

onset nosocomial infection is a potential danger in any delivery room unit whenever there is breakdown in asepsis and hygienic measures.

Nosocomial infections are preventable and an 'Infection Control Committee' should be instituted in all major hospitals to monitor and review cases of infection, establish an antibiotic policy, to create awareness and to educate medical and paramedical staff about it.

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Vitamin A and Post Measles Complications

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Measles a common childhood disease, predisposes to vitamin A deficiency(1,2).

Such a deficiency can modify the outcome and the complication of the disease. Barclay and Hussey(1,3) have observed that the mortality due to measles was much higher in those who did not receive vitamin A supplementation. We studied 107 children with measles and its various complications, in an attempt to correlate their pattern and its severity with vitamin A status.

Material and Methods

One hundred and seven consecutive patients, admitted in JIPMER Hospital, Pondicherry, South India, during a one year period from June 1989 for various complications of measles, were included in this study. On admission, a diagnosis of vitamin A deficiency was made by the presence of night blindness/conjunctival xerosis/Bitot's spots/corneal xerosis/ulcer/keratomalacia. The relevant data were entered on a preplanned proforma and the details analysed

Results

Out of the 107 children, 71 were boys and 36 were girls. Sixty-nine (64.5%) were below 3 years, 26 (24.3%) between 3 and 5 years and 12 (11.2%) more than 5 years of age. No child was below 6 months of age, 29 (27.1%) were well nourished. Sixty-seven (62.6%) had no clinical evidence of vitamin A deficiency. The various complications seen in the groups with and without vitamin A deficiency are shown in the *Tables I and II*. The respiratory complica-

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TABLE I—Group I (with Deficiency of Vitamin A) (n = 40*)

Age (yrs)	Resp.	GI	CNS	TB	Others	No comp.
0.5–3	14	5	1	6	1	1
3–5	8	0	0	1	1	1
>5	6	0	0	1	1	0
Total	28 (70%)**	5 (12.5%)	1 (2.5%)	8 (20%)	3 (7.5%)	2 (5%)

* Mean hospital stay = 10.7 days
 No. with >1 complication = 6 (15%)
 Mortality = 2 (5%)

p values >0.05 (NS) between each of the variables.

**Percentage of total complications in that group.

Abbreviations:

Resp. = Respiratory; GI = Gastro Intestinal; CNS = Central Nervous System; TB = Tuberculosis;
 No comp. = No complications.

TABLE II—Group II (No deficiency of vitamin A) (n = 67*)

Aged (yrs)	Resp.	GI	CNS	TB	Others	No comp.
0.5–3	35	3	6	4	1	1
3–5	12	1	1	3	0	1
>5	5	1	0	1	0	1
Total	52 (77.6%)**	5 (7.46%)	7 (10.4%)	8 (11.9%)	1 (1.49%)	3 (4.47%)

* Mean hospital stay = 7.9 days
 No. with >1 complication = 8 (12%)
 Mortality = 2 (2.9%)

p value >0.05 (NS) between each of the variables.

**Percentage of total complications in that group.

Abbreviations:

Resp. = Respiratory; GI = Gastro Intestinal; CNS = Central Nervous System; TB = Tuberculosis;
 No comp. = No complications.

tions seen were bronchopneumonia (n=57), empyema (n=5), laryngotracheo-bronchitis (n=2) and upper respiratory infection (n=16). The gastrointestinal complications were diarrheal disorders. Other complications were encephalitis (n=5), pyogenic meningitis (n=1), demyelinating disorders (n=2), keratitis (n=2), acute glomerulonephritis (n=1), cancrum oris (n=2), and otitis media (n=3). Tuberculosis was present in 16 children out of which 3 had tuberculous meningitis. Fourteen out of 107 children had more than one complication. Chi Square test and Fischer test were applied to each variable and it was found that there was no significant difference between the 2 groups.

Discussion

From this analysis, it appeared that vitamin A deficiency status did not significantly influence the pattern or severity of complications following measles. This is on similar lines with the observations by Vijayaraghavan *et al.*(4) who in a prospective double blind, placebo controlled community study in India found no significant difference in the morbidity and mortality among the groups of children who did not receive periodic vitamin A supplementation (9.7 vs 10.8/1000). On the other hand, other workers including Sommer *et al.*(5) from Indonesia and Rahamatullah(6) from India observed a reduction in mortality by about 34-54% in the group of children receiving periodic supplementation of vitamin A.

Vitamin A is essential in maintaining the integrity of the epithelial lining of the respiratory, gastrointestinal and genitourinary tracts and studies have shown increased binding of bacteria to nasopharyngeal epithelial cells obtained from children with mild xerophthalmia(7). But it is to be

noted that in our analysis the pattern and severity of complications at the time of admission was not influenced by vitamin A status. Vitamin A is important in preventing blinding malnutrition but studies claiming its exclusive role in reducing childhood mortality and morbidity need to be further validated.

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