective study of patients admitted with severe malaria in the paediatrics unit of Murtala Mohammad specialist Hospital, Kano from January to December 2017. Case files of the patients were used to retrieve the data and it was inputted into excel sheet. Charts and tables were used to represent data
Results: Majority of the patients were males (59%) and aged under 5. Severe anaemia (72%), multiple convulsions (50%) and prostration (40%) were the commonest manifestations observed. Severe anaemia occurred more amongst those aged less than 5 years and these patients were significantly more likely to stay for less than 1 week on admission. Cerebral malaria occurred more amongst those older than 5 years and accounted for most deaths. Mortality was 1.8% with complications occurring in 7% of survivors.
Conclusion: Most of the patients with severe malaria in this facility presented with severe anaemia. Mortality rate was low and cerebral malaria accounted for most deaths.
Key words: Severe malaria, presentation, outcome

OHAO1

Assessment of haematological parameters in anti-retroviral therapy (ART)-naive HIV-positive children in Enugu, Nigeria

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Introduction and Objective: The haematological complications such as anaemia, neutropenia and thrombocytopenia are associated with HIV disease progression and reduced survival and they have been documented to be the second most common causes of morbidity and mortality in children. Hence, this study sought to assess the haematological parameters in HIV-positive, ART-naïve children.
Subjects and Methods: This study was a prospective observational study carried out at University of Nigeria Teaching Hospital, Enugu, involving a total of 200 children (100 test subjects and 100 test controls). Biodata was collected with a proforma and blood samples were subsequently collected and analyzed for full blood count (FBC) and CD4 counts. Data generated were analyzed with Statistical Package for Social Sciences (SSPS) version 22.
Results: The results showed that anaemia with a prevalence of 60%, was significantly associated with HIV infection unlike neutropenia and thrombocytopenia. It was also shown that the age of the children was inversely and significantly associated with anaemia but not with neutropenia and thrombocytopenia. Likewise, CD4 count was inversely and significantly associated with anaemia.
Conclusion: The study showed that anaemia is quite common and more prominent with decreasing age of the children. The study also suggested that haemoglobin concentration estimations can be useful as one of the criteria for commencement of anti-retroviral medications especially in resource-poor centers or localities where CD4 count is not readily available. It is recommended that haemoglobin concentration less than 10mg/dl can be used as a cut-off mark for diagnosing anaemia.
Keywords: HIV, Antiretroviral therapy naïve, Haematological parameters

OHAO2

Immune Thrombocytopenic Purpura treated with vincristine following poor response to corticosteroids: a case report

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Introduction and Objective: Immune Thrombocytopenic Purpura (ITP) is a rare disease. Treatment usually involves the use of corticosteroids and intravenous immunoglobulins. Although vincristine is sometimes recommended for chronic ITP, its role in newly diagnosed cases is yet to be established. We report a case of ITP in a child which was resistant to steroids but responded to vincristine.
Materials and Methods: This is a case report of a 5-year -old boy with ITP that was managed at the University College Hospital Ibadan and followed up for 18 months.
Results: He presented with easy bruising and generalized skin rash of 5 days' duration. On examination, he had purpuric patches on his trunk and upper limbs and subconjuctival haemorrhage. Examination of other systems were within normal limits. His haematocrit was 35%, leucocyte count and morphology were normal and

platelet count was 2,000/cmm. His bone marrow was normocellular with increased megakaryocytes. A diagnosis of ITP was made. He was transfused with platelets concentrates and treated with 1mg/kg of prednisolone daily for 2 weeks with no response, followed by high dose intravenous methylprednisolone of 30mg/kg for 3 days with a transient rise in platelet count. He was then given weekly intravenous vincristine at 1.5mg/m^2 (had 2 doses) and platelet count rose to 486,000/cmm after 10 days and remained normal along with other components of the haemogram through 18 months of follow up.

Conclusion: Intravenous vincristine is useful in the treatment of ITP which fails to respond to corticosteroids and is recommended in such circumstances.

Keywords: ITP; Thrombocytopenic; Purpura; Vincristine

OHAO3

Comparison of WHO and sickle cell disease growth reference standards for assessment of severe acute malnutrition in Nigerian children with sickle cell disease

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Background: The most widely acceptable method for assessing nutritional status in children with chronic diseases like sickle cell disease (SCD) is through the use of a reference standard specific for that disease.

Objective: We compare the WHO growth reference and the SCD-specific growth reference standard in assessing severe acute malnutrition in children with SCD.

Methodology: This was a cross-sectional cohort study involving 803 children with SCD ages 5 to 12 years from Stroke Prevention in Nigeria (SPRING Trial #NCT00072761). We determined the proportion of children classified as having severe acute malnutrition, defined as BMI Z-score < -3, using the WHO growth reference standard and compared with SCD-specific growth reference from Silent Infarct Transfusion-SIT Trial (ClinicalTrials.gov: NCT00072761) population. We also determined whether severe acute malnutrition was associated with decreased mean hemoglobin levels or abnormal Transcranial Doppler (TCD) measurements (greater than 200 cm/second).

Results: The median age of participants in the SPRING cohort was 8.2 years, approximately half were male (49.4%). The application of the WHO growth reference resulted in lower mean BMIz scores, -2.3 and-1.2; $p<0.001$ than when SCD-specific growth reference (from SIT population) was used. The use of the WHO growth reference when compared to the SCD-specific growth reference also resulted in a higher prevalence rate of severe acute malnutrition (28.6% vs. 6.4%; $p<0.001$). Regardless of the growth reference standard, mean hemoglobin level and abnormal TCD measurements were not associated with severe acute malnutrition.

Conclusion: WHO growth reference overestimates the prevalence of severe acute malnutrition in children with SCD when compared to a SCD-specific growth reference standard.

Keywords: Severe acute malnutrition, sickle cell disease, Growth reference standards.

OHAO4

Evaluation of hearing thresholds of children and adolescents with sickle cell disease in Ahmadu Bello University Teaching Hospital, Zaria

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Background: Sickle cell disease (SCD) is the most common haemoglobinopathy, resulting from the homozygous or heterozygous presence of altered haemoglobin (HbS, HbS, HbC, Hβ-thalassaemia). Among the clinical manifestations of SCD, vasoconstriction is the most frequent, occurring in multisystemic vessels including the auditory system. The hearing loss typically found in SCD is sensorineural, with great variability in the characteristics and prevalence. It was on this note that this study aimed to evaluate and compare with control the hearing thresholds of children and adolescents with SCD in steady state.

Method and Materials: A hospital-based, cross-sectional study which assessed children and adolescents 5 - 16 years of age, of both sexes. One hundred and twenty-five (125) participants with sickle cell disease in steady state (SCD subject group) attending haematology clinic of ABUTH and 125 apparently healthy participants with AA haemoglobin were recruited using table of random number. All participants had normal otoscopy, middle ear findings, defined as the presence of tympanometric curve type 'A' (and a contralateral acoustic reflex threshold) and pure tone audiometry in a sound treated

booth.
Results: The mean hearing thresholds among subjects (20.0±2.5 dB; t= 12.918; p= <0.001; df=216) without SNHL and the controls (14.2±3.4 dB; t=12.918; p<0.001; df=216) were statistically significant at both low (250 – 1KHZ) and high (2KHZ – 8KHZ) frequencies in both ears. The mean hearing thresholds among subjects (SCD) increases with advancing age at all frequencies in both ears. The mean hearing thresholds in subjects (SCD) by gender distribution showed no statistically significant difference between males (21.1dB both ears) and their female (21.2dB both ears) counterparts.
Conclusion: This study revealed that children with sickle cell disease perceived hearing at a higher frequency hearing level albeit but normal compared to the apparently healthy children in the general population. It also demonstrated steady increase in hearing thresholds with advancing age at all frequencies.
Keywords: Hearing threshold, Sensorineural hearing loss, Sickle cell disease, Sickle cell crisis.

OHAO5

Digital gangrene, multifocal abscesses and chronic osteomyelitis in a child with sickle cell disease: a case report

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Introduction: Infection is common in Sickle Cell Disease; Streptococcus pneumonia, staphylococcus and salmonella species are frequent pathogens identified. Abscess formation and osteomyelitis are commonly reported events however gangrene is an uncommon complication.
Case report: A three-year-old boy with sickle cell anaemia presented with fever, bone pains and gangrene of the digits. The gangrene affected the toes, distal phalanges of right index and middle fingers, and the tip of the left index finger. His temperature was 39^{o}C. Peripheral pulses were palpable. His full blood count showed progressive increase of the WBC and fall in the haemoglobin from the first to third week, but the clotting profile was normal. He had three blood cultures from the first, to third week: only the first yielded Proteus vulgaris. Arterial Doppler scan showed reduced flow in right ulnar and both dorsalis pedis arteries. X-ray of the upper and lower limbs showed chronic osteomyelitis. He received blood transfusion, fresh frozen plasma and heparin, ceftazidime and azithromycin; other medications were ibuprofen, morphine and intravenous fluid. Orthopaedic surgeon reviewed and suggested disarticulation when the progression has stopped. Incision and drainage of anterior tibia abscesses was done; and pus aspirate showed gram-negative cocci in clusters, but culture was negative.
Conclusion: Early recognition and prompt treatment of infection will minimize the development of these devastating complications of sickle cell anaemia.
Keywords: Digital gangrene, multifocal abscess, chronic osteomyelitis, Sickle cell anaemia

OHAO6

Herniotomy for a misdiagnosed abdominal Burkitt lymphoma in a 4-year-old Nigerian child

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Introduction: Burkitt lymphoma is the commonest childhood tumor in tropical Africa, accounting for between 19% and 36% of childhood cancers in high risk areas. It commonly presents as jaw or abdominal masses. Occasionally however, lymph node swelling in the cervical, inguinal or axillary region may be the first presenting feature.
Objective: To raise awareness among medical practitioners at all cadres about atypical presentation of Burkitt lymphoma as an inguinal swelling and the need for thorough evaluation to differentiate it from inguinal hernia.
Case report: We report a case of Abdominal Burkitt lymphoma misdiagnosed as Inguinoscrotal hernia in a 4-year-old boy. He presented at the Federal Medical Centre Lokoja with recurrent groin mass, abdominal distension, fever, and generalized body swelling. There was a history of herniotomy at the referral centre but patient presented with a recurrence of the inguinal swelling and multiple abdominal masses. The diagnosis of Burkitt lymphoma was confirmed by histology of a trucut biopsy sample of the mass showing monomorphic small blue cells with multiple nucleoli and basophilic cytoplasm. Significant resolution of the masses was also demonstrated with the commencement of chemotherapy.
Conclusion: Burkitt lymphoma is one of the commonest tumours in Nigerian children and presents atypically with lymphadenopathy. We therefore recommend adequate evaluation of all children presenting initially with cervical, inguinal or axillary swelling to ensure accurate diagnosis.
Keywords: Burkitt lymphoma; inguinal swelling

OHAO7

A 2-year hydroxyurea trial in children with SCD in a tertiary health center in Nigeria: Feasibility and effects of therapy. A retrospective review

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Introduction/Objectives: Hydroxyurea is a cheap and cost-effective treatment option for SCD. Awareness of benefits and safety of hydroxyurea may reduce the phobia associated with its use in Nigeria. We determined feasibility, safety and clinical benefits of hydroxyurea in Nigerian children with SCD.
Materials and Methods: A retrospective review of SCD children aged 14 months to 18 years who were offered hydroxyurea (15mg/kg/day followed by dose escalation) from January 2017 to June 2019. Information was retrieved from case files and questionnaires. Endpoints were feasibility (adherence to drugs, clinic and laboratory tests), benefits (hematologic, clinical, parental satisfaction), safety (safe starting dose, toxicity).
Result: One hundred and sixteen patients were offered hydroxyurea at a mean dose of 18mg/kg/day. Therapy resulted in significant increase in hemoglobin and fetal hemoglobin and a reduction in white cell counts. Majority (91.25%) reported improvement in general well-being, reduction in bone pain (83.3%), abdominal pain (62.3%), blood transfusion (56.1%) and hospital admissions (71.9%). Six percent expressed dissatisfaction with hydroxyurea based on cost, side effects and efficacy. There was good adherence to therapy, doctor's appointment and laboratory tests (88.9%, 88% and 80% respectively). Transient neutropenia occurred in 3 patients. No significant hepatic or renal toxicity observed. Common side effects were abdominal pain (18.4%) and headache (13.2%).
Conclusion: Hydroxyurea at 15mg/kg/day is safe, effective and feasible in Nigerian children with SCD if attention is paid to patient/family education and support services. Wider use of hydroxyurea for Nigerian children is recommended. Future research may focus on effectiveness of fixed low dose and infrequent use.
Keywords: sickle cell disease, hydroxyurea, feasibility, safety

OHAO8

Spectrum of renal disorders among admitted children with sickle cell disease in a paediatric nephrology unit

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Introduction: Patients with sickle cell disease (SCD) are at increased risk of developing a spectrum of renal complications referred to as sickle cell nephropathy (SCN).SCD patients are susceptible to acute injuries that increase risk of progression to end-stage renal disease. We therefore sought to determine the spectrum of renal disorders necessitating hospital admission in these children for purposes of advocating for appropriate preventive measures and management.
Methods: Data obtained from the data base of the PNU of the UCH Ibadan on children with SCD aged below 18 years, admitted with clinical features of renal dysfunction over a 10-year period was studied. Their demographic profiles, the clinical syndromes they suffered, and treatment outcomes were analyzed.
Results: Forty-one children with SCD had symptomatic renal disorders, 74.4% being males. Their ages ranged between 2 and 17 years with 9.8% aged below 5 years; 43.9% between 5 and 10 years while 46.3% were aged ≥10 years. AKI occurred in 46.3% of the patients, followed by nephrotic syndrome (23.9%), urinary tract infection (9.8%), chronic kidney disease (CKD) in 2.4% and others. The diagnosis of SCD was made in two patients for the first time when they presented in AKI.AKI patients were dialyzed. In-hospital mortality was 4.9%.
Conclusion: A high index of suspicion is needed to avoid missing the major disorders highlighted in this study and tests of kidney function should be mandatory.
Keywords: Sickle Cell Disease, Sickle cell nephropathy, children, Renal Disorders.

OHAO9

Estimated glomerular filtration rate in children with sickle cell anaemia on hydroxyurea

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Background: Glomerular hyperfiltration (GH) occurs frequently in sickle cell anaemia (SCA), progressing to reduction in the glomerular filtration rate (GFR). Some studies reported preservation of GFR with hydroxyurea (HU) use.
Objective: This study aimed at describing the estimated GFR (eGFR) of children with SCA taking HU at a tertiary hospital.
Materials and Methods: Paired data at baseline and follow-up was culled from clinic records between 2016 and

2019. eGFR was calculated using Schwartz formula. eGFR > 135, 60-135 and <60 mls/min/1.73were defined as glomerular hyperfiltration, normal and abnormal, respectively.

Results: Sixty-three children with mean age of 7.6 ± 4.2 years were studied. The mean serum Cr at baseline and follow-up were 55.8 ± 19.9 and 58.0 ± 24.5 umol/L (p = 0.58) while the mean eGFR were 121.6 ± 55.8 and 130.2 ±58.8 mls/min/1.73 m^2 (p = 0.40), respectively.

At baseline 42 (66.6) subjects had normal eGFR, 3 (4.8%) abnormal and 18 (28.6%) GH. At follow-up, 37, 4 and 22 were in each category. The differences were not statistically significant.

One subjects from the abnormal group normalized at follow-up. Of the baseline normal group, 2 (4.8%) became abnormal, 13 (31.0%) developed GH while 27 (64.3%) remained normal. Nine (50%) subjects with GH at baseline had normalized at follow-up.

Conclusion: This study demonstrated 28.6% prevalence of GH in HU-naive SCA, of which 50% normalized with HU treatment.

OHAO10

Asymptomatic bacteriuria in children with sickle cell anaemia in a tertiary hospital in Kano State North-west Nigeria

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Introduction: Urinary tract infection is a common cause of morbidity in children with sickle cell anemia (SCA) and may present as asymptomatic bacteriuria. Asymptomatic bacteriuria is often under-diagnosed and may lead to long term renal complications.

Objectives: The study compared the prevalence of asymptomatic bacteriuria, bacterial isolates and their antimicrobial sensitivity in children with SCA and children without SCA seen at Aminu Kano Teaching Hospital.

Materials and Methods: This was a prospective cross-sectional study that recruited 139 children with SCA in stable state and 139 children without SCA aged 1-15 years. All children were tested for asymptomatic bacteriuria using clean catch or mid-stream urine samples. Children whose urine samples yielded significant bacteriuria ($\geq 10^5$cfu/ml) had a repeat urine culture within a week to confirm asymptomatic bacteriuria.

Results: Both study groups had a mean age of 4.25 years ± 3.04, and a male: female ratio of 1.4:1. The prevalence of asymptomatic bacteriuria was higher in children with SCA (5.8%) compared to children without SCA (1.4%). Asymptomatic bacteriuria was more common among females in both study groups. The most common isolate in both groups was E. coli, other organisms include Klebsiella spp and S. aureus. Majority of the isolates were sensitive to Ofloxacin, Ciprofloxacin, Gentamycin and Nitrofurantoin but resistant to commonly used antibiotics like Amoxicillin and Cotrimoxazole.

Conclusion: Asymptomatic bacteriuria is commoner in children with SCA when compared to children without SCA. It is therefore important that periodic testing for asymptomatic bacteriuria should be included as part of standard of care for children with SCA.

Keywords: Urinary tract infection, asymptomatic bacteriuria, children, Sickle cell anaemia.

OHAO11

Cerebral blood flow velocities and cognitive functions in children with sickle cell disease

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Background: Neurological complications have been reported as the most devastating complications of sickle cell disease. Cerebrovascular accident (CVA) and silent cerebral infarcts have been associated with significant decline in cognitive functions and other neurocognitive deficits in SCD.

Objective: To determine the relationship between cerebral blood flow (CBF) velocities and neurocognitive functioning measured by the processing speed index.

Methods: A cross sectional study on children with SCD, aged ≥ 6 years. Cognitive function was measured by the processing speed index (PSI) of the Wechsler Intelligence Scale for Children- Fourth edition and flow velocities were measured in the internal carotid and the middle cerebral arteries using non-imaging TCD ultrasonography.

Results: One hundred and twenty children aged ≥ 6 years, with homozygous sickle cell disease were enrolled into the study; 75 (62.5%) males and 45 (37.5%) females. Their ages ranged from 6 to 14 years, with a mean of 119.95 (SD 33.01) months. The mean processing speed intelligence quotient (PSIQ) was 99.91 (SD 10.07). TCD velocities were standard, conditional and abnormal risk in 82 (62.3%), 32 (26.7%) and 6 (5%) of the participants respectively. There was a significant negative correlation between TCD class and PSIQ ($r = -0.407$; $p < 0.001$).

Conclusion: Children with elevated TCD velocities are at an increased risk of cognitive decline. This observation may be a pointer to the presence of silent cerebral infarcts in the absence of overt symptoms of stroke. TCD velocities may predict the need for cognitive assessment in children with SCD.

Keywords: Sickle cell, Transcranial Doppler, Cognition, Cerebral Blood flow

OHAO12

Ischaemic stroke in children with sickle cell disease in Ibadan in the post-SPIBA era

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Background: Stroke is one of the most devastation complications of sickle cell disease (SCD). TCD helps to identify children at risk and chronic transfusion reduces the risk of primary stroke by >92%.
Objective: To determine the incidence of ischaemic stroke in children with SCD seen at the UCH, Ibadan in the last decade, the post-SPIBA era.
Methods: All children with SCD presenting at the Paediatric Haematology and Paediatric Neurology units of the University College Hospital, Ibadan from July 2009 – July 2019 were carefully evaluated for features of stroke. Diagnosis of stroke was clinical and stroke type was determined by cranial CT scan.
Results: A total of 39 ischaemic strokes occurred in 1679 children with SCD giving a stroke prevalence of 2.3%. The ages at stroke event ranged from 2 to 13 years, with a mean age of 91.9 (39.2) months. Two of the 39 strokes occurred in children with previously diagnosed abnormal risk TCD velocities. The stroke rate in children with at least one previous TCD was significantly lower than in those with none ($p<0.001$) and they were less likely to have residual motor disability. Intellectual disability, epilepsy, severe motor disability and school dropout were recorded in 10 (25.6%), 4 (10.3%), 7 (17.9%) and 5 (12.8%) children respectively.
Conclusion: Routine TCD screening with HU therapy has resulted in a significant drop in stroke rates and severity of disability in children with SCD in Ibadan. There is an urgent need to improve the access to routine TCD screening in Nigeria.
Keywords: Sickle cell disease, stroke, prevention, disability.

OHAO13

Hydroxyurea to lower TCD velocities and prevent primary stroke: The Ibadan SPIBA sickle cell anaemia cohort

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Background: About 10% of children with sickle cell disease (SCD) will have a stroke before their 20th birthday. Chronic blood transfusions for stroke prevention in SCD is faced with a myriad of challenges in resource-poor settings.
Objectives: To evaluate the response to hydroxyurea therapy in children with SCD and elevated TCD flow velocities in the Ibadan SPIBA cohort.
Methods: Children with SCD aged 2-16 years were enrolled into the Stroke Prevention in SCD in Ibadan (SPIBA) cohort. All had TCD examination at enrolment and thereafter every 3 months or annually based on the stroke risk classification. Hydroxyurea (HU) was initiated at 5mg/kg in children with TCD velocities > 170cm/sec and gradually increased to the maximum dose tolerated. Response to HU was monitored by TCD measurements, growth indices and haematological parameters.
Results: Seven hundred and thirty-nine children with SCD were enrolled in the last decade. TCD risk classifications were standard, conditional and abnormal risk in 510 (69.0%), 159 (21.5%) and 70 (9.5%) respectively. The mean TCD velocities at commencement of HU was 198 (15.8) cm/sec and this showed a significant decline to 177 (21.5) cm/sec on HU. Adverse reaction to HU was recorded in one child. The mean packed cell volume showed a significant rise from 23 (3.6%) to 27 (3.7%) and the frequency of VOC declined from 3-4/year to <1/year ($p<0.001$)
Conclusion: Hydroxyurea significantly lowers TCD velocities in children with SCD who are at an increased risk of stroke with minimal adverse effects and significant beneficial effects on haematological parameters and general well-being.
Keywords: Transcranial Doppler, Sickle cell disease, Stroke, Hydroxyurea.

