



OUTCOME OF PNEUMONIA ASSOCIATED WITH TRADITIONAL CHILD REARING PRACTICES IN INFANTS

Dr. Anil kumar.M

M.D. Post Graduate, Department of Paediatrics

Dr. Padmavathy.K

HOD & Professor, Department of Paediatrics Meenakshi Medical College Hospital & Research Institute, Kanchipuram, Tamil Nadu, India.

ABSTRACT

AIM AND OBJECTIVE:

- To compare and assess the clinical features and outcome of pneumonia occurring in infants with traditional child rearing practices and in infants without traditional child rearing practices.
- To assess the influence of individual traditional child rearing practices with the outcome of pneumonia occurring in infants.

MATERIALS AND METHODS: For this study detailed clinical history was taken. Infants with clinical and radiological evidence of pneumonia were selected as per the selection criteria. The study. After eliciting necessary history some children were excluded using exclusion criteria. Detailed questionnaires were asked to mother / care taker which included details regarding various traditional child rearing practices. **RESULTS:** On comparing and analyzing the clinical parameters and outcome of pneumonia in infants between traditional child rearing practices and without traditional child rearing practice, it is found that increased morbidity pattern of pneumonia in infants associated with traditional child rearing practices is high while comparing non traditional child rearing infants. **CONCLUSION:** In my study increased morbidity in the infants is attributed to traditional child rearing practice, mortality was very less probably due to increased vaccination status and also due to increasing literacy rate in mothers.

KEYWORDS: Pneumonia, traditional child rearing practices, under 5 mortality

INTRODUCTION:

Traditional practices are rituals which are practiced from centuries which are prevalent in a community which may pertain to a wide range of activities. In India customs and tradition are followed in many families both urban and rural. Certain child rearing practices are being advocated by elders and are being followed traditionally even today. The customs and rituals which are followed have been passed on from one generation to another which are influenced by educational level and socio-economic status and values believed by the family and the society. The traditional practices are blindly believed by the people hence it is difficult to change them even if traditions are identified as wrong or useless practices.

Certain child rearing practices play a significant role in causing pneumonia. This study was undertaken to assess the clinical profile and the outcome of pneumonia following those traditional child rearing practices in infants.

THE STUDY GROUP

Included the infants in the age group of 29 days to 1 year who showed clinical and radiological evidence of pneumonia and having history of traditional child rearing practices done

THE CONTROL GROUP

Included the infants in same age group admitted with clinical and radiological evidence of pneumonia and without history of traditional child rearing practices.

INCLUSION CRITERIA:

All infants admitted with pneumonia in the age group 29 days to 1 year during the study period

EXCLUSION CRITERIA:

- Neonatal period
- Children with systemic disorders causing respiratory distress like pulmonary cardiac, renal, central nervous system or metabolic problems.

OUTCOME EXPECTED OUT OF THE WORK:

To assess the adverse effect of traditional child rearing practices on outcome of pneumonia

METHODOLOGY

For this study detailed clinical history was taken. Infants with clinical and radiological evidence of pneumonia were selected as per the selection criteria. After eliciting necessary history some children were excluded using exclusion criteria.

Mother / care giver were given questionnaires which included details regarding various traditional child rearing practices like, Oil bath, oil instillation into nose, ear and mouth, blowing into the nose, mouth to mouth suctioning, Finger-mouth suctioning, application of irritant myrrh / saambirani fumes and giving native medications, was prepared and the accompanying person with the infant was asked.

All necessary investigations were done. X-rays were analysed during admission for evidences in the form of bronchopneumonia, patchy opacities, consolidation, pneumatoceles, and pyothorax

RESULTS AND DISCUSSION

DEMOGRAPHIC PROFILE OF INFANTS EXPOSED TO TRADITIONAL CHILDREARING PRACTISES:

Age group	Group		Total(n=280)	Chi-square	P-value
	Study(n=100)	Control(n=180)			
	68(68.0)	54(30.0)	122(43.6)	40.41	0.0001
4-6 Months	21(21.0)	60(33.3)	81(28.9)		

7-12 Months	11(11.0)	66(36.7)	77(27.5)		
Total	100(100.0)	180(100.0)	280(100.0)		

- During the study period, the total numbers of infants came as out patient census was 1,07,53
- Out of this, 280 infants had clinical symptoms and signs and with radiological signs of pneumonia.
- Out of 280, 100 infants had history of traditional CRP
- On analyzing all infants with pneumonia, 68% infants of <3 months had pneumonia when compared to the age group of 4-6 months (21%) and 7-12 months (11%) and is statistically significant.
- Also traditional CRP is done in 68% of <3 months old infants when compared with other age groups and is statistically significant.
- This may be due to family members visiting the mother and baby after delivery and the new mother is afraid of doing those child rearing practices. Also, noisy breathing in early infancy is attributed to colds and in order to relieve this symptom, various CRP are done.
- According to the study done by Sudha basnet et al in a case study of 264 the most common age group was between 2-36 months of age which coorelates with the present study⁴¹.

