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Editorial

Acute Post-streptococcal Glomerulonephritis: A Common Renal Disease

ACUTE post-streptococcal glomerulonephritis (APSGN) is the prototype of acute immune complex-mediated glomerulonephritis [1] that is presenting as acute nephritic syndrome. Acute nephritic syndrome is characterized by the presence of some or all of the following: haematuria, oedema, oliguria, hypertension, circulatory congestion and decreased glomerular filtration rate. In APSGN, the source of the antigen which sets off the cascade of events is a nephritogenic streptococcal infection commonly of the throat or the skin. APSGN is the most common example of post-infectious acute glomerulonephritis; however, other bacterial, viral and parasitic agents have been implicated in the pathogenesis of post-infectious glomerulonephritis.

Diagnosis of APSGN is based on the presence of characteristic clinical features supported by relatively simple laboratory tests. In most cases, the diagnosis is straightforward; however, the differential diagnosis includes other causes (polyarteritis nodosa, systemic lupus erythematosus, haemolytic uraemic syndrome) of acute nephritic syndrome, acute exacerbation of chronic glomerulopathy and other causes of oedema. Although APSGN may occur at any age, it is seen most frequently in the three-to-seven-year age group, with a male predominance. The disease has a world-wide distribution, but the true incidence is unknown because of the high frequency of asymptomatic cases, particularly during outbreaks. In one such outbreak, more than half of the patients were asymptomatic, despite biopsy evidence of APSGN.[2]

One of the earliest reports on acute glomerulonephritis in Nigeria was published from Ibadan in 1963. In a study of 196 children with renal diseases seen over a four-year period, Hendrickse and Gilles found that 22 had acute glomerulonephritis.[3] A decade later, Whittle and his group presented a detailed clinical and epidemiological study of scabies, pyoderma and acute nephritis in Zaria; 20 of the 68 cases of acute nephritis seen in two years, had scabies and pyoderma.[4] In a review of paediatric admissions in Enugu, Kaine and Okoli found 0.11 percent of admissions were due to acute glomerulonephritis.[5] More recent reports came from Ilorin,[6] Zaria[7] and Port Harcourt.[8]

Analysis of the various studies of acute glomerulonephritis in Nigeria shows some differences as compared to the presentation of the disease in developed countries. In developed countries, with high socioeconomic standard, the incidence of the disease has been decreasing, [9] [10] whereas in Nigeria, there has been no decrease; instead, the numbers reported from Zaria, show an apparent increase compared with earlier data from this institution. It is tempting to ascribe the increased incidence to the de-

clining economy in the country. However, it is not certain if the increase is a true increase, since none of the studies was population or community-based.

In developed countries, a typical presentation of acute glomerulonephritis is that of a child with slight oedema, haematuria, normal serum protein and slight proteinuria. The African child with the disease, is more likely to present acutely with generalized oedema, circulatory congestion, hypertension, nephrotic-range proteinuria and significant hypoproteinaemia. With this type of presentation, it is not always possible to distinguish acute glomerulonephritis from nephrotic syndrome, either on clinical grounds or even after laboratory tests. This dilemma has led to the use of confusing terms, such as nephritic nephrotic, nephrotic nephritis, acute glomerulonephritis with nephrotic component etc.

The principle of management of APSGN remains unchanged and this principle consists of eradication of residual streptococci with a course of penicillin and anticipatory observation for and prompt treatment of potentially serious complications, such as circulatory overload, pulmonary oedema, hyperkalaemia and hypertensive encephalopathy, while allowing time for spontaneous cure of the renal lesion. Country-wide and population-based studies of acute glomerulonephritis are certainly required in order to describe the epidemiology of the disease in our country. These studies should focus, not only on the clinical presentation of the disease in hospital, but also on the long-term outcome. Ideally, the studies should form part of a comprehensive study of the epidemiology of common childhood health problems.

References

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