OHAO14

Clinical spectrum and treatment outcome of retinoblastoma in Kano Northern Nigeria

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Background: In contrast to high income settings where retinoblastoma (RB) is highly curable, most children with RB in low-income countries die from the disease. We determined the prevalence, clinical spectrum, and treatment outcome of RB in Kano.
Methodology: This was a retrospective study of children with histologically confirmed diagnosis of RB, who were admitted at the paediatric oncology unit of Aminu Kano teaching hospital, Kano between July 1, 2017 and June 30, 2019.
Results: One hundred and seventy-four children were admitted with childhood cancers during the study period, of these 57 (32.8%)were RB. Of the 57 patients with RB, 48 (84.2%) were included in the final analysis. The median age at diagnosis was 36 months (1 – 84), with a male predominance of 58.3%. The median age at

first symptom was 12 months (1 – 60), and the mean (SD) lag time (time to diagnosis) was 19.52 months (10.56). Thirteen (27.1%) patients had bilateral disease, 2 had positive family history of RB and 14 (29.2%) patients had metastatic disease at diagnosis. In majority 38 (79.2%) of patients, the tumour was extraocular at presentation, and all had exenteration and systemic chemotherapy. Sixteen (33.3%) completed chemotherapy after surgery. Of those who did not complete a planned chemotherapy, 7(14.6%) died during treatment leaving 25 (52.1%) who met the criteria for treatment abandonment.

Conclusion: Vast majority of children with RB were diagnosed with advanced disease, in addition to high rate of treatment abandonment, resulting in considerable overall poor treatment outcome. In low income settings, improved RB survival can be achieved through public enlightenment, and education of health care workers on early identification and timely referral of cases to appropriate treatment centers.

Keywords: Retinoblastoma, Clinical spectrum, Low income setting, treatment outcome

OHAO15

C-Reactive Protein and Pro-calcitonin levels in children with Sickle Cell Anaemia at ABUTH, Zaria

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Background: Many conditions in sickle cell anaemia (SCA) mimic sepsis with almost all accompanied by features of systemic inflammatory response syndrome (SIRS). Culture results take 48-72 hours with low yield consequent on widespread pre-presentation use of antibiotics.

Many patients are treated presumptively with antibiotics which may lead to over-medicalization. A diagnostic marker differentiating sepsis from SIRS in SCA patients is needed.

Methodology: Twenty-five SCA patients admitted in a teaching hospital were divided into No SIRS, SIRS and Sepsis groups. White blood cell count, blood culture, C-Reactive Protein (CRP), high sensitive CRP (hsCRP) and Procalcitonin (Procal) were evaluated.

Results: Study subjects had a mean age of 8.6 ± 4.4 years. There were 2, 11 and 12 patients in No SIRS, SIRS and sepsis groups. Five blood cultures (20%) were positive. One subject in No SIRS, four in SIRS and nine in Sepsis group had elevated Procalcitonin levels. The CRP values were elevated in all subjects in No SIRS, 10 out of 11 in SIRS and all 12 in the Sepsis groups. hsCRP was elevated in all groups. All culture positive and nine out of 20 culture negative cases had elevated levels of Procalcitonin. CRP values were elevated in 19 out of 20 culture negative and all five positive cases. hsCRP values were elevated in all the 30 negative and 5 positive subjects.

Conclusion: Procalcitonin is a better marker of sepsis in SCA patients than CRP. A larger study is needed to further validate the findings.

OHAO16

Pattern of Hemoglobin Phenotype distribution in newborns of major ethnic groups in the rural and urban communities of Oshimili Local Government Areas (LGAs) of Delta State.

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Introduction: Sickle cell disease contributes significantly to morbidity and mortality particularly in infants and young children. There are links between Malaria endemicity and the high prevalence of the various known haemoglobin phenotypic patterns. However, studies in this domain are relatively few in our environment.

Objective: This household cross sectional survey describes hemoglobin phenotypes of newborns of major ethnic groups in the rural and urban communities of Oshimili Local Government Areas (LGAs) of Delta State.

Method: This multistage stratified random sampling proportionately selected Newborns from households in rural and urban communities. Sample analysis was by High Performance Liquid Chromatography (HPLC). Frequencies, means and standard deviations, Chi square and Fischer's exact test studied categorical data.

Results: There were eight haemoglobin phenotypes : HbAA; 240 (73.6%), HbAS; 75(23.1%), HbAC; 1 (0.3%), HbAD; 4(1.2%), HbSS;1(0.3%), HbSβ^+;2 (0.6%), HbSC;2(0.6%), and HbDD;1(0.3%). There was no significant difference in the pattern of distribution of the haemoglobin phenotype between the rural and urban (p value= 0.076) and between the ethnic groups (p values – HbAA, AS, AD, HbAS, Sβ^+, SC, SS and DD was 0.89, 0.64; 0.06, 0.11, 0.15, 0.08 and 0.08 respectively). However, HbAC and HbCS (p values 0.01 each), were found among the Yoruba ethnic group. There was higher frequency of Hb D (5/326; 1.5%) and Sβ^+ (2/3260; 6%) in this study.

Conclusion: A wide haemoglobin phenotype distribution and a high frequency of Hb D has been identified. The HbAC was predominantly among the Yorubas.

Key Word: Hb- Phenotype distribution; Urban, Rural OSHIMILI

PHAO1

A case report of hemangiomaassociated BCGitis (A rare reason for vaccination refusal)

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Introduction: Infantile haemangioma (IH) is the most common vascular tumour of infancy occurring in up to 10 % of infants. BCG (Bacille Calmette-Guérin) vaccine, a live attenuated vaccine derived from Mycobacterium bovis, is one of the childhood vaccines under the NPI schedule. Abnormal reactions to BCG vaccine occur in 1% to 2% of cases, one of which is BCGitis, a suppurative reaction that takes long to heal and may require specific treatment.
Materials: Patient's case note.
A product of term gestation delivered via emergency C/S due to maternal eclampsia. A 5-month old male infant presented to us with red patch of skin on the left shoulder and upper arm noticed from birth which rapidly increased in size and thickness following BCG injection at the site. There was associated deepening in color to bright red. It spread to involve the whole left side of anterior chest wall, left shoulder and the left upper arm. The BCG site ulcerated, with subsequent yellowish discharge which persisted till presentation. No dysmorphic features or systemic features were present except growth failure. Patient had anti-tuberculous drugs and oral propranolol with remarkable response.
Conclusion: The index case had a dual condition that in isolation may resolve spontaneously. However, it is still unclear whether the rapid proliferation of the hemangioma after the BCG vaccination was just a coincidence or was caused by the immunological reaction to BCG vaccination. This, however, became a reason for poor vaccine uptake in the infant, as parents refused to continue with child's scheduled immunisation.
Keywords: infantile hemangioma, Bacilli Calmette Guerin, BCGitis, rapid increase.

PHAO2

Haemoglobin SO-Arab in a child from Southwestern Nigeria

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Introduction and Objectives: Haemoglobin (Hb) SO-Arab, a rare compound heterozygous haemoglobinopathy comprising of Hb S (β6 Glu →Val, GAG>GTG) and O-Arab (β121 Glu→Lys, GAA>AAA), has not been reported previously in Nigeria. This study describes the case of a child from South-western Nigeria diagnosed by high performance liquid chromatography (HPLC)and reviews information about the geographic distribution, clinical and haematological characteristics of patients with Hb SO-Arab.
Methods and Results: The child who was initially misdiagnosed as Hb SC with alkaline cellulose acetate electrophoresis on two occasions, had recurrent severe haemolytic crisis, severe sepsis, early onset dactylitis, leucocytosis (leucocyte count of 21,200 cell/mm^3), thrombocytosis(average platelet count – 663,000 cells/mm^3), microcytosis (mean corpuscular volume of61.8fL) and hypochromia (mean corpuscular haemoglobin of 21.5pg).
Conclusion: Hb SO-Arab presents with clinical and some haematological phenotypes similar to homozygous Hb S disease. In the absence of DNA diagnosis, combining HPLC with the more frequently used alkaline cellulose acetate and/or acidic citrate agar electrophoresis is necessary for accurate diagnosis of haemoglobinopathy.
Keywords: Child, Haemoglobin SO-Arab, Nigeria

PHAO3

Blood pressure abnormalities in children with sickle cell anaemia

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Introduction: Blood pressure in the range defined as normal for the general population may represent hypertension in subjects with Sickle Cell Anaemia (SCA) with the attendant risks of adverse cardiovascular outcomes.
Objectives: To determine the blood pressure pattern of children with sickle cell anaemia in steady state and evaluate any relationship between blood pressure levels and microalbuminuria.
Materials and methods: Cross sectional study of children with SCA attending the Paediatric Haemato-oncology clinic, ABUTH, Zaria. All children and/or their caregivers were informed of the research, consent obtained and answered a standardized questionnaire. Blood pressure was measured using calibrated mercury sphygnomanometer for paediatric patients. Microalbuminuria was analysed in spot morning urine using Micral test strips.
Results: One hundred and ninety-five children with SCA in steady state aged 2 - 16 years participated in the study. The mean systolic blood pressure (SBP) of the study subjects was 98.4 ± 8.7 mmHg while the mean diastolic blood pressure was 63.1 ± 7.1 mmHg. The mean SBP of subjects with and without microalbuminu-

ria was 101.1 ± 9.8 and 97.9 ± 8.3 mmHg respectively (p = 0.059).
Conclusion: The blood pressure levels of the study population were within normal limits. Subjects with microalbuminuria had higher systolic blood pressure than those without microalbuminuria.
Keywords: Blood pressure, Children, Sickle Cell Anaemia, Microalbuminuria,

PHAO4

The perceived stigma of adolescents with sickle cell anaemia attending the University of Port Harcourt Teaching Hospital, Port Harcourt, Rivers State, Nigeria

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Background: Adolescents with sickle cell anaemia (SCA) are challenged by a myriad of complex psychosocial issues, which may be triggered or exacerbated by stigmatisation. The magnitude of childhood stigma and its potential for associated psychosocial adjustment issues is scarcely being assessed, as more focus is often given to the physical symptoms and signs of SCA.
Objectives: This study sought to assess the prevalence of perceived stigma, its associated factors and psychosocial effects in adolescents with SCA in steady state, seen at the University of Port Harcourt Teaching Hospital (UPTH).
Methods: Using a cross-sectional design, 200 adolescents with SCA (subjects) were recruited consecutively from the Paediatric haematology clinic of UPTH. Controls matched for age, gender, and socio-economic class, with haemoglobin genotype AA or AS were recruited from the Children Outpatient Clinic of UPTH. A self-administered questionnaire was used to obtain the clinico-demographic and psychosocial data. A validated perceived stigma scale was used in this study.
Results: There were 97 (48.5%) males and 103 (51.5%) females in each group with a male to female ratio of 1: 1.1. Overall, perceived stigma was present in 159 (79.5%) subjects and 16 (8.0%) controls (p= 0.001). Subjects in early and mid-adolescence were about three times more likely to experience perceived stigma than those in late adolescence (OR= 2.9; 95% CI= 1.1-7.7; p= 0.031).Perceived stigma was significantly higher in subjects with three to four sickle cell pain crises and three or more hospital admissions in the preceding one year (p= 0.035 and 0.001 respectively). One hundred and fifty-eight (79.0%) subjects had a depressive feeling, 122 (61.0%) avoided the health care system, 39 (19.5%) had social withdrawal and 17 (8.5%), suicidal ideation. Perceived Stigma was significantly associated with these four psychosocial effects (p-value < 0.05).
Conclusion: Stigma and its attendant psychosocial effects are a major problem among adolescents with SCA. Regular psychosocial assessment is recommended for every SCA patient on follow up with particular attention to the early and mid-adolescence age groups and patients with more frequent crisis and hospital admissions. Early detection and prompt psychological interventions are key to improving the quality of life in affected persons.
Keywords: Perceived Stigma, Sickle cell anaemia, psychosocial

PHAO5

Chronic Myeloid Leukaemia in A 6-Year-old Nigerian Girl at the Ahmadu Bello University Teaching Hospital, Zaria, Nigeria

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Introduction: Chronic Myeloid Leukaemia (CML) is a haematological malignancy characterised by an increase and dysregulated production of the myeloid cell lines. CML accounts for 20% of malignancies in adults, but is rare in children, responsible for only 2-3% of haematological malignancies. Treatment mainly follows adult protocols with Tyrosine Kinase inhibitors (TKI) and stem cell transplantation.
Objective: The current study aims to describe the presentation and management of a child with CML at a tertiary hospital in North-western Nigeria.
Materials and methods: The study is a case report of a rare clinical presentation. The case notes of the patient were summarised, and the relevant literature was reviewed to contextualize the report.
Results: A 6-year-old girl presented with fever, abdominal swelling, weight loss and pallor. She was acutely ill looking, had generalised peripheral lymphadenopathy, hepatomegaly of 9cmand massive splenomegaly of 19cm. Investigation results showed hyper-leucocytosis, white blood cell (WBC) count 277 x 10^9/L, and granulocyte predominance (70%). Viral and tuberculosis screening were negative, and her haemoglobin electrophoresis pattern was AA.
Bone marrow biopsy revealed a markedly increased myelopoiesis with myeloblasts 9%, promyelocytes 10%, myelocytes10%, band forms 11%. The Myeloid erythroid ratio was 30:1. DNA PCR detected BCR-ABL: Philadelphia chromosome positive b3a2 variant (ABL Quantity: 3,990,468). She had multiple sessions of exchange blood transfusion, hydroxyurea and was subsequently commenced on Imatinib. She became asymptomatic, with normalisation of the WBC ($7x10^9$/L) and splenic size.
Conclusion: Our report so far shows a favourable response of childhood CML to TKI.
Keywords: CML, TKI, Philadelphia chromosome

PHAO6

Psychosocial problems of caregivers of children with sickle cell disease attending clinic at the University of Maiduguri Teaching Hospital, Maiduguri, Borno State

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Background: Sickle cell disease (SCD) is the most common genetically inherited blood disease, affecting mostly black race. The chronicity of the illness combined with frequent hospitalization, may have significant psychosocial impact on the patient and the caregiver. These psychosocial problems are worst in developing countries like Nigeria, where there are inadequate social and health care facilities. Caregivers are tasked with the responsibility for managing their children's condition, especially when in crisis.
Objective: To assess the psychosocial feelings of caregivers of children with SCD in North-east, Nigeria.
Methods: This is a cross-sectional study of caregivers of children with SCD seen at the University of Maiduguri Teaching Hospital, over a two-month period. A random sample of 130 caregivers were interviewed using a structured questionnaire to assess their psychosocial problems.
Results: One hundred and twenty-seven questionnaires were valid for analysis. Ninety-eight (77.5%) of the respondents were mothers, about two-thirds were from low social class and unemployed full-time housewives (ρ=0.004). When their children were in crisis, fifty-seven (44.9%) of the caregivers felt scared being the most common problem. Fifty-two (40.9%) caregivers had reduced recreational activities, while 41 (32.3%) of them had reduced social activities. Thirty-two (26.0%) caregivers were uninterested in things around them when their wards were in crises. In addition, 32 (25.2%) caregivers felt unhealthy, whilst 42 (33.1%) caregivers were disinterested in other activities. Only 11% had some sort of coping mechanism whenever their children were in crises.
Conclusion: There is a significant level of psychological distress experienced by caregivers in this study, especially during SCD crisis. It will be good if psychosocial counselling is routinely done during the follow up visits in the clinic and at home.
Keywords: Psychosocial problem; Caregiver; Children; Sickle cell disorder; Maiduguri

PHAO7

Henoch schonlein purpura presenting with intussusception in a 7-year-old in South-West Nigeria: A case report

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Introduction and Aim: Henoch-Schonlein purpura (HSP) is the most common childhood systemic vasculitis. It manifests with purpura, arthritis/arthralgia, abdominal pain and nephritis. The outcome is excellent in most cases, with spontaneous resolutions of symptoms. A few patients however develop long-term sequelae from chronic kidney disease.
About 70% of children with HSP develop abdominal pain from submucosal haemorrhage and bowel wall oedema. These may also be associated with intussusception.
We report a case of HSP in a 7-year-old who had surgery for intussusception to highlight this disorder and its association with potentially serious gastrointestinal, as well as renal, complications.
Case summary: AO was a 7-year-old female, referred to us following laparotomy for intussusception. She had developed a rash over both legs two weeks prior, which was associated with severe abdominal pains, bloody stools, and painful swelling of the right knee joint.
Physical examination revealed palpable purpura limited to both lower limbs in an otherwise well child. Results of FBC, E/U/Cr, urinalysis and urine microscopy remained normal throughout the course of the illness. The rash waxed and waned over the next 4 weeks and has not subsequently reappeared. She is however still being followed up.
Discussion and Conclusion: HSP is characterized by leucocytoclastic vasculitis and IgA deposition in the skin, joints, gastrointestinal tract, and kidneys. The prognosis in childhood is generally excellent, with a self-limited course in most cases, as it occurred in our patient. Gastrointestinal complications, like intussusception, may however impact adversely on outcomes.
Keywords: henoch-schonlein purpura, vasculitis, intussusception

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OINF1

The prevalence and risk factors for dyslipidaemia in HIV-infected children on HAART in Kano, Nigeria

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Background: Prolonged administration of highly active anti-retroviral therapy (HAART) is associated with metabolic side effects, especially dyslipidaemia with potential increase in the risk of development of cardiovascular disease as the affected children mature into adulthood.
Objectives: This study determined the prevalence and risk factors for dyslipidaemia among HIV-infected children aged 2-15 years.
Methods: Socio-demographic characteristics and physical examination findings were recorded, and serum lipid levels were measured on blood samples from eighty HIV-infected children on HAART and eighty HIV-infected, HAART-naive children as controls.
Results: The overall prevalence of dyslipidaemia in HIV -infected children on HAART was 62.5% while 52.5% of the HIV-infected HAART-naive children also had dyslipidaemia. The risk factors associated with hypercholesterolaemia and hypertriglyceridaemia among the HIV-infected children on HAART were: age at commencement of HAART less than 2 years, PI-based HAART regimen, age group greater than 5 years, duration of HIV diagnosis greater than one year and duration of treatment on HAART for more than one year. However, on multivariate analysis,PI-based HAART regimen was the only independent predictor of hypercholesterolaemia in the HAART treated group. Duration of diagnosis greater than 1 year was associated with hypercholesterolaemia in HAART-naïve HIV-infected children (p value = 0.05).
Conclusion: Dyslipidaemia was more common in HAART treated than HAART-naïve HIV-positive children.
Keywords: Human immunodeficiency virus, HAART, HAART-naive, Dyslipidaemia

OINF2

Pubertal development pattern in HIV-infected adolescents in Port Harcourt Nigeria

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Introduction: Unidentified and untreated pubertal abnormalities in HIV-infected children may result in adverse psychosocial consequences and reduced final adult height.
Objectives: The aim of the study was to determine the pattern of pubertal development among HIV-infected adolescents aged 10-18 years attending UPTH and Braithwaite Memorial Specialist Hospital (BMSH) Port Harcourt and to compare the findings with those obtained from age-, sex- and socioeconomic class-matched non-HIV-infected adolescents.
Materials and Methods: A cross-sectional study of 170 HIV-infected adolescents and 170 non-HIV-infected adolescents who served as a comparison group was done. Physical examination was conducted to determine pubertal development using the Tanner staging scale.
Results: One hundred and twenty-seven (75%) HIV-infected adolescents had attained puberty in contrast to 159 (94%) non-HIV-infected adolescents (χ^2= 16.277 and 13.091, p<0.05). The mean age of HIV-infected females at Tanner stage II of breast development was 11.57±1.05years compared to 10.78±0.69 years in non-HIV-infected females (t=2.667, p=0.011). Also, the mean age of HIV-infected males at Tanner stage II of genital development was 11.76±1.33 years compared to 10.81±0.77 years in non-HIV-infected males (t=2.558, p=0.015). The proportion of HIV-infected adolescents with pubertal delay was 4.7% compared to 0.6% in non-HIV-infected adolescents. Pubertal delay was significantly more common in HIV-infected adolescents in the late WHO clinical stages (stages 3 and 4) than those with early WHO clinical stages (p-value <0.05).
Conclusion: HIV-infected adolescents attending UPTH and BMSH Port Harcourt attain puberty at significantly later ages than non-HIV-infected adolescents with pubertal delay being significantly more common in adolescents in late WHO clinical stages.
Keywords: Puberty, Human Immunodeficiency virus (HIV), Adolescent.

