

# Management of ARI

Pages with reference to book, From 28 To 28

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Each year pneumonia kills approximately 3-4 million children under 5 years of age worldwide. In Pakistan, 13% of all infant deaths each year are due to pneumonia. Pneumonia is susceptible to relatively simple and inexpensive treatment. Early therapy with appropriate antibiotics has shown very satisfactory results, Thus most deaths can be prevented through timely diagnosis and correct management.

In Pakistan, it should be possible to further reduce mortality due to lower respiratory tract infection (LRTI) by using low cost, simple technology. Nearly one quarter of pneumonia deaths can be prevented by immunization against measles and whooping cough. Recent data has shown a decline in the vaccine coverage rates country wide, This should be a cause of serious concern both for the health planners and health care providers.

Studies from Peru<sup>1</sup> and other countries have shown that during the first 4-6 months of life, there is many times reduced risk of death due to pneumonia in exclusively breast fed infants compared to those who are bottle fed. It is fortunate that a nation-wide campaign to promote optimal breast feeding is being successfully implemented in Pakistan. This has led to a change in the feeding practices in hospitals which are trend setters. Similar efforts to change the infant feeding practices in the community can go a long way in lowering the proportion of deaths due to LRTI. Breast milk provides not only energy but also enormous defense against pneumonia irrespective of whether it is of bacterial or viral origin. For those over the age of 4 months, breast-feeding together with age appropriate supplementary food given in adequate quantity, needs to be emphasized for similar reasons.

Because of rapid breathing, fever and withholding of food and fluids, the children with pneumonia can get dehydrated. This may thicken the alveolar exudate and hence make it difficult for the child to cough this up, thus worsening the intensity of cough. Liberal oral intake of fluid intake is the principal adjunct to therapy.

Studies conducted in India<sup>2</sup>, Indonesia<sup>3</sup> and elsewhere suggest that children marginally deficient in Vitamin A are two to three times more prone to respiratory infections. This has led to concern for Vitamin A status in countries without a clinical problem. A recent study in Lahore has shown serum retinol of level <20 ug/ml in 9% of children 9-24 months of age, indicating a high prevalence of subclinical Vit. A deficiency (personal communication). The Government of Pakistan is planning to overcome this by fortification of edible oil with Vit. A.

The National ART control guidelines for case management of hospitalized children are simple and effective. However, it must be appreciated that only a fraction of those with severe or very severe pneumonia would have access to hospitals with trained staff. Some parents may opt not to go to a hospital. A community based effort is required to address this issue. It would include:

- 1) training of families in early detection,
- 2) training of health workers at the grass root level in timely therapy according to National ART management guidelines and
- 3) creating awareness in families for health services utilization.

Efficient arrangements for emergent referral where necessary are still to be established on firm footing countrywide.

Further research is needed in the following areas in order to achieve the goals of reducing mortality due to pneumonia by one third, before the end of the century:

- To improve case management,
- Extensive trial of new and safe drugs, keeping in mind the emerging resistant strains. This should

include drug trials both for common bacterial and viral pathogen.

- Newer and safer vaccines against common organisms.
- Improved pneumococcal vaccine for use in younger age group.
- Newer strategies with improved vaccines against whooping cough, measles and tuberculosis.
- Research in production of less expensive vaccine against H. Influenza, which can then be included in the EPI programme in developing countries.
- Role of micronutrients in relation to ARI mortality and morbidity.
- Health seeking behaviour of communities.

Today the three most important steps to reduce morbidity and mortality from ARI, are hence optimal breast feeding, comprehensive childhood immunization and management of ARI according to National guidelines.

## References

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