

Acute Respiratory Infection in an Infant

O OVIawe* AND N OVIawe**

Summary

Oviawe O and Oviawe N. Acute Respiratory Infection in an Infant. *Nigerian Journal of Paediatrics* 1993; 20:21. A study of the episodes of acute respiratory infection (ARI) that occurred in a paediatrician's daughter during infancy, revealed 11 episodes with an average duration of 8.7 days (range: 3-18 days). In nine of the episodes, family members experienced ARI which preceded that of the infant by a mean of four days (range: two-seven days). Relevant factors to this ARI experience included family size, number of siblings at school and household irritants. Most of the ARI episodes in the infant required only liberal intake of oral fluids, breast feeding and nasal toileting.

Introduction

ACUTE respiratory infection (ARI) remains a major cause of childhood morbidity and mortality in developing countries. It is estimated that more than four million children die of ARI each year.¹ Yet, its incidence remains undetermined in many African countries, especially in urban communities. Most workers^{2,3} have reported the incidence of ARI to vary between five and seven episodes per annum, with lower incidence rates being reported for rural than urban communities.⁴ The opportunity to determine and monitor the incidence of ARI in a Nigerian home came with the birth of our daughter. This short report thus concerns the episodes of ARI during the first year of her life.

University of Benin, Benin City

Institute of Child Health
+ Consultant Paediatrician

University of Benin Teaching Hospital
** Catering Officer

Correspondence: O Oviawe

Cases Report

RO was born at the University of Benin Teaching Hospital (UBTH), Benin, on 26th July 1990, following a full-term and normal pregnancy. Delivery was uneventful and the birthweight was 3.6kg. She was discharged home after 48 hours and after having received BCG immunization. At the six-bedroom home to receive the mother and daughter were myself, the father and also a paediatrician at the UBTH, four siblings (aged 5, 11, 12 and 14 years) and an uncle, aged 26 years. The home is located in a low density area of Benin and interaction between this non-smoking family and other children in the neighbourhood is minimal.

Having settled the baby fully at home, a diary was kept in which all episodes of ARI, their duration, effects on feeding, sleeping and mood were recorded. Also noted and documented were the incidence and duration of ARI in family members and family activities within and outside the home in which the baby also participated, e.g. visiting friends and relatives, participation in ceremonies, such as marriages,

funerals etc.

The baby was exclusively breastfed for the first four weeks and continued on the breast thereafter, for another six months. Infant formula was introduced at the age of one month and continued till the age of one year, while cereal and other weaning food items were introduced at four months. She was immunized, as and when due. During the 12-month period of study, the baby had 11 episodes of ARI; the first episode occurred at the age of 4.5 weeks, while the average duration of the ARI was 8.7 days (range, 3-18 days). The other family members also experienced ARI during nine (18.8 percent) of the 11 episodes and this experience by family members preceded that of the child's episodes by four days on the average (range, 2-7 days). ARI episodes occurred throughout the year, except December and March; there were two episodes in May.

Symptoms of ARI included nasal discharge (in 11 episodes), cough (in eight episodes), fever and blocked nose (in two episodes each), sneezing, wheezing and dyspnoea (in one episode each.) The symptoms among the family members included cough, nasal discharge, blocked nose and sneezing. Complications of ARI in the infant included poor feeding (during four episodes), secondary fever (during three episodes), secondary cough (during three episodes) and post-nasal drip (during one episode).

Management during eight of the 11 episodes consisted of encouragement of breast-feeding, liberal oral fluids (orange flavoured drinks), toileting of nasal secretion with cotton buds and mouth-to-mouth suctioning of nasal secretion. Drugs used included paracetamol syrup (during three episodes), chlorpheniramine (during two episodes) and ampicillin syrup (in one episode). The indications for treatment included irritability, temperature above 38°C, disturbance of sleep, feeding and dyspnoea. The wheezy episode lasted for less than one hour and was

not treated with any bronchodilator. The infant weighed 10.6kg at the end of one year.

Discussion

This study has indicated a high incidence of ARI in the home of a paediatrician, located in an urban town. The 11 episodes of ARI experienced by the infant during the first year of her life were higher than those reported by others.^{2,3} It is however, similar to a report from Bangkok⁵ in which 11 episodes of ARI per annum, was also documented. By contrast, the number of episodes in the present case was slightly lower than the 13 episodes per annum reported from a rural town in Burkina-Faso.⁶ The study has also confirmed that the most frequently occurring symptom of ARI is nasal discharge and that cough is less frequent. The discharge is usually mild and does not seriously disturb the daily activities of the infant. As this symptom may manifest simply as wetting of the nostrils, parents are likely to miss, or ignore it and thus may account for the low incidence of ARI reported in some studies.^{2,7} Many factors may enhance the incidence of ARI. These include the out-of-home activities of the parents, school attendance by older siblings, large family size and usage of irritants in the home; this last factor may include parental smoking, cooking oil fumes and the use of insecticides.^{8,9}

Most cases of ARI require no specific treatment. Encouragement of breast-feeding, ensuring adequate oral fluids, nasal toileting and suctioning will suffice in most cases. Among the symptoms of mild ARI, nasal congestion appears to be the most troublesome as it often disturbs sleep and feeding and consequently leads to irritability. Other signs that indicate the seriousness of ARI problem include secondary fever, cough and dyspnoea. Treatment of ARI with drugs such as paracetamol, chlorpheniramine and ampicillin or other suit-

able antibiotics either singly or combined, as was done in the present case, is strongly indicated when serious signs as mentioned above, develop.

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