OINF3

Report of an outbreak of a multidrug resistant blood stream bacterial infection at Special Care Baby Unit of a tertiary health center, in Kano

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Introduction: Neonatal sepsis contributes to about a million neonatal deaths annually in low and middle-income countries. This includes hospital-acquired sepsis. Nosocomial sepsis is defined as blood stream infection during hospitalization that was not present or incubating at the time of admission.
Objective: To report an incidence of blood stream nosocomial infection at the Special Care Baby Unit of our hospital.
Methods: Records of admission and blood culture-positive sepsis at AKTH from December 2016 to July 2017 were reviewed. Blood culture was done with the automated BACTEC system.
Result: The prevalence of blood stream bacterial infection (BSBI) was 10 % to 14.8% from December 2016 through February 2017. There was an increase in the incidence of BSBI from 32% in March to 40% in April and 30% in May 2017. Multi-drug resistant organisms mainly klebsiella SP were isolated from the patients, surfaces in the labor room, theatre and the SCBU. Possible points of infection were the operating theatre in 25%, labor room in 21%, the SCBU in 35% of cases. Factors identified as responsible were change of nursing

staff leading to poor patient safety bundle compliance, and contaminated surfaces.
Infection control measures were taken, and these included re-emphasizing the universal precautions, organizing a patient safety workshop and enforcement of the practice of hand washing/rubbing. The hospital management was informed, and the SCBU was closed and fumigated. The rate of BSBI fell to 7.5% by July 2017.
Conclusion: Nosocomial outbreak can be prevented through judicious control measures and vigilance.
Keywords: infection outbreak, multidrug resistance, bacterial infection.

OINF4

Liver enzymes during and after antimalarial therapy in Nigerian children with uncomplicated plasmodium falciparum infection

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Introduction: Derangement of liver enzymes could occur during antimalarial treatment and this has been attributed to drug-induced liver toxicity. However, it remains unclear whether these changes in liver enzyme levels persist upon completion of treatment.
Objective: This study determined the plasma levels of four liver enzymes, in children treated for uncomplicated malaria infection with Artemether-Lumefantrine (AL).
Materials and Methods: We examined the records of 102 children with microscopically-proven uncomplicated P. *falciparum* infection treated with AL in a clinical trial which involved follow-up visits on days 3, 7, 14, 21, and 28. Data on parasite density and liver enzymes [ALT (U/L), AST (U/L), ALP (U/L) and GGT (U/L)] at baseline, on days 3 and 28 were extracted and compared.
Results: The median age of participants was 25 months (range = 3 to 119 months), and 49% were male. The mean values of ALT and AST did not change significantly over the course of the 28-dayfollow-up from baseline (25.8 – 19.1U/L, p=0.098 and 50.4 – 52.2U/L, p=0.1943 respectively). GGT decreased substantially between baseline 17.0 U/L (11.0-22.5) and day 28 15.0U/L (10.5-21.5); p= 0.0010 while ALP increased over time (baseline: 305.0U/L (216.0–403.5); day 28: 345.0 U/L (241.0–492.5); p=0.0303. Elevated ALT, AST, ALP and GGT were observed in 8.5%, 20.0%, 20.9%, and 14.8% of participants, respectively.
Conclusion: Considerable rise in ALP, suggestive of liver injury occurred during antimalarial treatment among Nigerian children. Further research is needed to identify the underlying mechanism responsible for this drug-induced liver toxicity.
Keywords: Artemether-Lumefantrine, Alanine aminotransferase [ALT], Aspartate aminotransferase [AST], Alkaline phosphatase [ALP] and γ-Glutamyl transpeptidase [GGT].

OINF5

Burden of scabies in children attending the dermatology clinic at the University of Port Harcourt Teaching Hospital, Rivers state

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Introduction: Human scabies is a parasitic infestation caused by *Sarcoptes scabie ivarhominis*. It a neglected tropical disease that is endemic in many resource-poor tropical countries with an average estimated prevalence of 5-10% in children.
Objectives: The aim of the study was to determine the prevalence, clinical profile and outcome of treatment of scabies among children attending the dermatology clinic in UPTH.
Materials and Methods: This was a prospective descriptive study of 62 consecutive children diagnosed with scabies at the Dermatology clinic in UPTH over a three-year period (January 2016 –December 2018). The diagnosis of scabies was mainly clinical.
Results: Four hundred and eighty-six (486) children were seen during the study period out of which 62 (12.8%) were diagnosed with scabies. Study subjects consisted of 35 (56%) males and 27 (44%) females; M:F= 1.3:1. Mean age of the subjects was 6.94±5.5 years. The commonest presenting features were pruritus and rash (100%). Average duration of symptoms was 5 weeks. Commonly affected sites were the fingers (92%), axilla (88%), elbow (62%) and genitals (22%). Thirty-six (58%) of the subjects were treated with benzyl benzoate while 26(42%) received 5% permethrin. All the study subjects had a good response to treatment with resolution of symptoms occurring in an average period of 3 weeks.
Conclusion: Scabies remains a cause of significant morbidity among children in our environment. Prompt diagnosis and treatment is required to improve quality of life and prevent complications.
Keywords: Scabies, Children, UPTH.

OINF6

Outcome of severe malaria among children in a tertiary hospital in North-western Nigeria

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Background: Malaria remains a leading cause of childhood morbidity and mortality in sub-Saharan Africa including Nigeria. This study set to determine the hospital outcome (discharge and /or death) of children with severe malaria at the Emergency Paediatric Unit (EPU) of Federal Medical Centre, Katsina.
Methods: The study was a descriptive retrospective study of all patients admitted into the EPU of the hospital with severe malaria from May 2016 to July 2017. The extraction of relevant data was from the department records and patients' folders. The data analysis was with SPSS version 20.
Results: The total of children with severe malaria was 483 over 15 months. The median age (IQR) was 4.0 (2.5 -8.0) years with a range of 5 months to 14 years and a male to female ratio of 1.1:1. The common forms of presentation were cerebral malaria (169; 35.0%); prostration (102; 21.1%), multiple convulsion (86; 17.8%) and anaemia (70; 14.5%). The mortality rate was 4.3%. Shock (Algid malaria) had the highest case fatality of 33%. Multiple indices of severity were seen in 59 cases (12.2%) with a case fatality of 15.3%. Furthermore, the presence of two or more components of severe malaria was significantly associated with deaths (OR 4.1, 95% CI 2.337 to 7.206).
Conclusion: Although the mortality rate appeared low, the presence of multiple components of severe malaria was significantly associated with poor outcome.
Keywords: Severe malaria, Hospital outcome, Children

OINF7

Circulating rotavirus genotypes prior to vaccine introduction in Nigeria

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Introduction and Objectives: Rotavirus gastroenteritis still remains a major cause of morbidity and mortality among young children in developing countries, with approximately150 000–200 000 deaths occurring annually in sub-Saharan Africa. This study was carried out to describe circulating rotavirus strains (as well as the epidemiology of rotavirus disease) in Enugu Nigeria, surveillance for rotavirus diarrhea. It was conducted between January 2011 and December 2015.
Materials and Methods: A total of 2273 fecal samples from children < 5 years of age admitted to the paediatric wards of the participating hospitals with acute gastroenteritis (AGE) was collected mostly within 48hours of hospitalization and analyzed for group A rotavirus infection. A subset of the rotavirus positive samples was subjected to polyacrylamide gel electrophoresis and VP4 and VP7 genotyping.
Results: Rotavirus was detected in 1034(45.5%) and the highest prevalence of rotavirus infection occurred in children < 2 years of age, predominantly between 0-11 months. January of each year of the study years remained the peak season of the virus. The predominant circulating strain was G12P[8] from 2011-2013. In 2014 G12P[8] co- dominated along with G3P[6] and G1P[8] while in 2015 G1P[8] dominated. Overall, G12P[8] dominated.
Conclusion: The diversity of rotavirus strains detected in this study highlights the need for continuous surveillance and data so far generated is already being used to advocate/apply for rotavirus vaccine introduction.
Keywords: Rotavirus, Molecular Characterization, Children, Genotype

OINF8

Pediatric bacterial meningitis surveillance in Nigeria from 2010 to 2016, prior to and during the phased introduction of the 10-Valent Pneumococcal Conjugate Vaccine

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Introduction and Objectives: Nigeria has experienced large bacterial meningitis outbreaks with high mortality in children. Streptococcus pneumoniae, Neisseria meningitidis, and Haemophilus influenzae are major causes of this invasive disease. In collaboration with the World Health Organization, we conducted longitudinal surveillance in sentinel hospitals within Nigeria to establish the burden of pediatric bacterial meningitis (PBM).
Materials and Methods: From 2010 to 2016, cerebrospinal fluid was collected from children <5 years of age, admitted to 5 sentinel hospitals in5 Nigerian states. Microbiological and latex agglutination techniques were performed to detect the presence of pneumococcus,

meningococcus and H. influenzae. Species-specific polymerase chain reaction and serotyping/grouping were conducted to determine specific causative agents of PBM.
Results: A total of 5134 children with suspected meningitis were enrolled at the participating hospitals; of these 153 (2.9%) were confirmed PBM cases. The mortality rate for those infected was 15.0% (23/153). The dominant pathogens were pneumococcus (46.4%:71/153), meningococcus (34.6%: 53/153) and H. influenzae (19.0%:29/153). Nearly half of serotyped pneumococcal meningitis cases (46.4%: 13/28) were caused by serotypes that are included in the 10-valent pneumococcal conjugate vaccine. The most prevalent meningococcal and H. influenzae strains were serogroups W and b, respectively.
Conclusion: Vaccine-type bacterial meningitis continues to be common among children <5 years in Nigeria. Challenges with vaccine introduction and coverage may explain some of the finding. Continued surveillance is needed to determine the distribution of serotypes/groups of meningeal pathogens across Nigeria and help inform and sustain vaccination policies in the country.
Keywords: Pediatric; meningitis; Nigeria; pneumococcus; meningococcus.

OINF9

Seasonal Variation of Severe Malaria among Children in a Tertiary Hospital in North-western Nigeria

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Background and Objectives: Malaria is among the leading causes of childhood morbidity and mortality in low to middle-income countries, Nigeria inclusive. This study set to determine the prevalence and seasonal variability of severe malaria among children at the Federal Medical Centre, Katsina.
Methods: This was a descriptive retrospective study of all patients admitted into the Emergency Paediatric Unit with severe malaria over 15 months. Data from the department records and patients' folder were extracted and analyzed with SPSS version 20.
Results: The total admission into the Emergency Paediatrics Unit from May 2016 to July 2017 was 1,733 children, out of which 483 had severe malaria, giving a prevalence of 27.9% (279 per 1,000 children). Males were 261 (54.0%). The median age (IQR) was 4.0 (2.5-8.0) years with a range of 5 months to 14 years. Under-five's were 263 of 483 (54.5%) of the study cohort. The pattern varies with the season of the year with rainy season having a higher prevalence of 37.2% [464/1249] compared with the dry season at 4.1% [19/484]; $\chi 2$= 191.54, p= < 0.001.The peak prevalence of 60% (165/277) was in September while the nadir of zero case was observed in February 0/59.
Conclusion: The prevalence of malaria remains high among the children despite control measures. The seasonal variation with more 150 cases per month at the peak of rainfall and no case in the peak of dry season suggests a need to tap into the significant role of environmental factors as the world strives towards malaria eradication.
Keywords: Severe Malaria, Seasonal Variation, Children.

OINF10

Socio-demographic determinants of measles herd immunity in vaccinated under-fives in Zaria, North West Nigeria

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Background and Objective: Socio-demographic factors have been shown to affect the level of measles herd immunity in vaccinated subjects. In this study, measles herd immunity was determined by a point-prevalence measurement of the specific neutralizing Immunoglobulin G (IgG) antibodies in vaccinated under-fives in Zaria, Nigeria.
Methods: The study was cross-sectional, descriptive and conducted at the Institute of Child Health Banzazzau, Zaria. Total sampling method was used to consecutively select 139 apparently healthy children aged 12 to 59 months who had received a single dose of measles vaccine at nine months at the study center. An interviewer-administered questionnaire was used to collect information on vaccination and the socio-demographics of the subjects. Blood samples were drawn and analyzed for measles-specific IgG antibodies using commercial ELISA kit obtained from IBL International (2014), Hamburg, Germany.
The data were analyzed using Statistical Package for Social Sciences (SPSS) version 23 (IBM USA, 2015), chi-square and binary logistic regression analysis.
Results: The mean (±SD) age of the subjects was 28.41 months (±12.43), with a male to female ratio of 1.4:1. The seroprevalence of protective levels of measles-specific IgG antibodies was 56%. Subjects belonging to families with five or fewer members were more likely to have protective levels of antibodies (p = 0.002). Additionally, subjects whose fathers engage in unskilled occupation were more likely to have protective levels of the measles-specific IgG antibodies (p = 0.006). Other socio-demographic variables were not significantly associated with protective antibody levels.

Conclusion: TheSero-prevalence of protective levels of measles-specific IgG antibodies in those vaccinated in our environment was low. Family size and father's occupation were independent predictors of having protective levels of measles-specific IgG antibodies. We recommend supplemental measles vaccination campaign especially for children whose families have more than five members and those whose parents engage in skilled occupation

Keywords: Measles, Herd Immunity, seroprevalence, socio-demographic factors

OINF11

Prevalence and risk factors for soil transmitted helminth infection among school children in Northern Nigeria

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Introduction: Soil-transmitted helminths (STHs) are a major public health problem in tropical and sub-tropical countries, affecting the physical growth and cognitive development in school-age children.
Objectives: To determine the prevalence, intensity and risk factors for STH infection among primary school children in Ingawa Local Government Area of Katsina State, Nigeria.
Materials & Methodology: A cross-sectional, descriptive study involving 461 school children aged 5-12 years randomly selected from 11 district wards of Ingawa Local Government Area of Katsina State. Stool samples were examined using standard (Kato-Katz) technique to determine prevalence and intensity of STHs.
Results: One hundred and twenty of the 461 study subjects had one or more STH infections. The species identified were Ascaris lumbricoides (15.0%), Hookworm (11.7%), and Trichuris trichiura (7.6%); with a heavy intensity of 4.3%, 8.6% and 9.3% for A. Lumbricoides, Trichuris trichiura and hookworm respectively. Among the identified risk factors, bush/open space defaecation was the strongest risk factor for STH transmission ($\chi 2$ = 35.7, df = 2, P<0.05).
Conclusion: The prevalence of STHs was 26.0%. Lack of formal education of the parents, cattle rearing and bush/open air defaecation were significant risk factors for transmission of STH infestations.
Keywords: STH infection, risk factors, heavy intensity, Katsina State, Nigeria

OINF12

Outcome of Prevention of Mother to Child transmission of HIV services at the University of Port Harcourt Teaching Hospital

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Background: Mother to Child Transmission (MTCT) of HIV causes over 90% of Paediatric HIV and its prevention must be targeted to curb this scourge**.**
Objective: To determine the associated risk factors and outcome (HIV status) of HIV-exposed babies at the University of Port Harcourt Teaching Hospital (UPTH)
Methodology: This was a prospective study carried out at the Paediatric HIV clinic of UPTH. Information on sociodemographic data of the babies, age at referral, when the mother's HIV status was diagnosed, HAART use status of the mother, place of ANC and delivery, method of delivery, feeding option, duration of breastfeeding and HIV status of the babies were obtained. Obtained data was analysed and a p- value of < 0.05 was considered significant at 95% confidence interval.
Result: A total of two hundred and sixty HIV-exposed children were seen over the study period, with a male: female ratio of 1.4 :1. The overall MTCT rate was 6.2%. Among the mothers that had the complete PMTCT intervention, an MTCT rate of 1.1% was observed, while it was 28.6% among mothers who had no form of PMTCT. Identified statistically significant risk factors to MTCT include; lack of use of HAART(χ^2 =116.2, p=0.0001; No infant ARV prophylaxis(p=0.0001); Mixed feeding(p=0.0001); Prolonged breast feeding(χ^2 = 7.09, P= 0.0287); TBA supervised pregnancy(χ^2 =31.9, P= 0.0001) and delivery (χ^2 =61.47, P= 0.0001).
Conclusion: PMTCT interventions in the control of MTCT of HIV is effective. To eliminate MTCT of HIV, promoting PMTCT services must be encouraged.

OINF13

Pattern and outcome of childhood tuberculosis seen at the University ofPort Harcourt Teaching Hospital, Rivers state

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Introduction and Objective: Despite the fact that Tuberculosis (TB) is preventable, treatable and curable, it has remained a significant cause of childhood morbidity and mortality. Identifying patterns of TB and its treatment outcome which is the aim of this study is relevant for implementing TB control programmes.
Materials and Methods: This was a retrospective cross-sectional study carried out over a three-month period from April-June 2019 at the DOTS clinic of the Univer-

sity of Port Harcourt Teaching Hospital. Relevant information on all children 0 - 18 years with tuberculosis over a four-year period from January 2015 to December 2018 was retrieved and analysed. Information retrieved included the age, sex, HIV status, method of diagnosis, type of Tuberculosis and the treatment outcome of the patients.

Results: There were 202 childhood (0 - 18 years) cases seen over the study period. Out of these, 109 (53.96%) were males and 93 (46.04%) females. Majority of them (40.59%) were 1 - 4 years of age. There were 194 (96.04%) new cases, 6 (2.9%) transfer and 2 (0.99%) retreatment cases. One hundred and six (80.69%) had pulmonary TB, 23 (11.39%) TB Adenitis, 10 (4.95%) had TB spine, 3 (1.49%) TB abdomen and 3 (1.49%) TB meningitis. TB/HIV co-infection rate was 48.45%. One hundred and eight completed treatment, 10 (4.95%) were cured, 22 (10.89%) died, 46 (22.77%) defaulted and 16 (7.92%) were transferred out. Successful treatment outcome rate was 58.41%.

Conclusion: Pulmonary TB was the commonest type of TB found and treatment success rate was just above average.

Keywords: Tuberculosis, Pattern, Outcome.

OINF14

Fatal human babesiosis in a 9-year-old girl

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Background: Babesiosis is a zoonotic disease caused by a protozoan of the *Babesia specie.* It is an opportunistic disease, often incidentally diagnosed. We report a fatal case of human babesiosis in a 9-year-old girl with retroviral infection.

Case Report: A 9-year-old girl with a one-month history of persistent fever, cough and weight loss, not responsive to antibiotics and anti-malarials. No history of contact with chronic cough and no diarrhoea. She was diagnosed to have retroviral infection at 3 years consequent to her mother's positive RVS test at a General Hospital. However, only the mother was on antiretroviral treatment due to a claim that the child had 'remained healthy'. Examination revealed an acute-on-chronic ill-looking girl, wasted (65% weight for age), in mild respiratory distress, moderate pallor, febrile (38.7^{o}C) with oral thrush. She had tachypnea and crepitations on chest examination.

She was admitted as bronchopneumonia with malaria. Her initial malaria test was positive and chest X-ray showed hilar patchy opacities. TB screening tests were not suggestive and RVS was reactive. Blood culture was negative and full blood count showed normal white cells with 74.1% granulocytes and a haematocrit of 18.3%. Subsequent blood films for malaria were consistently negative but no fever remission. Further review of blood film at 3rd week of admission revealed characteristic tetrads (maltese-cross formation) pathognomonic of babesial infection. She had blood transfusion and was placed I.V Quinine and oral Azithromycin. The fever and cough persisted, and she succumbed to the illness within second week of anti-babesial treatment.

Conclusion: Human Babesia is a rare opportunistic disease that can be fatal. High index of suspicion is required for its diagnosis, especially in immunocompromised hosts.

Keywords: Babesia, opportunistic infection, zoonosis

OINF15

Pregnancy outcome of ART-experienced and ART-naïve HIV-infected mothers at the University of Port Harcourt Teaching Hospital, Port Harcourt, Nigeria

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Background: Untreated maternal HIV infection is associated with adverse pregnancy outcome. This study compared the pregnancy outcome between HIV-infected mothers who received ART in pregnancy and those who were ART-naïve.

Methods: Information obtained from HIV-infected mothers who brought their infants for follow up at the University of Port Harcourt Teaching Hospital included time of diagnosis, ART regimen and when it was commenced, gestational age at delivery, birthweight of child, mode of delivery, infant feeding option, ARV prophylaxis and HIV status of the infant. Mothers were grouped into three [(HAART experienced (HE), HAART in pregnancy (HIP) and HAART naive (NH). Outcome measures were rates of prematurity, low birth weight, mean birth weight, birth defects and mother-to-child transmission.

Results: A total of 1,640 HIV-exposed infants were seen [716(43.6%) in HE, 360(22.0%) in HIP and564(34.4%) in NH groups]. Zidovudine/Lamivudine and Nevirapine/ Efavirenz were the most frequently used combined ART in724 (67.3%) mothers. The mean birth weight was 3.12±0.38Kg; range 1.2 – 5.7Kg. A hundred and eighty (11.0%) babies were preterm [76 (42.2%) in HE; 26 (14.4%) in HIP; 78 (43.3%) in NH] (p=0.007), while 159 (9.7%) were LBW [74 (46.5%) in HE; 22 (13.8%) in HIP; 63 (39.6%) in NH] (p=0.03). Fourteen (0.9%) babies had birth defects [5 (35.7%) in HE; 9 (64.3%) in HIP] (p=0.01). The commonest birth defects were neural tube defects in 7(50%) and congenital heart defects in 4 (28.8%). Overall transmission rate was 21.4% [8% in the HE, 4.5% in HIP and 87.5% in NH groups] (p=0.001).

Conclusion: The benefits of early HAART in reducing mother-to-child transmission must be weighed against the risks of lower birth weight and potential teratogenic effects of drug exposure on the foetus.

