Original Research Paper

Volume : 5 | Issue : 11 | November 2016 • ISSN No 2277 - 8179 | IF : 3.508 | IC Value : 69.48

Clinical Profile & Outcome of Acute Lower Respiratory Tract Infection in Children Aged Between 2 Months To 5 Years:

Medical Science

KEYWORDS : - Carbapenems, double disk diffusion test, Modified Hodge Test.

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Introduction:
Acute lower respiratory tract are leading cause of morbidity and mortality of young children under 5 yrs which accounts for 43 million. There were about 12 million episodes of hospital admission for severe and 3 million for very severe pneumonia / ALR / which resulted in 0.3million death in hospitalized children. 99 % of these deaths were in developing countries. In year 2010 7.6 million children died in first 5 years of life. 4.9 children died due to infectious condition such as diarrhea, malaria, pneumonia. Pneumonia accounts for 18% mortality in under 5 children and 4% in neonatal period. In india around 4lakh deaths annually occur due to pneumonia.

Materials and Methods
A case series of ALRTI in children aged 2 months – 5 years over a period of 18 months who are admitted at D.Y.Patil hospital, Kolhapur.

Source of data:
Children admitted with clinical diagnosis as per WHO criteria. The children enrolled in the study was evaluated at dept. of paediatrics.

Inclusion criteria:
Children aged 2months to 5years diagnosed with ALRTI.

Exclusion criteria
Those children with 1.congenital heart disease

2.tuberculosis

3.bronchial asthma

4.hospital acquired illness

5. those admitted outside for same illness.

Informed verbal consent will be obtained from all parents/ Guardians of the case enrolled in the study.

Results: in presents study out of 200 cases admitted with ALRTI ,3 had pneumonia ,155 had severe pneumonia ,42 had very severe pneumonia according to ARI programme.

Case as per WHO ARI classification

WHO Classification	No. of cases	Percentage
Pneumonia	3	1.5
severe pneumonia	155	77.5
very severe pneumonia	42	21

Cases as per socio demographic factor

Variable	No. of cases	percentage
Age <12 months	107	53.5
Male	116	58
Socio-economic status>/ 3	153	76.5
Birth order >/3	57	28.5

Percentage of nutritional risk factor

Variables	No. of cases	percentage
PEM	121	60.5
Vit-D deficient	34	17
Anaemia	147	73.5
Micronutrient defiency	32	16
Exclusively breastfed	62	31
Inappropriate weaning	67	33.5

Frequency of clinical signs:

Sign	No. of cases	percentage
Tachypnea	196	98
Chest retraction	186	93
Wheeze	129	64.5
Stridor	11	5.5
Crepitation	127	63.5
Abnormal air entry	23	10.5
Others	23	10.5

Discussion :
Age distribution:
Young children <12 months are found to risk factor for poor prognosis (53.5%)

Sex distribution:
Male children 58 % ,female children 42%.

Risk factor: in present study 76.5 % were lower social status and 28.5 % cases are of birth order >/3 ,42 % were living in overcrowded home,67 % were exposed to indoor pollution and 66.5 % were practicing open air defecation.only 23.5 % were living in pucca housing condition.parental smoking noted 43.5% cases.

Clinical profile:out of 200 cases 1.5%,77.5%,21% were pneumonia,severe and very severe pneumonia.

Conclusion:
Acute lower respiratory tract infection remains one of the major causes of morbidity and mortality in children and infants.

Among the studied risk factor parental smoking,period of exclusive breast feeding and gestational age were significantly associated with pneumonia severity and majority belonged to lower socio-economic group and were living in poor housing condition.majority of the cases were anaemic and malnourished with incomplete immunization for the age in upto 1,4th cases.

Symptoms and signs mentioned in the WHO ARI control programme are very sensitive in determining ALRI cases ,routine hematological investigations and blood culture will not give much information regarding severity or etiology of illness.

Duration of stay and requirement of antibiotic change was significantly associated with pneumonia severity,early diagnosis and treatment helps improve the mortality and morbidity profile.

Young children,malnutrition,poor housing condition,over crowding,indoor pollution and poor socio-economic status continues to be an important predisposing factor in the childhood respiratory disorders.Breaking this vicious circle is essential in decreasing the morbidity and mortality due to respiratory infections.

Effective utilization of under five clinics to ensure availability of proper nutrition to combat malnutrition and anemia and increasing the immunization coverage and promotin exclusive breast feeding can reduce the disease burden and severity.improving the living standards and educating hazards of smoking can help in preventing the ARI burden.