OINF16

Prevalence of pulmonary tuberculosis among presumptive cases in Rivers State, Nigeria

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Background: Tuberculosis (TB) is a leading cause of death in children but it is underdiagnosed and underreported in children.
Objective: To determine the prevalence of pulmonary TB in children among presumptive cases ofTB and to compare the diagnostic efficacy of different screening tools for TB in children.
Materials and Methods: This study was a descriptive prospective study. Children aged 0 – 18 years with presumptive diagnosis of TB were explored by carrying out a clinical assessment and chest radiograph, sputum or gastric aspirate for AFB microscopy and XpertMTB/RIF screening. Sociodemographic data and results of the screening tests were retrieved, obtained data was analysed and a test of significance was conducted between proportions and means as appropriate, while a p value of < 0.05 was considered significant.
Results: Nine hundred and sixty-three patients aged 0-18 years had presumptive diagnosis of TB and chronic cough was the commonest presenting symptom in 735 (76.5%). The prevalence of pulmonary TB was 19.1%. Significantly more males (p-value <0.001), children from the low socioeconomic class (p =0.002) had confirmed pulmonary TB. Seventy-two (39.1%) and 29 (15.8%) of the patients were AFB and XpertMTB/RIF positive respectively. Of the children with confirmed TB, 98 (53.3%) had suggestive clinical features while 86 (46.7%) had suggestive X-ray features. More than a third (33.2%) of the children aged 0-5 years had their TB confirmed by suggestive clinical features and X-rays.
Conclusion: The prevalence of pulmonary TB in this study washigh and clinical diagnosis of Pulmonary TB remains very relevant in its management.

OINF17

Respiratory Syncytial Virus Infection: prevalence, seasonality and outcome among under-fives presenting with severe acute lower respiratory tract infection at ABUTH Zaria

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Introduction: Respiratory syncytial viral infection (RSVI) is emerging as a significant cause of hospital admissions and mortality globally following the widespread use of vaccines against bacterial pneumonias. The impact is reported to be greatest in developing countries, however, there is paucity of data with regards to RSVI in Northern Nigeria. Our objective was to determine the prevalence, seasonality and outcome of RSVI among children 0-5 years with severe acute lower respiratory tract infections (ALRTI).
Materials and Methods: This was a one-year cross-sectional, hospital-based study undertaken from November 2018 to November 2019. Admitted children with signs and symptoms of severe lower respiratory tract infection were recruited consecutively. A rapid qualitative detection of RSV viral fusion protein from nasopharyngeal swab samples from each patient was done using a dipstick immuno-assay (QuickVue® RSV by Quidel). Epi info-version 6.220was used for analysis and a p-value of <0.05 was considered significant.
Results: A total of 125 patients were recruited for this study. The mean age was 14.17 (± 14.0) months. Age range was 3weeks to 54months.The prevalence of RSVI was 35.3 % with a M:F of 1.05:1. RSV infection was greatest during the rainy season with peaks in July and August and occurred more commonly in children with vaccine preventable disease but this was not statistically significant. Mortality rate was 1.8%.
Conclusions: RSVI is an important cause of severe ALRTI among under five children in Zaria. The higher proportion of RSVI among children with vaccine preventable diseases will require further research considering the poor vaccination uptake in the region.
Keywords: Respiratory syncytial virus, seasonality, vaccine preventable diseases

OINF18

Childhood Tetanus; Still a public health concern: A review of 95 cases

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Background: Tetanus is preventable by immunization; hence each case of tetanus is a public health care embarrassment. The World Health Organisation had called for the elimination of neonatal tetanus 22 years ago (1989) but it still remains a public health concern.
Objectives: To determine the incidence, clinical profile and outcome of tetanus among Paediatric admissions in UITH, Ilorin.
Methodology: A three-year retrospective chart review of consecutive admissions for childhood tetanus in UITH was carried out.
Results: Ninety-five patients were admitted with tetanus out of 3,880 paediatric admissions, giving an incidence of 2.4%. Male to female ratio was 1.2:1. Among the patients with tetanus, 70 (73.7%) were neonates accounting for 1.8% of the total admissions. The major portal of entry of clostridium tetani was infected umbilical stump in the neonate and lower limb wound in the older children. There was a fairly positive correlation

between the time of onset (hours)and average spasms/ day (r= 0.56), and a greater positive correlation between average spasms/day and the outcome (death) (r=0.78).There were 59 deaths (case fatality of 62.1%) accounting for 8.6%of deaths during the period under study.
Conclusion: Tetanus still remains a major cause of morbidity and mortality in children.

OINF19

The fatal outcome of cryptococcal meningitis in an immunocompetent child: the 1st case report in Northern Nigeria

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Background: Cryptococcal meningitis is a rare opportunistic fungal disease seen mostly in HIV-infected individuals, and rarely seen in immunocompetent individuals. Although a few cases have been reported among immunocompetent children, none was reported from Northern Nigeria. Treatment is challenging involving prolonged use toxic medications and associated with high morbidity and mortality even among immunocompetent individuals.
Case report: A 12yr old boy presented to our emergency pediatric unit (EPU) with complaints of fever, headache, neck stiffness and visual disturbance of two weeks.Physical examination showed a well-nourished adolescent boy, in painful distress, febrile (axillary temp 38.9°C), neck stiffness with positive kerning's and brudzinski's signs. He had bilateral 6th cranial nerve palsy with impaired hearing ability. Cryptococcus neoformans was isolated from spinal tap on two occasions one week apart. Serum cryptococcal antigen test was reactive. Retroviral screening tests were negative, he was also negative to screening for tuberculosis and diabetes. The child received IV amphotericin and IV fluconazole for two weeks. He died in the 3rd week of treatment.
Conclusion: Although cryptococcal meningitis is a disease of the immunocompromised, it can still be seen in the immunocompetent children. Morbidity and mortality may be high irrespective of immune status, and despite adequate treatment.
Keywords: Cryptococcal meningitis, Immunocompetent child, Fatal outcome.

OINF20

Unusual congenital varicella zoster virus infection following maternal exposure towards term: a case report.

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Introduction and Objective: Varicella-Zoster Virus (VZV) infection is highly contagious and though maternal transmission to newborns is uncommon, cases still occur. Up to 130 cases of congenital VZV have been described in English and German literature since it was first documented in 1947. Hence, the impetus for reporting this case.
Case report: Female neonate A admitted after delivery by emergency Cesarean Section (CS) at 36 weeks' GA. Birth weight was 2.8Kg and she was clinically normal at birth. Fetal tachycardia necessitated the CS. Her mother had presented one day prior to delivery with 1-day history of generalized body rash, and features in line with VZV, and managed accordingly. The neonate was assessed as a VZV-exposed preterm, and her routine investigations were normal. Prophylactic antibiotics were commenced and with unavailability of Zoster Immune Globulin, Intravenous Immune Globulin (IVIG) was administered at the 63rd hour of life. Baby was nursed in isolation and commenced on breast milk substitute (BMS). Mother and baby were discharged on the 7th day of life and parents were appropriately counseled. However, neonate was re-admitted on the 16th day of life, after 2days' appearance of maculo-vesicular and papular rashes, with fever unresponsive to antimalarials. She now had mild fever with the presence of few umbilicated rash on the scalp, trunk and limbs. The mother's maculo-papular rashes were more widespread over the abdomen. A clinical diagnosis of delayed congenital VZV infection was made, and the baby was commenced on IV Acyclovir 10mg/kg/dose 8 hourly. She responded satisfactorily and was finally discharged home by day 23 of life.
Conclusion: We speculate that the use of IVIG soon after birth could have contributed to the delay in presentation, with an estimated 15 days' incubation period. Due to limitations, confirmation with serological methods could not be done, although the case fits in the criteria used for diagnosis.

OINF21

Varicella zoster infection complicated by pneumonia and acute renal failure

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Background: Varicella infection is a highly infectious disease that commonly follows a benign course in children. An acute kidney injury complicating varicella infection and/or its treatment in children is among the rarest complication reported.
Case: An 8-year-old boy presented with 8 days history of skin rash, 5 days history of fever, 12 hours history of vomiting and passage of coca-cola coloured urine. There was contact with an elder sister who had similar rashes. He had generalised vesicular rashes of different sizes, with some healed ones in the extremities and freshly erupted ones in the trunk with crusted lesions in the scalp. His peripheral oxygen saturation (SPO2) was 77% at room air. An initial assessment of severe chickenpox with complications of pneumonitis, myocarditis, nephritis, and hepatitis was made. He was transfused and had Tabs acyclovir 500mg 6hourly among other interventions. Initial urinalysis results showed blood of 3 +++
Urine output at admission was 3mls/kg/hr which dropped to 0.47mls/kg/hr a week into the admission. He was at this time noticed to have developed facial swelling with a decline in glomerular filtration rate from 60 mls/min/1.73m^2 at admission to 8.71mls/min/1.73m^2. He had 3 sessions of hemodiafiltration with normalization of the biochemical parameters and renal function.
Conclusion/Recommendations: Acute kidney injury warranting hemodiafiltration could occur as a complication of varicella infection in children. Kidney functions should be routinely evaluated in children presenting with severe varicella infection particularly those contracted from the opposite sex. Particular attention should be paid to the renal function if acyclovir is to be used for treatment.
Keywords: Varicella, Renal Failure, Children, acyclovir

PINF1

Awareness and attitudes of mothers of under-fivestowards the prevention of malaria in aselected hospital in Ibadan

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Introduction: Malaria is a leading cause of illness and death among children in countries in which it is endemic. It is one of the world's deadliest diseases affecting people particularly in tropical and sub-tropical regions of the world. It is highly endemic in Nigeria and it remains one of the leading causes of childhood and maternal morbidity and mortality in the country.
Aims: This study was carried out to assess the awareness and attitude of mothers towards the prevention of malaria among under-five children.
Methods: Mothers who brought their children to the hospital were recruited consecutively at Oni Memorial Children Hospital, Ibadan, Nigeria. A non-experimental, descriptive survey was adopted for the study, while a self-administered questionnaire was used to obtain information from two hundred (200) respondents. Data were analyzed through the statistical package for social science (SPSS) version 18 and presented using appropriate charts, figures, and tables.
Results: Findings from this study showed that half (50%) of the respondents were between the ages of 30-39 years with a mean age of 30.97 $\pm$ 0.395 years. Majority of mothers (88.5%) had a good knowledge of malaria and its prevention. This may be as a result of the fact that over half of them were educated, having at least tertiary education and gainfully employed. Majority (98.5%) of them had a positive attitude towards malaria prevention. The study also revealed a high prevalence of malaria among under-five.
Conclusion: Knowledge of malaria prevention had a significant effect on the attitude of mothers. Unfortunately, the positive attitude of mothers did not affect their practice of prevention as shown by a high prevalence of malaria among under-five children.
Keywords: malaria, prevention, awareness, attitude.

PINF2

Title: Superbugs in NICU: An urgent call for scaling up of infection prevention and control (IPC) practices

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Introduction: Antimicrobial resistance (AMR) is currently a global pandemic rendering common infections difficult to treat. Inadequate IPC practices further worsen the spread of AMR in healthcare facilities especially in the Neonatal Intensive Care Unit (NICU).
Objectives: To report confirmed cases of superbugs and interventions instituted
Materials and Method: Case records of the neonates with MDR isolated from the laboratory were reviewed and healthcare worker and environmental sampling conducted
Result: Two babies, delivered in our facility, were admitted 4months apart to the NICU for neonatal sepsis. Baby A was delivered at 27weeks gestation via SVD to a mother who had cervical cerclage at 13th week of gestation. Baby B was delivered at 31weeks gestation

through emergency C/S on account of major degree placental praevia with severe preeclampsia. The clinical diagnosis of neonatal sepsis made in both cases was confirmed by blood culture. *Klebsiellapneumoniae,* sensitive to only chloramphenicol but resistant to all the other available antimicrobials, was isolated in both cases. Investigation revealed that the two organisms were the same despite presenting at different periods. Whole genome sequencing identified it as *Klebsiellapneumoniae*ST22, which carried different plasmids with many antimicrobial resistant genes. Environmental sampling and surveillance conducted on NICU environment and health-care workers revealed other multidrug resistant organisms. The results of the surveillance study were reported to the management and recommendations were made to wash down the ward and optimize IPC in the unit.

Conclusion: Sepsis from superbug has been identified in the NICU. We therefore advocate scaling up of infection prevention and control programs.

Keyword: Superbug, NICU, Multi drug resistance, Infection Prevention and Control

PINF3

Title: Outcomes of Fever in Children Presenting to Emergency Departments in Southeast Nigeria

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Introduction and Objectives: Fever is a common reason for presentation to children emergency room. It is often a source of anxiety to care givers and healthcare providers.

This study was carried out to review the causes, associated risk factors and outcome among febrile children admitted to the emergency rooms of two tertiary institutions in Enugu, Nigeria.

Materials and Methods: This was a retrospective study involving 335 children who presented with fever to the emergency rooms over a one-year period. Children who presented with fever within the period were identified from case records. Necessary information was obtained using a structured questionnaire. Statistical analysis included odds ratio and chi square.

Results: Their mean age was 43.20 ±50.30months. The mean temperature at presentation for febrile children was 38.2± 0.9^{o}C. The commonest diagnoses included severe malaria, sepsis, pharyngotonsilitis, acute gastroenteritis and pneumonia.

There was a total of 42 deaths (12.5% mortality rate). Fever of more than 2 days prior to presentation at the emergency department was significantly associated with a fatal outcome, ($p = 0.03$ $\chi^2 = 4.57$). The risk of dying among febrile children was highest in those with diarrhoea, anaemia, convulsions, unconsciousness and respiratory distress. Referral from other health facilities ($p = 0.01$, $\chi^2 = 7.25$) and prior treatment ($p = 0.01$, $\chi^2 = 6.90$) were associated with increased mortality.

Conclusion: Emergency room admission for fever portends a great risk which should be anticipated and managed with caution.

Keywords: Fever, Children, Emergency, Mortality

PINF4

Determinants of utilization of insecticidal net in children with severe malaria at a tertiary health facility in Northern Nigeria

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Introduction: The progress in the global control and elimination of malaria has stalled in the last two-years with an increase of 3.5 million cases in WHO African region including Nigeria. A key strategy adopted by the country is usage of long-lasting insecticidal net (LLIN), which has remained largely underreported among children with the severe malaria. This study therefore hypothesized that there was a failure in the usage of LLIN among children with severe malaria.

Methods: This was a cross-sectional descriptive study carried out from May to December 2018and involved children age 1 months to 14 years who presented at EPU of Federal Medical Centre, Katsina, with evidence of malaria (defined as positive for Rapid diagnostic test) and features of severe form of the disease. A semi-structure study proforma was used to obtain relevant information including level of utilization of LLIN.

Results: A total of 253 children with severe malaria were recruited. Median age was 4 years (IQR 2-6). Males were 127 (50.2%).Households with at least one LLIN were 215 (85.0%). Regular usage of LLIN was 50.2% (127/253), infrequent usage 12.6% and no usage was 37.2%. There was significant association between gender, mother's age and usage of LLIN. Logistic regression showed significant predictors of usage of LLIN as presence of under-five (***p*=0.019)**, maternal age of 40 years and above (***p*=0**.002), and poor knowledge of LLIN (*p= 0.024).*

Conclusion: Usage of LLIN among children with severe malaria was average with under five, older maternal age and poor knowledge being the determinants of usage.

Key words: Severe malaria, long-lasting insecticidal net, children, utilization

PINF5

Effect of the Integration of Malaria Rapid Diagnostic Test in the Management Algorithm of Childhood Malaria

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Introduction and Objectives: Several challenges exist in the management of malaria. One is over treatment, thus parasitological confirmation of the diagnosis in now recommended, microscopic examination of blood film for malaria parasite (BfMp) or malaria Rapid Diagnostic Tests (mRDT). This study examines the impact of introduction of mRDT in the management algorithm of malaria at a tertiary paediatric hospital.
Materials and Methods: A retrospective cross-sectional study was carried out among children aged <18years treated for malaria from 2012 to 2019. Results over two periods, before and after mRDT was integrated into the malaria management algorithm at the study site were compared. The first was 2012 to 2015, second period was from 2016.
Results: A total of 822 children with a diagnosis of malaria were studied, 531(64.6%) before and 291 (35.4%) after introduction of mRDT into the testing algorithm. There were 475(57.8%) males and 347(42.2%) females. The mean (SD) age was 46.71(40.8) months. In the first phase studied, 312(73.6%) were managed for uncomplicated malaria and 112(26.4%) for severe malaria, as against 17(5.8%) cases of uncomplicated malaria in the second phase and 274(94.2%) with severe malaria. In the first phase 412(82.6%) children were treated with antibiotics with or without antimalarial medications, compared to 65(26.5%) in the second phase.
Conclusion: The findings suggest that integration of mRDT into the management algorithm of malaria at the study site has improved accuracy of malaria diagnosis and reduced the co-administration of antibiotics in patients with malaria.
Key words: Malaria, mRDT, microscopy

PINF6

Tuberculosis in Children Aged 0-5 Years at the University of Port Harcourt Teaching Hospital, Nigeria - How Common is HIV in Children with Tuberculosis?

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Background: Progression of tuberculosis (TB) from infection to disease is higher in the very young especially among those with HIV infection. This study examined how common HIV infection is among children 0-5 years with TB and the method of TB diagnosis.
Methods: Information on children aged 0-5 years were retrieved from the TB register of the DOTS clinic and analysed. This included the age, sex, HIV status, sputum AFB status, method of TB diagnosis and the treatment outcome of the patients.
Results: Three hundred and thirty-five children were treated for TB, 179 (53.43%) of them were aged 0-5 years with a male: female ratio of1.08:1. Their mean age was 1.96 ±1.45years. Seventy-two (40.22%) of the children with TB were HIV positive. The common method of TB diagnosis was clinical/radiological, and this constituted 158 (88.27%) of the patients with TB. Ninety (50.28%) children with TB were less than one year of age and there was no statistically significant relationship between age and method of TB diagnosis ($\chi^2 = 2.78$, p = 0.249). More males 93 (51.96%) than females 86 (48.04%)had TB but more females 13 (61.90%) than males 8 (38.10%) were AFB positive. However, these were not statistically significant ($\chi^2 = 1.26$, p-value = 0.262). Following treatment, 175 (75.42%) recovered while 44 (24.58%) were referred out. No child died.
Conclusion: The prevalence of TB among under-fives especially among infants is high. Clinical and radiological methods were the common methods of TB diagnosis. HIV prevalence among children with TB was low and the treatment outcome was good. Re-training of clinicians to improve their expertise on clinical diagnosis of TB is advocated.
Keywords: Tuberculosis, 0-5years, HIV prevalence

PINF7

Trigeminal Herpes Zoster with Encephalitis in a HIV Seronegative Child: A case report

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Background: Herpes zoster (HZ) – the reactivation of latent varicella virus infection, is usually seen in the immunocompromised. Complicated Trigeminal nerve involvement is rare in childhood.
Aim: To report a case of Trigeminal herpes zoster with encephalitis in a 19-month-old HIV-seronegative boy.
Case Summary: AP presented with a 2-week history of painful, blistering and ulcerating lesions on the right side of the face, 12 days of fever and 8 days of convulsions. His mother had varicella zoster(VZ) at 8 months of gestation and did not receive antiviral therapy nor VZV Immunoglobulin. No history of vesicular rashes in the neonatal period or previous VZ infection. On examination, he had multiple, weeping vesicles, ulcerations, scabs and crusts all localized to the V1, V2 trigeminal dermatomes on the right half of the face. He was conscious, alert with normal tone and reflexes. There were no visual or auditory deficits. He was seronegative to HIV. Full blood count showed leucocytosis, CSF analy-

sis was normal. He received IV acyclovir, IV ceftriaxone, topical lidocaine, oral paracetamol with remarkable clinical improvement.

Conclusion: HZ is an unusual presentation in immunocompetent children but can occur following in-utero exposure from maternal VZV infection. Advocacy for antenatal care, vaccination/immunization against VZV, use of post-exposure VZV Immunoglobulin in pregnant women and neonates is key.

Key words: Trigeminal herpes zoster, encephalitis, children

ONEO1

Health Education to Improve Knowledge, Perceptions and Practices Regarding Neonatal Jaundice among Traditional Birth Attendants in Northern Nigeria: A Mixed Methods Study

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Introduction: Early identification of neonatal jaundice (NNJ) is critical for decreasing related morbidity and mortality. Traditional birth attendants (TBAs) are the first line healthcare providers for maternal-child health in many low- and middle-income countries. Formal training for TBAs has been shown to improve neonatal outcomes.

Objective: To determine the knowledge of TBAs on causes, detection, treatment and complications of NNJ, and provide jaundice risk awareness through health education.

Methodology: A mixed quantitative and qualitative study was conducted. Forty-seven TBAs from eight metropolitan local government areas (LGAs) in Kano, Nigeria were enrolled.

Focus group discussion was conducted with 28 of these TBAs. Both audio and written records were obtained, and these were transcribed under four main themes namely, knowledge, causes, effects and treatment.

An interviewer administered seven questions 47 TBAs pre and post education. The education included lectures on NNJ and practical demonstrations on detection of jaundice.

Result: TBAs had some basic knowledge of NNJ but with significant gaps in both knowledge and practice. There was significant improvement in their knowledge and referral practices following education demonstrated by an increase in the mean score ± standard deviation (SD) for the following: jaundice definition from 6.4±4.2 to 8.7±2.3 ($p=0.001$); complications of severe NNJ from 32.7±15.8 to 45.7±11.5 ($p<0.001$)and practices involving known icterogenic substances from 34.3± 13.7 to 47.7±10.5 ($p<0.001$). The answers to the other questions insignificantly improved. Qualitative data demonstrated notable improvement in TBAs knowledge, referral practices and avoidance of icterogenic substances.

Conclusion: Training TBAs on NNJ improved their knowledge base and referral practices.

ONEO2

Nigerian 2019 Verbal and Social Autopsy study for determining the causes of still births, neonatal and child deaths: Implementation status by 2019 VASA Technical Sub-Committee

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Members of the 2019 VASA Technical Sub-Committee Dr. Kayode Afolabi (FOMH and Co-chair); Telison Osifo (NPC, Co-chair and Project Director); Inuwa Jalingo (NPC); Dr. Festus Okoh (NMEP, FMOH); Adeleke M. Balogun (DPRS, FMOH); Duru John (FMWASD); Dr. Nwaze O Eric (NPHCDA); Gertrude Odezugo (USAID); Vathani Amirthanayagam (USAID); Uwem Inyang (USAID); Dr. Ojo Olumuyiwa (WHO); Prof. Stephen Oguche PAN Representative); Prof. Mustapha Bello (NISONM Representative); Dr. Clara Ladi Ejembi (Academia); Prof. Ebuoluwa Adejuyigbe (Academia); Prof. Alice Nte (Academia). Dr. Michael Kunnuji (CIRCLE); Prof. Wammanda D. Robinson (CIRCLE Project).

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Introduction: Verbal and Social Autopsy (VASA) studies determine the causes of deaths and their associated sociocultural factors. The 2019 VASA of selected under-five deaths from the 2018 Nigerian Demographic and Health Survey (NDHS) is being implemented by the National Population Commission, led by Federal Ministry of Health. The USAID-funded Coordinating Implementation Research to Communicate Learning and Evidence (CIRCLE) Project (led by Social Solutions International) is providing technical support.

Materials and Methods: A mixed study design consisting of quantitative and qualitative components will be used. The quantitative component will employ a questionnaire adapted from the 2016 WHO Global Standard

Verbal Autopsy and the 2014 Nigerian VASA instruments while the qualitative component will apply key informant interviews and focus group discussions. The quantitative data will be collected using a computer assisted personal interviewing technique.
Implementation status: Ethical approval for the study was obtained from the National Ethics Research Committee. A VASA 2019 Technical Sub-committee, a unique body comprised of diverse child health stakeholders, contributed to the finalization of the protocol, implementation schedule, data collection tools and trainings of data collectors. The adapted English questionnaire was translated into Yoruba, Hausa and Igbo languages, pretested and finalized for use. Two training workshops on the VASA tools and data collection process were conducted for the supervisors/monitors and the interviewers following which they participated in a 60-80-day field work. An ICT team was trained for concurrent data entry and analysis.
Conclusion: Successful completion of the preliminary stages of the 2019 VASA allows us to anticipate a successful study which reveal the causes of under-five mortality and assist policy makers and other programmers develop and action plan to end child mortality in the country.
Keywords: Verbal Autopsy; Social Autopsy, 2018 NDHS, Under-five deaths, Nigeria.

ONEO3

Pattern of birth defects at a University Teaching Hospital in Northern Nigeria: A ten-year retrospective review

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Background: Major birth defects are common causes of perinatal morbidity and mortality worldwide and their occurrence in developing nations like Nigeria, requires due consideration especially their pattern and risk factors.
Objectives: To determine the pattern of birth defects, their associated factors and outcome at Aminu Kano Teaching Hospital (AKTH), Kano.
Methods: This was a 10-year retrospective study conducted in the departments of Obstetrics and Gynaecology and Paediatrics (Special Care Baby Unit) of AKTH, Kano between April 2007 and March 2016. Data were retrieved from patients' files using a purpose-designed proforma and information obtained was analyzed using IBM SPSS version 20, Inc. Chicago, 2009 software.
Results: There were 6990 deliveries of which 305 babies had birth defects; giving a prevalence of 4.4 %. Mothers were 16-45years with a mean age of 30±5years. The highest incidence of birth defects occurred in 26-35years age group. Single system anomalies were significantly high. Majority of neonates (52.5%) affected were males. The digestive system was the most affected 32.5%; omphalocele was the most frequent condition (31.5%) while the musculoskeletal system was the least involved (3.75%). Factors identified include intake of traditional herbs (81%), orthodox drugs (12.5%), hypertension and chorioamnionitis. Most (60%) neonates were managed conservatively, 23.5% had surgery, 82.5% were discharged while case fatality rate was 8.5%.
Conclusion: Birth defects were common. Hypertension in pregnancy, ingestion of herbs and social drugs by mothers were associated factors. Educating mothers on the dangers of herbs ingestion and adequate attention to medical conditions in pregnancy are recommended.
Keywords: Birth defect, Neonate, Anomaly, Prevalence.

ONEO4

Blood Glucose Profile of Exclusively Breastfed Healthy Newborns in the First 24 Hours of Life at Obio Cottage Hospital, Rivers State.

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Introduction and Objective: Healthy newborns have transient, asymptomatic and self-limiting low blood glucose levels as part of their adaptation to extrauterine life. Despite this knowledge, the practice of prelacteal feeding by health care workers and mothers as a result of the erroneous perception of hypoglycemia among newborns that are considered not to have breastfed optimally in the first 24 hours of life has persisted. Prelacteal feeding interferes with exclusive breastfeeding, with loss of its benefits such as prevention of pneumonia and diarrhoea. This study sought to proffer a profile of blood glucose levels for healthy newborns in the first 24 hours of life.
Materials and Methods: This was a longitudinal study conducted over six weeks among 240 exclusively breastfed healthy newborns delivered at Obio Cottage Hospital. The Fine test glucometer was used to measure blood glucose by the bedside at birth, three, 12 and 24 hours of life.
Results: The mean blood glucose profile was 4.48±1.09, 3.68±0.65, 3.71±0.55 and 4.09±0.51mmol/L at birth, three, 12 and 24 hours of life respectively.
Conclusion: Healthy newborns have normal blood glucose profile in the first 24 hours of life and should be exclusively breastfed without the fear of hypoglycaemia.
Keywords: Glucose, exclusive breastfeeding, newborns, Obio

ONEO5

Low birth weight infants in Katsina metropolis

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Introduction: Low birth weight (LBW) is a global health challenge and presents a serious burden on newborn health care delivery in developing countries such as Nigeria. Low birth weight babies have an increased risk of neonatal morbidity and mortality. It is the single most important risk factor for neonatal death.
Objectives: To determine the incidence of low birth weight and its predisposing factors among newborn infants delivered in the three major public healthcare facilities in Katsina metropolis.
Materials and methodology: A cross-sectional descriptive study was conducted in Federal Medical Centre, Katsina, Turai Umaru Yaradua Maternal and Child Hospital and General Hospital, Katsina between September 2016 and February 2017.
Results: 4619 live babies were delivered over the study period out of whom 315 were low birth weight babies. Female: Male was 1.3:1. The incidence of LBW was 68 per 1000 live births. Predisposing factors identified to be significantly associated with delivery of low birth weight infants in the study were low social class, lack of antenatal care, preterm rupture of membranes and prematurity. Preterm birth was the strongest risk factor for LBW.
Conclusion: Incidence of LBW in the major public hospitals in Katsina was 6.8%. Predisposing factors for delivery of a low birth weight infant are low social class, lack of antenatal care, preterm rupture of membranes and preterm birth.
Keywords: Katsina, LBW, Socio-economic factors, Prematurity.

ONEO6

Basic neonatal resuscitation: Assessment of retention of knowledge and skills of primary healthcare workers in Port Harcourt, Rivers State.

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Background: Birth attendants' retention of knowledge and skills of neonatal resuscitation post training can prevent birth asphyxia by repeatedly applying steps outlined by resuscitation guidelines. This study aimed to assess primary healthcare workers' retention of knowledge and skills of basic neonatal resuscitation.
Methods: One hundred and six participants randomly selected from 28 primary healthcare centres had their knowledge and skills assessed following a one-day Neonatal Resuscitation Training. Knowledge and skills were evaluated using standard tools before, immediately after training, at three months (a subset of participants) and at six months. Paired t-tests were used to compare the mean scores at two different evaluation times.
Results: The mean baseline knowledge and skills scores of participants were 35.22%±12.90% and 21.40% ±16.91% respectively. Immediately after training, knowledge and skills scores increased to 81.48%±7.05% and 87.40%±13.97% respectively (p = .0001). At three months, the knowledge and skill scores decreased to 55.37%±20.50% and 59.11%±25.55% respectively (p = .0001), while at six months it was 55.77%±14.28% and 60.38%±19.79% respectively (p = .0001). No participant had adequate knowledge and only one had adequate skills at baseline. Proportion of those with adequate knowledge and skills markedly increased at immediate post-training but decreased remarkably at three-month and at six-month evaluations respectively.
Conclusion: Neonatal resuscitation training improved knowledge and skills but retention was suboptimal three to six months post-training. We recommend retraining and mentoring at least bi-annually.
Keywords: Neonatal resuscitation, retention, healthcare workers, primary health centres.

ONEO7

A review of Neonatal Jaundice at a tertiary hospital in South Western Nigeria

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Introduction and Objectives: Neonatal jaundice (NNJ) is a common problem in neonates. It is the clinical manifestation of elevated levels of (unconjugated) bilirubin in the body. Despite recent advances in healthcare systems, significant neonatal jaundice requiring hospitalisation remains a major health challenge in the developing world, putting a strain on already scarce health care resources.
Data from the records of neonates who presented to our neonatal unit with NNJ was reviewed to provide an update on the incidence, risk factors, common causes, treatment modalities and outcomes among neonates with jaundice.
Materials and Methods: A retrospective review of the case records of out born babies presenting with jaundice between August 2018 and February 2019.
Results: Fifty-eight neonates presented with jaundice during the study period contributing 35.8% of total admissions. The male to female ratio was 1.9:1. Most neonates (82.8%) were term and modal age at presentation was 6days.Time interval between onset of NNJ and

presentation was 1 to 12days.The mean (SD) Total Serum bilirubin (TSB) at presentation was 20.4 (± 7.6) mg/dl and average (SD) peak TSB was 21.0 (± 7.9) mg/dl. About half had G6PD deficiency, a third ABO incompatibility and 6.4% had Rhesus incompatibility. All the neonates had phototherapy. Twenty-three percent had exchange blood transfusion and 4% had fresh frozen plasma. In-hospital mortality was 8% while 22.4% had features of bilirubin encephalopathy at discharge.
Conclusion: In conclusion, the burden of Neonatal jaundice remains high. G6PD deficiency is the most common cause and late presentation is the most important risk factor for poor outcomes.
Keywords: Neonates, outborn, jaundice.

ONEO8

Need for Review of NICU Nutritional Management Protocol: The Prevalence of Extrauterine Growth Restriction and Associated Risk Factors

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Background: Extrauterine growth restriction (EUGR) in very low birth weight (VLBW) infants affects their growth and developmental prognoses and increases the risk for non-communicable diseases in adulthood. The aim of the present study was to determine the frequency and factors associated with EUGR in very low birth weight infants.
Methods: The subjects consisted of infants with birth weight below 1500 grams that were managed and discharged from the Neonatal unit of National Hospital Abuja between April 2017 and February 2019. Data was obtained from the Neonatal Unit Red Cap data registry. For EUGR assessment, subjects whose weight at discharge were below the 10th percentile of the standard normal distribution using the Intergrowth 21st growth standards, were selected.
Results: There were 107 VLBW infants managed and discharged during the study period. EUGR rates for weight of VLBW babies at discharge was 74.8%. Mean gestational age and birth weight were 29.8(2.3) weeks and 1225.3(180.1) grams, respectively while postmenstrual age at discharge and duration of stay were 33.5 (3.1) and 29.4(20.0) days, respectively. EUGR was higher among the male gender, extreme preterm/extreme low birth weight babies as well as among infants who were small for gestational age at birth.
Conclusions: Extrauterine growth restriction at discharge among very low birth weight babies in the NICU poses a serious challenge. Predisposing factors were gestational age, intrauterine growth restriction, and inadequate nutritional management.

ONEO9

Spatio-temporal trends of perinatal birth asphyxia in Sokoto metropolis: A 10-year review

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Background: Perinatal asphyxia serves as a disease of public health importance that impedes societal growth. As a disease, it has a high economic cost attributable to prolonged hospitalization and such long-term effects like mental impairment, blindness and deafness. In resource-constrained settings like Sokoto metropolis, the disease thus serves as an impediment to the attainment of good health indices.
Objectives: To reduce disease burden and improve outcome, we aimed to determine spatio-temporal distribution of cases in Sokoto metropolis referred to our tertiary center in the last decade with a view to delineating high burden areas where scarce resources can be channelled for manpower and material development.
Methods: Referral centres were mapped using handheld Global Positioning System. Analysis was done to define spatial randomness. Administered questionnaires sought to determine time of arrival after birth, demographic profile of cases, risk factors for asphyxia, case severity, temporal trends and outcomes. Spatial and non-spatial data were analysed using ArcGIS (version 10.0) and SPSS (version 20.0). (p= 0.05).
Results: A clustering of cases was observed from areas less than 20km from our centre. We observed no seasonal trend. Asphyxiated babies were mainly females whose main risk factor was prolonged labour. Arrival time to our facility ranged between 2 to more than 24 hours.
Conclusion: This study underscores the importance of two-way referrals with emphasis on educational feedback to |health facilities in the metropolis. This would serve as a cost-effective way towards improving outcomes of perinatal asphyxia.

ONEO10

Characteristics and Disease Pattern of Preterm Babies Admitted in the Special Care Baby Unit of Murtala Mohammed Specialist Hospital, Kano

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Introduction and objectives: Prematurity accounts for about 70% of neonatal deaths with majority of preterm births worldwide occurring in Africa and Asia. The

World Health Organization statistics shows that Nigeria has the third highest number of preterm births worldwide, with 773,600 born in 2010.
Their disease manifestations may affect all organs and can be mild to life threatening. In resource-constrained settings, lack of modern facilities prevents appropriate management of some of these complications. This study aimed to study the characteristics and disease pattern of premature babies admitted in the special care baby unit (SCBU) of Murtala Mohammad Specialist Hospital, Kano.
Materials and Methods: It was a retrospective cross-sectional study conducted amongst premature babies admitted in the SCBU of Murtala Mohammad Specialist Hospital, Kano from January to June 2017. Data was retrieved from the folder and was entered into an excel sheet and was analyzed using the minitab.
Results: Over a period of 6 months, 65 preterm babies were admitted. Most of them were preterm very low birth weight (52.3%) with the lowest admitted weighing 0.7kg. Hypoglycemia (66.2%), anaemia (56.9%) and jaundice (53.8%) were the commonest complications observed. The mortality rate was 7.6% with most deaths occurring amongst those weighing less than 1 kg.
Conclusion: The burden of preterm admissions in this facility is high. Their survival can be improved by provision of modern facilities for intensive neonatal care.
Key words: Prematurity, characteristics, disease pattern.

ONEO11

Blood transfusion pattern, indications and outcome in a neonatal unit of a Nigerian tertiary health Institution

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Introduction and Objective: Blood transfusion plays an important role in the management of neonates with different conditions that lead to anaemia. The objective of this study was to determine the pattern, determinants and outcome of blood transfusion in neonatal unit of Alex Ekwueme Federal University Teaching Hospital, Abakaliki, Ebonyi State.
Materials and Methods: All neonates admitted in the newborn unit who required blood transfusion between February to October 2019 were retrospectively studied. Information on the sex, age, birth weight, indications for transfusion, type of blood component transfused, and outcome were extracted from the case notes. Data analysis was done with SPSS software, version 20. Ethical approval was secured.
Results: A total of 50 neonates were transfused, made up of 30 (60%) males and 20(40%) females, with median age of 19.5 hours. Pre-term and term babies were 25 (50%) each. Mean weight of the babies was 2.4 ± 1.1kg. Most (96%) received whole blood transfusion. The main indications for blood transfusion were severe anaemia (66%), neonatal sepsis (22%) and bleeding disorders (12%). Referred babies constituted 72% of the subjects. Mean duration of stay on admission was 15.7 ± 14.2 days. Sixteen neonates (32%) died, 33 (66%) were discharged while one (2%) left against medical advice.
Conclusion: Whole blood transfusion was the main form of transfusion carried out. Severe anaemia and neonatal sepsis ranked high in the indications for transfusion. Improvement in strategies to identify infants at risk for transfusion and the implementation of prophylactic measures can reduce the incidence of severe anaemia and the need for blood transfusion.
Keywords: Blood transfusion, neonatal unit, severe anaemia

ONEO12

Oxygen saturation of healthy newborns in the first day of life using pulse oximeter

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Background: Qxygen saturation measurements (SpO_2) in various clinical settings serves as guide for timely interventions to prevent hypoxaemia, hyperoxaemia and their consequences. The paucity of data on oxygen saturation is a limitation in this environment.
Objectives: This study determined SpO_2 of healthy newborns in the first day of life using pulse oximeter and relationship with some newborn and maternal parameters
Method: New generation motion resistant pulse oximeters were used to obtain oxygen saturation readings in 210 consecutive newborns. $SpO_2$was measured at 1 minute after birth, for the first 5 minutes, then every 5 minutes until 20 minutes and then at one and six hours. Newborns requiring supplemental oxygen or admission were excluded from the study.
Result: Fifty percent attained pulse oximetry saturations of > 90% at 9 minutes and over 97%attained normal adult values of ≥ 95% at 12 minutes. Some correlation occurred between SpO_2 and maternal haematocrit ($P < 0.05$), between SpO_2 and infant haematocrit ($P < 0.05$), and also between SpO_2 and gestational age ($P < 0.031$). Infants born vaginally reached > 90% saturations more quickly than did infants born by caesarean section ($p < 0.05$). No statistically significant relationship existed between SpO_2 with gender and anthropometry.
Conclusion: Infants had a gradual rise in oxygen satura-

tion after birth with attainment of normal values at 12 minutes. Maternal haematocrit and gestational age are weak predictors for oxygen saturations after birth.

Key Word: Qxygen saturation, healthy newborns, hypoxaemia, hyperoxaemia, correlation

ONEO13

Mode of delivery: Effect on age at initiation of breastfeeding and blood glucose levels among healthy newborns in Obio cottage hospital, Rivers state

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Introduction: Early initiation of breastfeeding is giving newborns breast milk within the first hour of life. This ensures that the newborn receives colostrum. Colostrum is rich in calories, immunoglobulins, antimicrobials and growth factors, which are essential for nutrition, growth and development. Despite this knowledge, the proportion of mothers who initiate breastfeeding early remains low.
Objective: This study sought to determine the effect of mode of delivery on the age at initiation of breastfeeding and blood glucose levels.
Materials and Methods: This was a longitudinal study conducted over six weeks among 240 exclusively breastfed newborns delivered at Obio Cottage Hospital. A questionnaire was used to obtain relevant information. The Finetest glucometer was used to measure blood glucose by the bedside at birth, three, 12 and 24 hours of life.
Results: Early initiation of breastfeeding was recorded among 96 (50.5%) and six (12%) newborns born by spontaneous vertex delivery (SVD) and elective Caesarean Section (CS) respectively, with an overall rate of 42.5%. Newborns delivered by SVD had significantly higher mean blood glucose at birth and 24 hours of life (p=0.000 and 0.015 respectively).
Conclusion: The rate of early initiation of breastfeeding is low among newborns delivered by elective CS.

Key words: Glucose, breastfeeding, newborns, initiation

ONEO14

Are mobile phones of health care workers portals of pathogenic organisms causing hospital-acquired infections in intensive care units? A mini systematic review

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Aim: To determine if mobile phones of health care workers in intensive care units carry potentially pathogenic bacteria leading to hospital acquired infections.
Design: Systematic review.
Data sources: Electronic databases (Medline via ovid, CINAHL, Web of science) and hand searching of references and citations were done to identify studies. Screening and inclusion criteria were used to identify studies with a cross-sectional or cohort design. The search was limited to journal articles published between 2008-2015 and to English language. Quality assessment was done using the National Institute of Health tool for observational studies. Data was extracted on to excel sheets and analysed using SPSS version 22.
Results: Six studies with a cohort (1) or cross-sectional design (5) involving 1, 131 health care workers were reviewed. The overall quality of the studies was fair, and a narrative synthesis was done.
The colonization rate of the mobile phones ranged between 46.3 % and a 100% with 13-50% carrying potentially pathogenic multidrug resistant microorganisms. Methicillin-resistant staphylococcus aureus, Vancomycin-resistant enterococci, acinetobacter and coagulase-negative staphylococci were reported across all studies and were recognized as leading causes of morbidity and mortality in the ICU.
Conclusion: Mobile phones of HCW are portals of potentially pathogenic microorganisms, which could result in morbidity and mortality. Although no causal relationship could be established, strong associations have been reported. Guidelines by hospital infection control committees are needed on restriction, care and routine cleaning of mobile phones as well as further research.

Keywords: Health care worker, Intensive care unit, Hospital Acquired Infections, mobile phones

ONEO15

Surfactant Administration at FMC Asaba: Preliminary report of the Mist Experience

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Introduction: Respiratory distress syndrome (RDS) is a major cause of morbidity and mortality in the preterm new-borns. Surfactant replacement therapy (SRT) delivered by the Minimal invasive surfactant administration therapy (MIST) technic is being introduced to Nigeria.
Objective: To report the cases managed with the MIST Surfactant therapy
Methods: This descriptive survey recruited newborns of consenting parents who provided for the surfactant. Demographic characteristics and the intervention were recorded. Standard statistical methods were used.
Results: The gestational ages (GA); birth weights were 26 to 36 weeks and 600 gm to 2000gms. Only one mother of an early preterm had received 2 doses of antenatal cortico- steroids. MIST was successful in 10 of 11 (90%) cases. Age range at administration was 6 hours to 48hours. 2 babies were weaned off CPAP within 24 hours and (3) at<48 hours. Two of the rest five re-

ceived a second dose of MIST after 48 hours of the first dose. Five of 10 babies died. Two each at 3days and 5days and one at 7 days. Prior to the MIST, respiratory distress (RD) and severity rating (SA scores) on a scale of 10 in the survivors ranged 6 to 8. RD and SA of > 4 beyond 72 hours was associated with the need for further dose of Mist or likelihood of death.
Conclusions: MIST, delivered at FMC Asaba, may have the potential for mortality reduction and enhanced survival for the very preterm recipients. Financial barriers remain a major constraint to its use.
Key Words: MIST, Asaba Experience, Outcome

ONEO16

Newborn screening for Sickle cell disease at the FMC, Asaba, Delta State Nigeria

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Introduction: Newborn screening programs have been the most effective public health intervention in disease detection, prevention of mortalities. In middle and low-income countries, it is not yet institutionalised standard of care.
Objective: This work introduces, institutionalises Newborn screening (NBS) for sickle cell disease and sets up Comprehensive care and early parental education.
Methods: Parents were counselled and dry spots were collected and analysed in batches at the regional Laboratory at the Federal Medical Center, Keffi using the NBS HPLC machine. Frequencies, means, standard deviations were calculated.
Affected individuals were recruited into the program for comprehensive care and follow up.
Results: 1033 of the total 2451 babies delivered over 1st March 2017 to 28th February2019 were recruited. The results of 983 samples were available for the analysis. Seven different haemoglobin pattern were identified in these newborns. They are Hb AA, HbAS, HbAC, HbAD, HbSS, HbAE and HbDD, with HbAA with the highest frequency 74.9%. The prevalence of HB SS was 0.8% and the DD was 0.2% and 24. 2% were traits.
There was a high level of awareness of the disease among the mothers as many of them had knowledge of their Hb Phenotype before marriage. Eight hundred and forty-four (844) 81.7% knew about phenotype test while 706 (68.3%) had prior knowledge of their Hb phenotype.
Conclusion: The low prevalence might be a reflection of high level of parental awareness
Key Words: Newborn Screening Hemoglobin

PNEO1

A Review of Neonatal Tetanus seen in Rasheed Shekoni Specialist Hospital, Dutse, Jigawa State, Nigeria

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Introduction/Objectives: Neonatal tetanus is a major contributor to neonatal mortality in developing countries. The study was aimed to identify the prevalence, routes and mortality rate among newborns with tetanus admitted to the Special Care Baby Unit (SCBU) of Rasheed Shekoni Specialist Hospital (RSSH), Dutse Jigawa State, Nigeria.
Materials and Methods: The study was retrospective and hospital-based. Neonates with a diagnosis of tetanus and who were admitted into SCBU from January 2016 to December 2018 were included. Their medical records were retrieved and analyzed. Data were analysed using SPSS version 16. Ethical clearance was obtained from RSSH.
Results: There were 36 cases of neonatal tetanus admitted over the 3 years under review. This represented 4.30% of the total admissions into the unit in the same period. Thirty cases (83.33%) had complete records for analysis. There were 20(66.7%) males, and male: female ratio of 2:1. The age range was 6 to 22 days and mean of 10.70±4.69 days. Only 28.6% of the mothers received tetanus toxoids during antenatal care. The major route of entry was traditional uvulectomy (80.0%).Twelve (40.0%) babies were discharged home. Mortality rate was 53.3%.
Conclusion: Traditional uvulectomy is a major route for neonatal tetanus, which still has high mortality rate.
Key words: tetanus, neonate, Jigawa

PNEO2

Review of literature and report of a case of bilateral congenital anophthalmia in Port Harcourt Nigeria

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Introduction and Objective: Bilateral anophthalmia is an uncommon condition. It presents with absence of the eyeballs in the presence of eyelids, conjunctiva or lacrimal apparatus. We report the imaging findings in an infant with congenital bilateral anophthalmia and review of literature.
Materials and Methods: Information was obtained from a verbal interview with the parent of this child, from the radiological investigation results and from literature review from the internet.
Results: 3months old female, child of unmarried couple, with positive history of consanguinity, use of herbal concoctions in pregnancy. Physical examination

showed bilateral closed normal eyelids with no evidence of an eyeball. All other systems were essentially normal, no cardiac murmur. Brain MRI done revealed absence of both globes, with hypoplasia of the orbits as well as the extraocular muscles. The orbital nerve could not be differentiated from the visualized intraorbital structures, normal cerebral and cerebellar hemispheres, no foci of altered attenuation, sulci and gyri were normal in configuration. Grey white matter interface was preserved, there was no intra-axial or extra-axial mass lesion or collection. Normal ventricular system. Brainstem cerebellopontine angles, sella and pituitary were normal. Chest X-ray showed a normal cardiac silhouette. Abdominal ultrasound was essentially normal. Being followed up in ophthalmology and ENT clinics. Literature revealed previous reports from Kano, Enugu and Benin city in Nigeria.
Conclusions: We are reporting an otherwise well female baby with bilateral anophthalmia.
Keywords: Anophthalmia, magnetic resonance imaging

PNEO3

Co-existence of neuroblastoma, congenital adrenal hyperplasia and congenital heart disease: A case report

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Background: There are various reports on co-existence of neuroblastoma with congenital heart disease, however, the presence of congenital adrenal hyperplasia (CAH) is quite rare especially one presenting with hypertension and hence the need to look out for other anomalies and complications especially adrenocortical defects in patients with neuroblastoma.
Case Summary: We report the case of a neonate who presented to our neonatal care unit with respiratory distress. On examination, he had abdominal distension, elevated blood pressure with presence of cardiac murmurs. A provisional diagnosis of neuroblastoma to rule out congenital adrenal hyperplasia was made. He was admitted into the neonatal care unit and laboratory results showed high levels of urinary catecholamine metabolites homovanillic acid (HVA) and vanillylmandelic acid (VMA) with low cortisol level and high 11-deoxycortisol level. Abdominal ultrasound scan and chest computed tomography showed a suprarenal mass and a posterior mediastinal mass respectively. Echocardiogram revealed a small ventricular septal defect (VSD) and a patent ductus arteriosus (PDA). He was reviewed by the endocrinologist, cardiologist and oncologist. Blood pressure was controlled with antihypertensive with spontaneous closure of both VSD and PDA. Growth has remained steady with no complications on follow up.
Conclusion: This is interesting because of the co-existence of neuroblastoma with congenital adrenal hyperplasia and congenital heart disease. We therefore recommend routine blood pressure monitoring in all neonates while patients with neuroblastoma may require further investigations and echocardiogram.
Keywords: Neuroblastoma, congenital adrenal hyperplasia, heart, blood pressure.

PNEO4

Morbidity and mortality associated with traditional uvulectomy among neonates in MMSH Kano

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Introduction: Traditional uvulectomy is a procedure that involves the cutting of parts of the uvula with the erroneous belief that it will prevent throat infections. It is usually performed during the neonatal period in Hausa land by a traditional barber. This practice predisposes to bleeding, sepsis and neonatal tetanus. We aim to report the prevalence and associated morbidity and mortality of traditional uvulectomy among neonates in MMSH.
Results: Prevalence of 2.6% (52/1959 admissions), Median age 8 days (range 2 -25 days). 31/52 (59.6%) were born at home, 19/52 (36.5%) were delivered at a health facility. Majority (82.8%) had ANC; mean ANC visit was 2.8(±1.9). 16/52 died, case fatality of 30.7 per 100 cases. Higher proportion of those who died were delivered at home12 /16 (75%) vs. 4(25%), p= 0.341, Most were from rural areas 10/16(62.5%) compared to 6 (37.5%) urban dwellers, p =0.2.98 (χ^2=0.698). A higher proportion of those who died 56.3% (9/16) had NNT, 43.7% (5) had sepsis, this was statistically significant [χ^2 =9.856, p= 0.043].
Conclusion: Traditional uvulectomy practice is prevalent in Kano and is associated with high case fatality rate.

PNEO5

Osteogenesis Imperfecta in a neonate seen in Benue State University Teaching Hospital

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Introduction: Osteogenesis Imperfecta (OI) is a generalized disorder of the connective tissue which classically

demonstrates fragility of the skeletal system and a susceptibility to fractures of the bones from mild or inconsequential trauma. It has various classifications based on inheritance pattern and severity. It has no definitive cure and treatment is essentially supportive.
Materials and Methods: A 5-hour old preterm male neonate delivered to a 30-year-old P_2^{+1} (NA) woman via caesarean section at 34 weeks GA on account of severe oligohydramnios who presented with abnormal posturing, abnormal shape of the head and limbs following delivery. The mother had previously lost a baby with similar features shortly after birth; and as well has had a first trimester spontaneous miscarriage before delivery of this baby. Examination findings revealed frog-like posturing, scaphocephaly, micrognathia, pectus excavatum, multiple abnormal tender swellings of the upper and lower limbs. A skeletal survey revealed multiple fractures involving the clavicle, humerus, femur, tibia and fibula. Biochemical findings revealed a serum calcium and phosphate of 2.57mmol/l and 1.6mmol/l respectively while serum alkaline phosphatase was 849IU/l. He was co-managed with the orthopaedic surgeons as a case of Osteogenesis Imperfecta (type 2) and was discharged after 2 weeks but parents defaulted follow-up visit.
Conclusion: OI is a rare disease and definitive diagnosis is often difficult to establish in Nigeria due to inadequate and huge cost of the required diagnostic facilities.
Keywords: Osteogenesis imperfecta, Congenital fractures, Benue, Nigeria

PNEO6

Aetiology of neonatal bacterial sepsis in national hospital Abuja

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Introduction: Bacterial Neonatal sepsis has continued to be a challenge in Neonatal intensive care units globally. The ever-changing pattern of isolates and increasing prevalence of antibiotic resistance necessitates the need for regular surveillance of pattern of bacterial isolates as well as the antibiogram pattern. This study aims to identify pattern of bacterial isolates and antibiotics sensitivity pattern and some risk factors for sepsis.
Methodology: Data on admission into the Neonatal units of National Hospital Abuja (NHA) over 29 months were obtained from the REDCAP Neonatal registry. Information on date of birth, birth weight, GA, mode of delivery, place of delivery, gender, bacterial isolates and antibiotic sensitivity pattern were retrieved.
Results: Of the 1,439 neonates admitted into the unit, 1420 with complete records were analysed. There were 777(54.7%) males and 643(45.3%) females. Five hundred and twenty-one babies (36.7%) were evaluated for sepsis, 304 using C-reactive protein levels only, 87 using microbiological evaluation of samples only and 43 using both. Of all culture samples taken (130), 118 (90.8%) yielded isolates, and majority were blood-borne 99(83.9%). *Staphylococcus aureus* constituted 53.4% (63) and *KlebsiellaPneumoniae* 11.0%(13) of all isolates. These were mostly sensitive to amoxicillin/clavulanate 35.1%(40), Amikacin 27.2%(31) and Ciprofloxacin 11.4%(13). Gram-negative bacteria were more commonly isolated among preterm babies 25(50.0%) versus 15(22.1%) among term/post-term babies (p=.008). Gender, place of birth and mode of delivery were not associated with risk of infection (p>.05).
Conclusion: Overall, gram-positive bacteria, particularly *Staphylococcus aureus*, is the most common cause of early and late-onset sepsis while gram-negative bacteria was more commonly isolated in preterm babies in this cohort.

PNEO7

Uptake of Surfactant Replacement Therapy (Insure and Mist) after the Introduction of Bovine Lipid Extract Surfactant in Nigeria

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Introduction: Surfactant is required for treatment of RDS, surfactant inactivation from meconium aspiration syndrome and perinatal asphyxia. Affordability of the service was the driver of surfactant replacement therapy (SRT) in Nigeria. The launch of Bles® at 30% of surfactant cost in2018 as a public health intervention was a welcome development. A master class was developed to improve skills in surfactant administration hence this report.
Method: Introducing of Bovine Lipid Extract Surfactant (Bles®) began with a stakeholders meeting. Assurance of its availability, cold chain management, training on administration, protocol and provision of support services. A new procedure of SRT, MIST was introduced using NGT instead of ETT. Trainings were done in three Nigerian cities using simulation-based learning principles.
Results: Two hundred and one health care practitioners were trained within ten months of the product launch. They consist of 108 (53.7%) doctors, 91(45.3%) nurses and 2 (1%) unspecified. Fifty-nine (54.6%) of the attending doctors were consultants, 27 (25%) senior registrars and 22 (20.4%) medical officers. Out of the trained HCP, 69 (34.5%) were in Lagos state, 50 (25%) in Abuja, 32 (16%) in Port Harcourt. Nine out of ten participants were confident of doing the procedure. Up to 300 doses of Bles surfactant has been delivered during the period.

Conclusion: Neonatal care in Nigerian has taken a new leap with SRT for routine care. It is largely supported by newborn care providers with skills and competence on MIST therapy. This could serve as a model for introducing needed neonatal care services and products in resource limited settings.

PNEO8

Congenital Malformations among neonates managed in SCBU at Federal Medical Centre, Lokoja

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Introduction and Objective: Congenital malformation is one of the causes of hospital admission in Special Care Baby Unit (SCBU). It contributes a significant morbidity and mortality in neonates. Studying the prevalence of congenital malformations is valuable in order to provide an accurate and up to date data for the epidemiologic importance of this condition.
Material and Methodology: This was a retrospective study of babies 28 days old or younger admitted into the Special Care Baby Unit (SCBU) of the hospital from January 2013 to December 2018. The case files of the participants were reviewed to determine their malformations and classify them based on the system of the body involved.
Results: There were 103 babies recruited into the study. Digestive system constituted the most affected system being about 58% of total malformations. This comprised omphalocoele, 29 (28%); anorectal malformation, 21 (20%); hirschsprung disease (6.7%), and gastroschisis,3 (3%). Neural tube defects were present in 26 (25%). In urogenital systems, there were two cases of posterior urethral valve (PUV) and a case of polycystic kidney disease (PKD). Others were limbs malformation, 6; cleft lip and palate, 2; multiple congenital anomalies, 2; and a case each of ventricular septal defect, cystic hygroma, diaphragmatic hernia and conjoined twin.
Conclusion: This study has determined and described the patterns of congenital malformations in newborns. Digestive system malformations were the most common conditions presenting in neonatal period in this study.
Keywords: Congenital malformation, neonates

PNEO9

Congenital hyperthyroidism: A case report highlighting the challenges of management in a resource-poor setting.

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Background: Congenital hyperthyroidism also known as congenital Graves' disease is very rare accounting for approximately 1% of hyperthyroidism seen in childhood. It occurs in 1-5% of infants born to women with Graves' disease. The condition is caused by transplacental passage of thyroid autoantibodies (TSI, TBII) to the fetus of mother with active Graves' disease.
Though rare, it is a potentially lethal condition associated with high early mortality rate if adequate treatment is not instituted. Hence, close monitoring of pregnant women with thyrotoxicosis during ANC and prompt management of at risk newborns is paramount.
Case summary: We report a case of neonatal hyperthyroidism due to maternal Graves' disease with classical features including prematurity, SGA, respiratory distress, tachypnoea, tachycardia, irritability, pyrexia, jaundice, proptosis, goiter, low TSH and elevated T_3, T_4.
Our case was diagnosed early, within 24 hours of birth by the help of high clinical acumen, presence of maternal active Graves' disease and classical features of the condition at presentation. Despite some challenges encountered in the course of treating this condition, our patient responded well to the prescribed medications (Propanalol, Carbimazole, Prednisolone) and was discharged at the age of 26 days to the clinic for follow up.
The challenges involved in surviving this rare condition at the University of Abuja Teaching Hospital are discussed.
Keywords: Hyperthyroidism, Neonate

PNEO10

Non-Accidental Ergometrine Administration to a Post-Circumcision Bleeding Neonate: A Case Report

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Ergometrine, is widely used drug in the management of the third stage of labour to control postpartum haemorrhage. It is therefore, commonly available in most maternity centres and primary health facilities in the country. Few cases of Ergometrine toxicity had earlier been documented in the literature when accidentally adminis-

tered into neonates instead of Vitamin K but no case of non-accidental ergometrine administration has been reported. We present case of a 19-day-old term male neonate who presented with unconsciousness and shallow respiratory efforts of 30 minutes duration. He was referred from a primary health care centre where intramuscular Ergometrine was administered to him with the aim of stopping post-circumcision bleeding. The challenges in management and lesson learnt are hereby presented.

PNEO11

A novel air-oxygen blender for neonatal respiratory support in resource-poor settings: a preliminary study

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Background Information: High cost of commercial-grade bubble continuous positive airway pressure (CPAP) machine has led to its limited availability for respiratory support of neonates in resource poor facilities. Centres resorted to improvised-CPAP which supplies oxygen at 100% concentration exposing neonates to hyperoxia with possibleROP.Polite-O_2blend® is a cheaper device that blends supplied oxygen with atmospheric air, delivering variable fractions of inspired oxygen (FiO_2) to neonates via tracheal tube or nasal prongs extended into a disposable PEEP water bottle as in improvised-CPAP. The system microfilters and humidifies blended gas unlike conventional improvised-CPAP.
Aim: This was to evaluate Polite-blend® as a standalone device as well as an upgraded version of improvised-CPAP.
Methods: Four units were installed at the University Teaching Hospital Abakaliki for trialing. Forty-five neonates, birth weight ≥1500g were treated. The systems were operated as improved improvised-CPAP in 16 neonates of which 18.8% (3/16) were delivered preterm. All patients initially experienced respiratory distress with 75% (12/16) having pre-treatment respiratory rate >60c/m and SPO_2as low as 43% in some.
Results: The target SPO_2 of 90-95% was achieved in all neonates using FiO_2 that ranged from 0.21 to 0.6. Duration of improvised-CPAP with Polite-blend® before successful discharge ranged from 5hrs to 7days.
Conclusion: Our target SPO_2 was rapidly achieved at a safer FiO_2in most neonates that received respiratory support. Improvised-CPAP application via Polite-blend® may reduce the incidence of oxygen toxicity owing to use of conventional improvised-CPAP. Polite-blend® is recommended as safer alternative for facilities lacking sufficient funds.
Keywords: Oxygen blender, Improvised bCPAP, newborns, SPO_2

PNEO12

Surfactant Replacement Therapy by Minimally Invasive Surfactant Procedure: a preliminary report from a Neonatal unit in Lagos, Nigeria

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Introduction and Objectives: Surfactant replacement therapy (SRT), a proven life-saving intervention, is rarely performed on preterm babies in Nigeria because of high-cost of surfactant and need for endotracheal intubation followed by continuous positive airway pressure (CPAP) or mechanical ventilation. Recently, cheaper bovine surfactant (*BLES*®) has become available and is deployable through direct laryngoscopy-minimally-invasive surfactant therapy (MIST)-which may improve accessibility to SRT. We review/ describeour experience with MIST, highlighting procedural feasibility, safety and short-term effects.
Materials and Methods: We extracted demographic, clinical and procedural data from case records of preterm infants who had MIST in LASUTH from August till date and analysed using Microsoft Excel 2016®.
Results: Eight preterm infants (24-34 weeks, 945-1700g) received MIST. All 8 babies had clinically-suspected respiratory distress syndrome. At first or second attempt, a nasogastric tube (6F or 8F)was inserted through the vocal cords under direct laryngoscopy (size 00 or 0).One baby was premedicated with atropine. Surfactant (5mL/Kg) was successfully administered to all babies at median (range) age of 52 (1.3-177) hours. The procedure was generally well-tolerated; one baby vomited due to gag reflex stimulation. Post-MIST, oxygen requirements declined [reduced fraction of inspired oxygen, (FiO_2) and peak end-expiratory pressure (PEEP) on CPAP within 24 hours] in 4 infants; two died of non-respiratory morbidities.
Conclusion: Our data suggests SRT without conventional endotracheal intubation is feasible, safe and useful in preterm babies in Nigeria. Data from larger sample size on longterm impact on morbidity and mortality are required.
Keywords: Surfactant, Nigeria, MIST, preterm infants, respiratory distress

PNEO13

Preterm admissions to Neonatal Unit of Federal Medical Center, Asaba Nigeria

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Introduction: Preterm births are leading causes of U-5 mortality. These deaths occur in less developed countries because of lack of basic amenities for care. More than half of births below 32 weeks gestation die. Evidence based cost effective interventions that can make the difference in the survival of these babies.
Objective: To evaluate the short-term outcome of the preterm babies admitted over 2017, 2018 managed with implementation of key best practices.
Results: There were 2351 FMC deliveries; 12% were preterm LBW births and 24.58% were admitted to NNU. There were 1,069 admissions to NNU; 511(46.6%) out born; 43.34% of 1,069 were preterm. 282 (25.73%) preterm inborn admissions; 193(17.6) out born preterm. Forty-six, 46(9.62) were of extreme low birth weight and had the highest mortality 9(19.97). Mortality was also high in the very low birth weight category 13/122 (10.66%) and was lowest in the late preterm Low birth weight babies 2/153 (1.31). Morbidities were mainly: Respiratory distress syndrome, Sepsis, Jaundice, hypoglycemia, and malaria. (88.5%) of the very low birth weight, preterm survivors had incubator care while receiving Intermittent KMC (IKMC). Average duration of hospital stay was 34.5 days. (85.5%) of those 69 infants who received respiratory support survived. The improvised bubble CPAP and KMC contributed favorably to outcome in care of these babies.
Conclusion: Mortality for the very preterm remains very high; longer observation is needed to verify the effect of practice of KMC and CPAP on the outcome of these babies.
Key words: Outcome; Preterm Admissions; NNU FMC - Asaba

ONEP1

Socio-demographic factors associated with asymptomatic bacteriuria in primary school children in Enugu, Nigeria

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Background: Urinary tract infection (UTI) can be symptomatic or asymptomatic (asymptomatic bacteriuria) and is a common cause of chronic kidney disease in children. It is second only to respiratory tract infection in developed countries as a cause of morbidity and mortality arising from microbial infections. It is also common in a developing country like Nigeria. Asymptomatic bacteriuria is said to be more common in school aged girls and children of low socio-economic class.
Objectives: To determine the relationship between asymptomatic bacteriuria and age, sex and socio-economic status of primary school children.
Methodology: This was a cross-sectional descriptive survey involving four hundred apparently healthy primary school children aged 6 to 12 years. A pre-tested, caregiver administered questionnaire was used to obtain information about the participants including age, sex, socio-economic status, history of fever and antibiotic usage in the two weeks preceding the study. Following a clinical examination, a sample of spot mid-stream urine was collected from each participant for dipstick urinalysis and urine microscopy and culture.
Results: The ages of the children ranged from 6 to12 years. Fifty seven of the 400 children were noted to have asymptomatic bacteriuria with a female preponderance. Forty-six (80.7%) of the fifty-seven children were nine years and above. There was a predominance of positive cases (54.4%) in the middle socioeconomic class.
Conclusion: Asymptomatic bacteriuria is commoner in adolescent school aged female and in children of middle socioeconomic class.
Keywords: Asymptomatic bacteriuria, Socio-demographic, Prevalence.

ONEP2

Acute peritoneal dialysis at the Emergency Paediatrics Unit of Federal Medical Centre, Lokoja: Our experience

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Introduction and Objectives: Acute peritoneal dialysis (APD) is the preferred and convenient treatment modality for acute kidney injury (AKI) in children. The procedure was commenced in this centre in 2017.
The objectives are to highlight the experiences and challenges with APD in Federal Medical centre, Lokoja.
Method: This was a retrospective study that was conducted at the Department of Paediatrics, FMC, Lokoja over a period of 2 years (2017 – 2019). Data was obtained from patients' medical records. Information obtained included biodata, clinical presentation, diagnosis, indication for dialysis, duration of PD, challenges and outcome.
Result: A total of 22 Children had AKI during the study period. Eight (36.3%) of them had APD. Their age range was 22 months to 12 years. There were 5 (62.5%) males and 3 (37.5%) females with M:F ratio of 1:6:1. Sepsis 6 (75.0%) was the commonest cause of AKI requiring APD. Complications encountered included catheter out-

flow obstruction and peri-catheter leakages. Mortality was recorded in 2 (25.0%) children. Financial difficulty was identified as the commonest challenge in initiating or having adequate sessions of APD in the children.
Conclusion: Acute peritoneal dialysis is an important intervention that reduces mortality among children with AKI in low resource settings. Efforts should be made at circumventing challenges and improving this vital therapeutic intervention. We recommend advocacy for children with AKI that requires APD, to be offered free or highly subsidized.
Keywords: Acute peritoneal dialysis, Children, Lokoja, Experience

ONEP3

Haemolytic Uraemic Syndrome complicated by digital gangrene in a resource poor setting: A case report

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Background: Complications of microangiopathy in sporadic Haemolytic Uraemic Syndrome (HUS) predominantly affect the kidneys and brain; however, all organs are at risk of ischaemia.
Aim: To report an uncommon complication of digital gangrene in an 8-month-old female with HUS.
Case summary: NC is an 8month-old female who presented with 1-week history of fever, watery stool and vomiting, paleness and reduced urine output. At presentation, she was unconscious, dehydrated and dyspnoeic, with no peripheral oedema. Her blood pressure was 90/50 mmHg, Pulse rate 138bpm, SPO_2 98%. Urinalysis showed haematuria (+), proteinuria (+). She had an elevated creatinine and urea, severe hypernatremia, hypokalemia and metabolic acidosis. There was severe anaemia (PCV 14%), leukocytosis, thrombocytopenia and fragmented erythrocytes on film. Two days into admission, she had gangrene of the terminal phalanx of the toes bilaterally and left fingers, which progressively fibrosed and turned non-viable. She was transfused with whole blood, received low dose amlodipine, aspirin, Ceftazidime, Artesunate, ORS, zinc, wound debridement. Her renal function recovered following conservative management and she was discharged after 2 weeks.
Conclusion: Digital gangrene is a rare complication of HUS more commonly reported with atypical rather than the sporadic variety. The use of low dose amlodipine, aspirin and rehydration were measures used to limit its progression.
Keywords: HUS, Digital gangrene, amlodipine, aspirin.

ONEP4

Case series of Lupus Nephritis seen at the University of Port Harcourt Teaching Hospital

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Introduction and Objectives: Lupus nephritis is one of the most severe clinical manifestations of systemic lupus erythematosus (SLE) occurring in 50% to 75% of all paediatric SLE patients, with associated higher morbidity and mortality rates. We report the clinicopathological findings and outcome of patients with Lupus Nephritis.
Materials and Methods: This was a case series involving children diagnosed with Lupus Nephritis, over a two-year period. All seven cases of lupus nephritis managed at the Paediatric Nephrology Unit of the University of Port Harcourt Teaching Hospital during the period were reviewed. Staging of Lupus Nephritis was based on the International Society of Nephrology and the Renal Pathology Society (ISN/RPS) classification.
Results: There were seven cases of Lupus Nephritis managed at the centre during the period. These included five females (71.4%) and two males (28.6%), giving a female to male ratio of 1:0.4. The ages of the patients ranged from 4.5years to 17years, with a median age of 12years. Presenting complaints included generalized body swelling (100%), fever (85.7%), joint pain/ swelling (71.4%), skin involvements (42.9%), haematological symptoms, and a case of neuropsychiatric involvements. All patients had proteinuria, 6(85.7%) had haematuria, 4 (57.1%) had hypertension, 5 (71.4%) had nephrotic syndrome, and 3 (42.9%) had End Stage Renal Disease. Renal biopsy was done in 4 patients: two had stage IIIC lupus nephritis and the other two had IIIA and IVA. All patients received steroid therapy and 5(71.4%) received mycophenolate mofetil. Three of the patients (42.9%) had ESRD and commenced haemodialysis; one of them had plasmapharesis. Outcome was poor, with a mortality rate of 42.9%.
Conclusion: Lupus nephritis, a condition that was previously thought to be rare in Africa, is now more frequently diagnosed. A high index of suspicion is therefore encouraged among clinicians.
Keywords: Lupus Nephritis, Children, Renal biopsy

ONEP5

Risk factors associated with urinary schistosomiasis amongst formal and informal (almajiri) school pupils in a rural community in Kano State

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Introduction: Urinary schistosomiasis remains one of the most prevalent neglected tropical diseases in the

world today, particularly in developing countries like Nigeria. Kura Local Government area in Kano State is a rural community with intense agricultural activities predisposing the inhabitants to this infection.
Objective: We aimed to determine the risk factors associated with urinary schistosomiasis amongst school pupils in this community.
Methods and Materials: It was a cross sectional study conducted amongst 200 primary and 200 almajiri school pupils in Kura LGA. Questionnaires were administered and urine samples were examined microscopically for the ova of *S. haematobium*.
Results: Out of those infected(49.2%), it was significantly higher amongst male students (51.7 %) , older respondents 53.9% (age 10 years above), and almajiri school pupils (55.5%) On the contrary, parental occupation, parental educational status, pattern of water contact, source of water for domestic use and active farming were not found to be associated with the infection. On adjusting for confounders using multivariate logistic regression analysis, respondents with past history of bloody urine were found to be four times more likely to be infected than others (0R = 3.99, 95% CI (2.35-6.77) P < 0.05).
Conclusion: Control programmes in this LGA should target older almajiri school pupils as this group of students are more infected with urinary schistosomiasis. The use of questionnaire to detect those with past history of bloody urine should be considered as a cheap indicator of the presence of urinary schistosomiasis in endemic communities.
Keywords: Urinary schistosomiasis, Almajiri, School.

PNEP1

Steroid-sensitive nephrotic syndrome in children in Umuahia: time to remission and pattern of relapses.

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Introduction and Objectives: Steroid sensitive nephrotic syndrome (SSNS) follows a relapsing and remitting course in the majority, with 90% relapsing at least once. This study was done to describe the time to initial remission as well as the pattern of relapses among children with SSNS in Umuahia, South-eastern Nigeria.
Materials and methods: Records of children with idiopathic nephrotic syndrome from July 2013 to June 2018 were reviewed. Time to remission and relapses in their first year were determined.
Results: A total of 24 children with idiopathic NS. Male to female ratio was 3:1. Their ages ranged from 2 to 14 years with a mean age of 6.67 ± 3.51 years. Fifteen (62.5%) responded to steroid. Steroid response rate in males was not different from females. Children aged 5 years and below had the highest remission rate. Time to remission ranged from 8 to 56 days with a median of 14 days. Six patients had at least one episode of relapse giving a relapse rate of 40.0%. Of these six, four (66.7%) were infrequent relapsers while 2 (33.3%) were frequent relapsers. One patient was steroid dependent. Relapse rate was not different across age groups or gender. Acute respiratory infection was the most frequent trigger of relapse.
Conclusion: More than two-thirds of children with NS in our centre experience early steroid response while less than one-third respond after 4 weeks of therapy. Less than half of the children experience a relapse in the first year of follow up.
Keywords: Steroid-sensitive nephrotic syndrome, time to remission, frequent relapsers, steroid dependent.

PNEP2

Pyocolpos presenting as obstructive uropathy in a six -week-old female

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Introduction: Obstructive uropathy is rare in females. When it occurs, it is usually due to an extrinsic obstructive cause. Pyocolpos, resulting from an underlying genital tract obstruction can compress the urinary tract causing urinary obstruction.
Case Report: A six-week-old female with abdominal swelling noticed few days after birth, reduced urine output and fever. Physical examination showed a febrile infant with markedly distended abdomen and a suprapubic mass. Urethral catheter was passed into the bladder with difficulty, with drainage of amber coloured urine but no reduction in the abdominal mass size. Abdominal ultrasound scan showed bilateral severe hydronephrosis and cortical thinning and a cystic mass mistakenly reported as a distended urinary bladder. A blind abdominal tap yielded about 2ml of frank pus. Examination under anaesthesia was done with subsequent exploratory laparatomy which revealed pyocolpos, atretic distal vagina but normal vulva, ovaries and fallopian tubes. Vaginotomy was done with drainage of about 500ml of frank pus. A tube vaginostomy was done and later vaginoplasty. Post-op condition was satisfactory, but she had a rectovaginal fistula which is being managed expectantly.
Conclusion: Diagnosis of pyocolpos is usually missed or delayed both clinically and radiologically. When evaluating a female child with abdominal mass and urinary obstruction, a suspicion of an extrinsic cause should be made, and genital examination done.
Keywords: Pyocolpos, urinary obstruction, vaginal atresia, hydronephrosis

PNEP3

Paediatric dialysis in Ibadan Nigeria- A four-year review

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Background: Data on paediatric dialysis in low resource settings is not widely available. We therefore reviewed the outcome of paediatric dialysis in our centre.
Method: A review of patients managed by the paediatric nephrology unit of the University College Hospital Ibadan and underwent dialysis from the 1st of September 2015-31st August 2019 (4 years).
Results: One hundred and seventy-five patients aged 7 weeks – 18 years [median 7. 9 (IQR 3-7) years]. The males were 106(60.6%), and females 69 (39.4%). Haemodialysis alone was carried out in 125 patients (71.4%) Peritoneal dialysis alone was carried out in 47 patients (26.9%) while 3 patients (1.7%) underwent both HD and PD. Patients who received PD only were aged median 1-year (IQR 0.46-3.0) years, while patients who had HD were aged median 9 years (IQR (6-13 years) p=0.00. Acute kidney injury occurred in 140 patients (80%) while end stage renal disease (ESRD) occurred in 35 patients (20%). All the patients who had either PD only or a combination of HD and PD had AKI, the 35 patients in ESRD all had HD only, while 90 patients with AKI had HD only. The overall in-hospital mortality was 32 (18.3%) and among the patients with AKI, 26 (18.6%) while among the patients with ESRD in-hospital mortality was 6 (17.1%).
Conclusion: Paediatric dialysis remains feasible in our country.

PNEP4

Steroid Response Pattern in Childhood Nephrotic Syndrome in Umuahia, South Eastern Nigeria

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Introduction and Objectives: Nephrotic syndrome (NS) in childhood is a leading cause of chronic kidney disease. Response to corticosteroids is the best prognostic marker. This study evaluated the steroid response pattern and associated factors among children with nephrotic syndrome.
Materials and methods: Records of children managed for nephrotic syndrome from July 2013 to June 2018 were retrieved and relevant information obtained and analyzed.
Results: A total of 30 children aged 2 to 15 years with a median age of 8 years. Male to female ratio was 2:1. Twenty-four (80%) had idiopathic NS. Remission rate was 50% overall and 62.5% among children with idiopathic NS. Patients with steroid resistance had a higher mean age ($p < 0.001$) compared to steroid responders. Frequency of steroid resistance in males was not different from females ($p = 1.00$). Children aged 5 years and below had the highest remission rate while those above 10 years were all steroid resistant. There was no difference in the mean levels of serum albumin ($p = 0.358$), total cholesterol ($p = 0.477$) and in the frequency of haematuria ($p = 0.431$), hypertension ($p = 0.821$) and raised serum creatinine ($p = 1.000$) among children who achieved remission compared to non-responders.
Conclusion: Steroid resistance is relatively high among children with nephrotic syndrome in Umuahia and predominates after the age of ten years. Presence of haematuria, hypertension and raised serum creatinine did not significantly influence steroid response in our series.
Keywords: Nephrotic syndrome, Steroid response, Steroid resistance, Childhood, Nigeria

ONEU1

Quality of sleep among clinical medical students of Bayero university, Kano, Nigeria

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Background: Sleep deprivation and disruptions are associated with both psychological and physical disorders. The medical student population is one of the populations that have an increased risk for sleep deprivation.
Aim and objectives: This study aimed to determine the quality of sleep among clinical medical students of Bayero University Kano. Specific objectives include determination of prevalence of poor sleep quality and excessive daytime sleepiness as well as the associated factors.
Materials and Methods: This is a cross-sectional analytical research that was conducted during the 2018 – 2019 academic session of Bayero University Kano. The data was obtained using socio-demographic questionnaire as well as the Pittsburgh sleep quality index (PSQI) and Epworth sleepiness scale (ESS) self-administered questionnaires. Two hundred questionnaires were administered to the clinical medical students in their fourth, fifth and sixth academic years. SPSS version 20 was used for the statistical analysis of the data collected.
Results: Total of 181 questionnaires were completed out of the 200 that were administered, giving a response rate of 90.5%. There were 114 males (63%) and 67 females (37%) giving a male to female ratio of 1.7:1, which is in keeping with the gender distribution of the students. The mean age (±SD) of the students was 23.8 ± 2.9 years.

The overall poor sleep quality was found to be 53.0% based on the PSQI while overall excessive daytime sleepiness was found to be 38.3% using the ESS. Poor sleep quality was found to be 61.1%, 51.7% and 42.9% among the students in the fourth, fifth and sixth academic year respectively [P=0.14]. Excessive daytime sleepiness was found to be 45.8%, 41.7% and 22.9% among the students in the fourth, fifth and sixth academic year respectively [P=0.03].
Conclusion: The prevalence of poor sleep quality is high among the clinical medical students of Bayero University Kano.
Keywords: Sleep quality, Clinical medical students, Pittsburgh sleep quality index, Epworth sleepiness scale, Bayero University Kano.

ONEU2

Congenital left hemispheric arachnoid cyst in a 4-month-old male infant: Case report

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Introduction and Objective: Arachnoid cyst is the most common brain cyst accounting for 1% of all intracranial space-occupying lesions. Reported cases from Nigeria are very rare. This case was reported to emphasize the need for adequate evaluation of children presenting with macrocephaly.
Case description: The infant was a 4-month old who presented with history of progressive head swelling noticed in the second month of life. He earlier developed seizures in the neonatal period for which he had anticonvulsants. He was not responding to noise nor tracked objects and had significant delayed developmental milestones as he had not achieved social smile nor head control. Examination revealed a child with craniofacial disproportion, occipitofrontal circumference of 45cm which was 107% of expected for child's age and gender. Child had light perception but did not track objects nor respond to visual threat. He also had generalized hypertonia. Cranial CT revealed dilated lateral and third ventricles with fourth ventricle appearing normal. A large cyst was seen in the left hemisphere, which connected with the posterior end of the dilated left lateral ventricle by a neck cleft, compressing and displacing the left cerebrum medially. Child had a ventriculoperitoneal shunt and is being followed up.
Conclusion: We present this case to heighten the importance of adequate evaluation of a child presenting with macrocephaly.
Keywords: congenital, arachnoid, cyst

ONEU3

Early-onset developmental impairments among infants attending the routine immunisation clinic at the University College Hospital, Ibadan

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Background: Developmental disorders are frequently overlooked in the developing countries of the world, particularly in sub-Saharan Africa (SSA). Early identification of developmental delays is critical to optimal outcomes.
Aim: To determine the prevalence of developmental delay among infants attending immunisation clinics at the University College Hospital, Ibadan.
Method: Infants attending the immunisation clinics of the University College Hospital, Ibadan were screened for signs of developmental delay using the five-domain, structured, parent-completed Ages and Stages Questionnaire. Detailed history of pregnancy, delivery and baby's health were obtained through face-to-face caregiver interviews.
Results: A total of 587 infants, 312 (53.2%) males and 275 (46.8%) females were enrolled into the study. Their ages ranged from 6 weeks to 12 months with a mean of 7.6 (4.1) months. One hundred and ninety-eight (33.7%) children showed signs of developmental delays in at least one of the five domains assessed. For the domains of communication, fine motor, gross motor, problem solving, and personal-social skills, the prevalence of developmental delay was 7.6%, 15%, 10.8%, 14.2%, and 14.9% respectively. Factors that significantly predicted developmental delay included prematurity (OR = 2.64; 95% CI: 1.45-2.05) and a history of perinatal asphyxia (OR = 1.74; 95% CI: 1.77-2.49).
Conclusion: One of every three children attending the routine immunisation clinics at the UCH, Ibadan shows signs of developmental delay. Prematurity and perinatal asphyxia are major risk factors. There is a need to incorporate routine developmental screening into the Nigerian healthcare system for timely recognition of developmental delay and prompt interventions.
Keywords: Development, Screening, Infants, Delay

ONEU4

Hearing function in children with cerebral palsy in Ibadan, Nigeria

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Background: Cerebral palsy (CP) is one of the leading causes of early onset lifetime disability. Neurological co -morbidities have been shown to be frequently associ-

ated with CP including hearing loss. Hearing impairment has been found to have significant deleterious effects on language and cognitive development.
Objectives: To describe the prevalence, pattern and risk factors for hearing impairment (HI) in children with CP.
Methods: It was a cross-sectional study of 120 children with CP. Hearing function was evaluated in all eligible children by otoacoustic emissions and auditory brainstem response testing. Risk factors for hearing loss were documented. Level of significance was set at $p < 0.05$.
Results: Sixty-four (53.3%) children with CP had associated hearing impairment with disabling hearing loss in 37 (30.8%). The degree of hearing loss was mild in 20 (31.2%) and 40 (62.5%) children had bilateral hearing loss. Fifty-two (81.2%) of the children with hearing impairment had sensorineural loss. Of these, 19 (29.7%) had sensory (cochlear) loss, 3 (4.7%) had neural loss while 30 (46.8%) had combined sensorineural loss. Five (7.8%) had conductive loss, 6 (9.4%) had auditory neuropathy and 1 (1.6%) had mixed type. Perinatal asphyxia, the presence of at least one other associated impairment and non-spastic CP were identified as risk factors for hearing impairment.
Conclusion: Hearing impairment occurs in one of every two children with CP in our paediatric neurology service with perinatal asphyxia identified as the major risk factor.
Keywords: Cerebral palsy, hearing function, Ibadan, perinatal asphyxia

ONEU5

Age when children present with developmental delays: An experience from a neurodevelopmental clinic

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Introduction: A delay in the attainment of age-appropriate developmental milestones is usually the heralding sign of an abnormality. Early recognition of a delay is critical because it affords the opportunity for early interventions which have been shown to be beneficial in ameliorating the long-term effects of undetected developmental delays.
The age at which children present with delays is dependent on the age of detection. Parental recognition is key to early presentation. Parental recognition is dependent on awareness of developmental milestones.
The objective therefore is to determine the average age of children presenting for the first time with a delay of development at the neurodevelopmental clinic and the age at which parents first recognized the delay.
Materials and Method: Over a period of 3 months, a questionnaire was administered to the caregivers of children aged 0-5 years, presenting for the first time at the neurodevelopmental clinic. Questions were on sociodemographic characteristic, age of first recognition and type of delay.
Results: Forty-nine caregivers completed the questionnaire. The average age of first presentation was 25months. The average age at caregivers' recognition of delay was 9.1months. Motor delay was the main type of delay (81%); the average age of presentation was 21.2 months and detection 6.8months. Speech delay presented in 16.3% and the age at presentation was 44.1 months and detection 21.6 months. Only one child presented with abnormal behavior at 60 months.
Conclusion: There is disparity between detection and presentation. This requires efforts at parental education and developmental surveillance.
Keywords: delayed development, parental recognition

ONEU6

Dyslexia: How often do Paediatricans diagnose it in hospital setting?

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Background: Dyslexia is a neurodevelopmental disorder manifesting as impairment in reading ability due to problems with word identification. It is not commonly diagnosed in the hospital setting and most cases are noticed by teachers or parents. We report a 'missed' case of dyslexia in an 8-year-old boy.
Case report: An 8-year-old primary 2 boy with history of difficulty in reading and writing noticed from age of 4years. No complaint about his vision ability. He had to be given special consideration in school, to be taking only oral exams, after realizing that he has difficulty reading and writing. He however did well in all his oral exams. His developmental history revealed normal motor, speech/language and socio-emotional developments. Family history is that of higher social class. He was earlier seen by Paediatricians at different tertiary hospitals and parents were told that child was 'normal'.
Examination revealed a healthy child, having normal conversation with his younger sibling and parents. Neurologic examination revealed only soft neurologic signs in the form of mild incoordination (finger-nose test and tandem walk). Romberg's sign was negative. Draw-a-person test was equivalent to a mental age of 9years (IQ = 112%). Ophthalmologic assessment revealed normal findings and EEG and Brain MRI were normal. A diagnosis of dyslexia (specific learning disability) was made and the family were counseled and referred to an educational psychologist for further intervention.
Conclusion: There is need to draw the attention of Paediatricans to learning disorders such as dyslexia which could adversely affect a child's educational potential if not identified and managed early.
Keywords: Dyslexia, learning disorder, reading difficulties

ONEU7

Mislabeled misbehaviour: Case of a 12-year-old boy with absence seizure

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Introduction: The hallmark of absence seizure is abrupt and brief impairment of consciousness, with interruption of the ongoing activity, and usually unresponsiveness, which ends suddenly with resumption of the pre-absence activity.
Aim: To describe how absence seizure can be mislabeled in children by parents and teachers, and the consequences on the child.
Case Report: A 12-year-old boy was brought to the Paediatric Neurology clinic by his mother with complaints that child was very forgetful and wasted time in returning from simple errands. There were school reports of absent mindedness in class and inability to recall lessons taught. Mother noticed occasional fluttering of the eyes in child but thought nothing of it. Both parents felt he was misbehaving, and as a result the father constantly scolded and caned him. Review of child privately revealed that there was repeated loss of consciousness in-between receiving instructions at home and in school. Examination revealed a withdrawn but otherwise stable child. A clinical diagnosis of absence seizure was made, and management instituted, along with counselling sessions for both parents and the child. Child did well, remained seizure free and relationship with his father became cordial.
Conclusion: The non-motor manifestation of absence seizure is often missed by parents and teachers, making the child at risk of being treated unfairly, as it occurred in this case. This underpins the need for raising awareness of presentation of absence seizure among schoolteachers and the general populace.
Keywords: Absence seizure, parents, misbehaviour

ONEU8

Knowledge, attitude and perception of teachers and learners about epilepsy in Jos, Plateau State

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Introduction: Children with epilepsy are often challenged with stigmatization and discrimination, asides the clinical effects of the disorder. This has been attributed to, among other things, poor knowledge, attitude and perception of teachers and co-learners about the disorder.
Objectives: The study aimed to assess the knowledge, attitude and perception of epilepsy among members of school communities in Jos north local government, Plateau state, Nigeria.
Methodology: A descriptive cross-sectional study using self-administered questionnaire among 437 secondary school teachers and students in the study area. The 59-item scale comprised 36 knowledge items, 7 attitude items and 16 perception items. Chi-square and Odds ratio were used to test the hypothesis at 0.05 level of significance.
Result: There was poor knowledge of epilepsy, (67.5% of study population) with some discriminatory items exhibited, although overall the attitude and perception about epilepsy were good. Those who had poor knowledge, attitude and perception had over three times the odds of discriminating against children with epilepsy. (OR 3.7, 95% CI=1.76-7.83). Majority, (88.3%) indicated interest in knowing more about how to respond to a child with epilepsy.
Conclusion: There is a need to educate members of the school about epilepsy and train them on first aid care to give a child who convulses in school. There is also need for associations like Paediatric Association of Nigeria to advocate for legislation against stigmatization and discrimination of children with epilepsy.
Keywords: epilepsy, knowledge, attitude, perception, school members

ONEU9

Oto-Acoustic Emissions and Auditory Brain Stem Responses as markers of hearing in apparently normal children

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Introduction: Hearing impairment is a global malady, but routine newborn hearing assessment has not been integrated into the Nigerian healthcare system. Children with undiagnosed hearing impairment are at a high risk of language and cognitive impairment as the sensitive period for language and speech acquisition is missed.
Objectives: This study describes the prevalence, pattern and risk factors for hearing impairment (HI) in a cohort of apparently healthy Nigerian children.
Materials and methods: It was a cross-sectional descriptive study of 104 children aged 6 months to 16 years. Hearing function was evaluated in all eligible children by otoacoustic emissions and auditory brainstem re-

sponse testing. Likely risk factors for hearing impairment were documented. Descriptive statistics were employed in data analysis to describe the pattern of hearing loss and associated risk factors.
Results: Eleven (10.6%) of the 104 children assessed had hearing loss. Hearing impairment was mild, moderate and severe in 7 (63.6%), 1 (9.1%) and 2 (18.2%) respectively while 1 (9.1%) had profound hearing loss. Four (36.4%) children had unilateral hearing loss and 7 (63.6%) had bilateral hearing loss. Six (54.5%) of them had sensorineural hearing loss while the remaining 5 (45.5%) had auditory neuropathy. Identified risk factors for hearing loss were a history of neonatal jaundice, recurrent otitis media, exposure to loud noise and history suggestive of perinatal asphyxia.
Conclusion: One in 10 apparently healthy Nigerian children have some degree of hearing impairment. This raises concerns about the prevalence of undiagnosed hearing impairment among Nigerian children.
Keywords: hearing function, Ibadan, one in 10 children

ONEU10

Predictors of Childhood Status Epilepticus associated in-hospital mortality and new-onset neurologic disability in Kano, northern Nigeria

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Introduction: Childhood status epilepticus (SE), or prolonged seizures among children, constitutes the most common life-threatening neurologic emergency in children and appears to have a higher incidence and higher associated morbidity and mortality in low- and middle-income countries (LMICs) of sub-Saharan Africa. The objectives of this study are to determine predictors of in-hospital SE-associated mortality, and new-onset neurologic disability in Kano.
Materials and Methods: This study is part of a population SE surveillance in Kano metropolis. Existing medical record data was abstracted for the study by active review of established SE medical records by CHEWs trained in epilepsy care and SE management. Mortality was defined as death associated with SE occurring from initiation of SE to time of discharge from hospital while acquired neurologic deficit is any new onset neurologic deficit that develops after the onset of the SE. Stepwise logistic regression was used to construct our models and independent variables were selected based on their clinical significance.
Result: The overall SE associated in-hospital mortality was 24.9%. New-onset neurologic deficit occurred in 13.9% of the survivors. Independent risk factors for in-hospital death in patients with SE included age <12 months [odd ratio (OR) = 4.9; 95% confidence interval (CI) = 1.7 – 13.6], hypoglycemia [OR = 9.6; CI = 2.6 – 34.3], and duration of SE >30 mins [OR = 2.7; CI = 1.8 – 3.8]. Independent predictors for acquired neurologic deficit were seizure lasting >30 mins [OR = 3.1; CI = 1.7 – 3,5], ≥2 SE episodes [OR = 7.1; CI = 3.5 – 18.1], and CNS infection [OR = 6.6; CI = 3.2 – 13.4].
Conclusion: We have identified duration of seizure >30 mins, hypoglycemia, and ≥2 SE episodes, duration of SE >30 mins and CNS infections as modifiable risk factors for childhood SE associated mortality and acquired neurologic morbidity respectively in Kano, northern Nigeria.

ONEU11

Does the effect of Omitting Breakfast on Cognitive function differ with Nutritional Status among Adolescence?

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Background: Omitting breakfast have variable effects on cognitive function in children. Some studies have shown negative effect while others have not shown any effect. The age and nutritional status of the subject may affect the outcome of such studies. Therefore, it is important to determine the effect of omitting breakfast on cognitive function in adolescents of different nutritional status.
Objectives: To determinethe acute effect of breakfast omissionon short-term memory, sustained attention and psychomotor performance in adolescents with varied nutritional status.
Method: An interventional cross over study on the effect of omitting breakfast on cognitive function was conducted among 192 adolescents of different nutritional status based on their BMI. It was conducted among male and female adolescents boarding secondary school students in Kano, Nigeria using a computerized battery of cognitive function test. Before administering the test, one half of the subjects took breakfast while the other half did not. The following day the subjects switched roles before taking the test.
Results: Short term memory and sustained attention were reduced by breakfast omission in both underweight and normal weight subjects. Short term memory was more adversely affected in underweight subjects. There was no change in cognitive performance among the overweight subjects after omitting breakfast.

Conclusion: Omitting breakfast has detrimental effect on short term memory and sustained attention among underweight and normal weight adolescents.

Key Words: Omitting breakfast, Cognitive function, Nutritional status, Adolescents, Kano.

PNEU1

Sleep Hygiene Practices among Children and Adolescents in Ilorin

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Introduction and Objectives: Sleep hygiene is defined as the conditions and practices that promote circadian rhythm-appropriate, continuous, and effective sleep. It involves both behavioural and environmental factors. Inadequate sleep during childhood is an invisible phenomenon that does not receive attention from primary care providers until it interferes with the child's behavior, mood, or performance. The general objective of this is study is thus to describe the sleep hygiene practices among children presenting to General Out-Patient Department of our institution. Specific objectives include description of socio-demographic factors that are associated with identified sleep hygiene practices.
Materials and Methods: The study was a hospital-based, descriptive, cross-sectional, carried out among children and adolescents 2-18 years attending the our GOPD after approval was obtained from the Ethics and Research Committee. Tools used for data collection were structured questionnaire and a standard sleep study tool called BEARS.
Results: The respondents were 428 comprising of 230 (53.7%) males and 198 (46.3%) females (M: F ratio of 1.2:1). Sleep hygiene practices of respondents showed that 12.4% of them routinely shared a bed with parents/ guardians/sibling while 6.5% did not have a regular sleeping arrangement; 37.1% had a TV/computer in the bedroom, while 61.9% used the TV/video within 2 hours of bedtime and 38.3% used the computer/internet/cell phone within 2 hours of bedtime.
Conclusion: Sleep hygiene practices of children and adolescents seen at UITH include routine room sharing with parents/guardian/sibling, presence in bedroom and use of media devices around bedtime, use of caffeinated beverages, and engaging in vigorous exercise close to bedtime.

Keyword: Sleep, Hygiene, BEARS, Children, Adolescent

PNEU2

Problems of paediatric genetic neurological disorders in resource-limited settings: case report of two children with Duchenne Muscular Dystrophy (DMD)

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Introduction: Awareness and management of genetic disorders like DMD have attained outstanding results in developed countries, as opposed to resource limited settings. Identifying challenges of diagnosis and management may contribute to future improvements in management and clinical outcome.
Objective: To highlight the challenges in diagnosis and management of paediatric genetic neurological disorders like DMD in low resource settings.
Case Report: Case 1: A 9-year-old boy referred to the Paediatric Neurology clinic with a clinical diagnosis of cerebral palsy had developed progressive difficulty in walking, climbing, dancing and standing from sitting position, a year prior to presentation. His parents did not attribute any problem to it until he became withdrawn from being teased by his siblings. Examination revealed global hypotonia, enlarged calf muscles and positive Gower sign. Diagnosis of DMD was hinged on the presentation, muscle biopsy and serum creatine kinase. He was thereafter commenced on prednisolone and physiotherapy.
Case 2: A 4-year-old girl presented 6 months after she developed progressive weakness of the lower limbs, difficulty in walking and Gower's manoeuvering when standing. Parents were concerned as her older brother had same presentation and died from the condition. Examination findings global hypotonia and waddling gait. For financial reasons, there was a retard in her management, and she was lost to follow up but reported to have died at 5 years of age.
Conclusion: We advocate for genetic screening policy and inclusion of management of such disorders in the financial healthcare insurance scheme.

Keywords: Duchenne Muscular Dystrophy, Creatine kinase, X-linked disorder, Genetic Neurological Disorders

PNEU3

Common sleep abnormalities seen among children and adolescents in Ilorin

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Introduction and Objectives: Sleep is a behavioural state of temporary disengagement from, and unresponsiveness to the environment. Like breathing and eating, we need sleep adequately in order to survive well. This study's general objective is to describe the common sleep abnormalities seen among children and adolescents presenting to our General Out-Patient Department. Specific objectives include comparison of sleep duration during weekdays and weekends.
Materials and Methods: A hospital-based, descriptive, cross-sectional study carried out among children and adolescents 2-18 years attending the our GOPD after approval was obtained from the Ethics and Research Committee. Data collection was with structured questionnaire and a standard sleep study tool called BEARS.
Results: The common sleep abnormalities found in toddlers are bedtime problems (6.7%) and excessive daytime sleepiness (46.3%);in adolescents, excessive daytime sleepiness (36.7%). Also, 70.2% of toddlers, 64.5% of 6-12 year olds and 75.5% of adolescents did not have a regular sleep and wake up time. The mean duration of sleep during weekdays for 2-5year olds was 8.97± 2.34hours. Mean duration of sleep on weekdays for school-aged and adolescents was 9.31± 1.90 hours and 8.71± 1.51 hours respectively. During weekends, mean sleep duration for toddlers, school-aged and adolescents were 9.37± 1.94 hours, 10.05± 2.41 hours and 9.45± 2.49 hours respectively.
Conclusion: The commonest sleep abnormalities found were irregular bedtime and wake time, and excessive daytime sleepiness. Majority of subjects did not get the recommended hours of sleep for age during the weekdays and during weekends.
Keywords: Sleep, Abnormalities, Duration, Weekend, Weekdays

PNEU4

Familial acute dystonic reaction – a call for stricter control of over-the-counter drug use

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Background: Acute dystonic reactions are extrapyramidal effects usually resulting from drug use, most commonly antipsychotics. Though rarely fatal, they are scary and have tremendous psychological effects on the sufferer and caregiver (s).
Case Report: F.F. is a 2-year-old girl who was brought to the children emergency room with symptoms of an acute dystonic reaction (drooling of saliva, abnormal tongue protrusion and intermittent tonic neck deviation) noticed about an hour prior to presentation. She was given two tablets of an unprescribed drug purchased over the counter (OTC) and presumed to be levamisole but identified at presentation to be 10 mg of haloperidol, about 16 hours prior to the onset of symptoms. Coincidentally, three siblings of the patient, between 9 and 13 years, presented simultaneously with similar symptoms to those of the patient. They all were also given three tablets each of the same drug (15mg each of haloperidol tablets). She was managed for acute dystonic reaction from haloperidol use with intravenous diazepam, intravenous hydration and artane tablets. The hospital does not have facility for estimation of plasma levels of the drug. Serum biochemistry was normal. She improved rapidly and symptoms subsided within 24 hours. The three siblings were equally admitted with the same diagnosis and managed as above.
Conclusion: There is a need for stricter control of OTC purchase of medications in Nigeria. The possibility of a fatal outcome in these siblings if the drug had a narrow therapeutic index is better imagined than experienced.
Keyword: acute dystonic reaction, haloperidol, over-the-counter.

PNEU5

All that 'jerks' is not seizures: a case report of infantile masturbation and review of the literature

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Introduction and Objectives: Infantile masturbation (IM), preferably known as gratification disorder, is a benign paroxysmal movement disorder, commonly misdiagnosed as epilepsy. It manifests as stereotypic episodes of stiffening of the body/limbs, with copulatory movements like thrusting the pelvis and somatosensory symptoms like flushing, perspiration or irregular breathing. It occurs without direct genital stimulation making diagnosis difficult. IM is under-reported due to missed diagnosis, parental fear of stigmatisation and feeling of shame. To create awareness, we report a Nigerian child who presented with 'jerking' thought to be epilepsy; IM was diagnosed after reviewing video recording of the episode.
Case Report: 12-month old female child presented in 2012 with one-month history of abnormal movements described as 'jerking' but no fever or altered consciousness; child stops when called. Frequency and duration had worsened to many episodes per day. Pregnancy-related and developmental histories were normal. Epilepsy was suspected and EEG requested but father

declined; a review of a video clip showed a conscious female child lying prone on the bed and intermittently making rhythmic rocking/thrusting movements of the pelvis; she stops with distraction. A diagnosis of IM was made, father was counselled on behavioural therapy. Symptoms progressively declined in frequency and duration, with occasional relapse until 2018 when symptoms stopped completely.
Discussion and Conclusion: IM may be confused with epilepsy; diagnosis requires awareness and high index of suspicion, to avoid needless investigations and treatment. Symptoms resolve without specific therapy, with excellent prognosis, although symptoms may occasionally relapse as child grows into adolescence.
Keywords: infantile, masturbation, gratification, disorder, Nigeria

PNEU6
Pyridoxine in management of super-refractory status epilepticus: Acase report

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Introduction: Super-refractory status epilepticus (SRSE) is status epilepticus that has recurred or persisted for more than 24 hours after initiation of intravenous anaesthetic medication. It carries a high risk of morbidity and mortality. We report a case of SRSE that abated only after the use of pyridoxine.
Aim: To raise awareness on super-refractory status epilepticus and propose the addition of pyridoxine to our status epilepticus management guidelines given its safety profile.
Case Summary: V.E was a 9-year-old female with cerebral palsy from kernicterus that was referred to our facility with acute seizures that persisted despite benzodiazepines. Significant past medical history was that of a single a febrile seizure two years earlier, but she has been otherwise stable. Her work up excluded sepsis, serum magnesium, electrolytes, renal and liver functions remained normal. Brain MRI revealed no acute changes. She continued to convulse beyond the first week of admission necessitating ICU admission and continuous thiopental sodium infusion with no response. Seizures however stopped after commencement of pyridoxine.
Conclusion: Super-refractory seizure warrants meticulous care due to its high fatalities and the addition of a simple non-toxic vitamin may be lifesaving.
Keywords: Super-refractory status epilepticus, pyridoxine.

PPUL1
Prevalence and pattern of pneumonia among children admitted into University of Port Harcourt Teaching Hospital: A two-year review

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Introduction: Pneumonia is the leading cause of death among children, it accounts for 17.0 % of under five deaths in Nigeria yearly. The aim of this study is to determine the pattern of pneumonia among children admitted in University of Port Harcourt Teaching Hospital (UPTH).
Materials and methods: A 2-year retrospective descriptive study was done. The admission and discharge records at the children emergency ward (CHEW) and folders of patients admitted for pneumonia were used to retrieve information.
Results: A total of 2169 children were admitted into CHEW from 2017- 2018 and this comprised of 1089 (50.2%) males and 1080(49.8%) females. Of the 2169 children, 286(13.2%) of them had pneumonia. More males (16.9%) compared to females (9.4%) had pneumonia, with a significant gender difference. (^{2} = 26.29, p = < 0.001) Males were twice more likely to have pneumonia compared to the females (OR = 1.95, CI= 1.51-2.54). Pneumonia was highest (27.1%) amongst children < 1 year old compared to the other age groups (P = <0.001). Thirteen (4.6%) of those that had pneumonia died. Mortality was highest (9.2%) among those who presented > 5 days after onset of symptoms. (^{2} =10.73, p = 0.03).
Conclusion: Childhood pneumonia is still a burden among children in Port Harcourt. Early presentation to the hospital may reduce the mortality.
Keywords: Pneumonia, children, UPTH

PPUL2
Late manifestation of CPAM in a Nigerian infant: A case report

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Background: Congenital pulmonary airway malformation [CPAM] is a rare developmental lesion of the tracheobronchial tree comprising of single or multiple cysts of uniform or varying sizes arising from anomalous growth of the airway parenchyma and vasculature.[1] It was formerly known as congenital cystic adenomatoid malformation [CCAM]. The term CPAM is recently used because not all types are entirely cystic and adenomatous.
There have been previous case reports in Nigeria.
Case Summary: We report the case of a four-month-old female infant who presented with two-week history of

cough and one-week history of fever and fast breathing. Patient had a chest radiograph and chest CT suggestive of CPAM. Some of the complications of undiagnosed and untreated CPAM include pneumonia, pneumothorax, pleural effusion and atelectasis of the contralateral and ipsilateral portions of the lung that are not involved due to compression. All these complications were present in our patient.
Conclusion: This case highlights manifestations and complications of late presentation of CPAM in a Nigerian setting.
Keywords: Congenital pulmonary airway malformation, late presentation, complications, Nigerian infant.

PPUL3

Clinico-Demographic Profile of Severe Childhood Pneumonia in Bauchi, North-East Nigeria

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Introduction and objectives: Pneumonia is a leading cause of childhood mortality, especially in children under five years of age. Pneumonia mortality is higher in low- and middle-income countries like Nigeria. This study was conducted to assess the clinical and demographic features of children managed for severe pneumonia, find the case fatality rate of severe pneumonia and determine possible association between mortality and clinical variables in children with severe pneumonia.
Materials and Method: A retrospective cross-sectional study reviewed 88 cases of severe 7pneumonia in children aged 2-59 months, admitted and managed for severe pneumonia. The World Health Organization case definition of severe pneumonia was used. Data was extracted from case files regarding patients' clinical and demographic variables using a proforma.
Results: Out of the 88 cases reviewed, 55.7% (n=46) were infants. The Case Fatality Rate of severe pneumonia is 4.5%. Fifty-nine patients (67%) had only one sign of severe pneumonia, 24 (27.3%) had 2 signs of severity while 5 (5.7%) had 3 signs of severity. Cardiac failure was the commonest sign of severe pneumonia, seen in 55.7% of cases. Mortality was associated with increase in signs of severity (p= 0.016).
Conclusion: From this study, severe pneumonia is associated with a high mortality. Cardiac failure is the commonest sign of severity in childhood pneumonia. Mortality is associated with worsening severity.
Key words: severe pneumonia, signs, mortality