According to the study done by Garcia-Elorriaga et al in Mexico the most common age group was below 2 years of age which coorelates with the present study³⁶.

TABLE – 2: LOCALITY

Locality	Group		Total(n=280)	Chi-square	P-value
	Study(n=100)	Control(n=180)			
Rural	72(72.0)	138(76.7)	210(75.0)	0.7467	0.3875
urban	28(28.0)	42(33.3)	70(25.0)		
Total	100(100.0)	180(100.0)	280(100.0)		

The study done showed that traditional beliefs were more prevalent in rural areas with 72% compared to urban area with 28%. Traditional beliefs are more common in rural due to lack of exposure and lack of education. The urban population is comparatively less due to education and exposure. **According to the study done by JOSEPH L MATHEW, ⁴³ in India children in rural areas are more affected when compared to children in urban areas which is similar to the present study.**

TABLE – 3: TYPE OF FAMILY

Type of Family	Group		Total(n=280)	Chi-square	P-value
	Study(n=100)	Control(n=180)			
Nuclear	25(25.0)	96(53.0)	121(43.2)	29.1	0.0001
Combined	45(45.0)	67(37.2)	112(40.0)		
Joint	30(30.0)	17(9.8)	47(16.8)		
Total	100(100.0)	180(100.0)	280(100.0)		

In this present study, pneumonia associated with traditional CRP is more commonly seen in combined families (45%) when compared with nuclear family (25%) and joint family (30%) and is statistically significant.

This might be due to traditional practices followed by the elders and the mother in the family. According to the study done by Manju Salaria⁴² pneumonia is more common in the family with overcrowding which coorelates with the present study.

TABLE - 4: MATERNAL AGE

Age of the mother(yrs)	Group		Total(n=280)	Chi-square	P-value
	Study(n=100)	Control(n=180)			
<20	69(69.0)	127(70.5)	196(70.0)	15.74	0.0001
20-30	14(14.0)	49(27.3)	63(22.5)		
>30	17(17.0)	4(2.2)	21(7.5)		
Total	100(100.0)	180(100.0)	280(100.0)		

In this study the incidence of traditional CRP is more with the mothers less than 20(69%) followed by >30yrs(17%) and 20-30 yrs (14%) which shows the significant difference with p value of 0.0001.

TABLE - 5: MOTHERS EDUCATIONAL STATUS

Mother's educational status	Group		Total(n=280)	Chi-square	P-value
	Study(n=100)	Control(n=180)			
No school	52(54.0)	79(43.8)	131(46.8)	23.03	0.0001
Primary	18(28.0)	54(30.0)	82(29.3)		
Up to +2	20(20.0)	42(23.4)	62(22.1)		
Graduate	10(0)	5(2.8)	5(1.8)		
Total	100(100.0)	180(100.0)	280(100.0)		

This study shows mothers education plays a very important role in traditional beliefs. The incidence of traditional CRP is more in mothers who have not attended school with 52% followed by primary school with 28% , followed by mothers who attended school up to +2 with 20%. with no cases with mothers who are graduates. The above study showed that traditional beliefs are blindly followed by the mother who are very less or not education. Due to lack of exposure they believe the traditional beliefs followed by their elders. This may be attributed to the knowledge of bad child rearing practices and consequences of it are known to the mother as they get experienced with aging and with more education.

According to Ritu Gupta study⁵ the graduate mothers despite educational status are still influenced by elders, associated with religious people and quacks which is similar to the present study.

TABLE - 6: DELIVERY CONDUCTED BY

Delivered by	Group		Total(n=280)	Chi-square	P-value
	Study(n=100)	Control(n=180)			
Relatives	2(2.0)	1(0.5)	3(1.1)	19.89	0.0005
Untrained dai	12(12.0)	10(5.6)	22(7.9)		
Trained dai	6(6.0)	1(0.5)	7(2.5)		

Health nurse	26(26.0)	30(16.7)	56(20.0)		
Doctors	54(54.0)	138(76.7)	192(68.6)		
Total	100(100.0)	180(100.0)	280(100.0)		

In this present study deliveries were conducted predominantly by doctors (54%) followed by health nurses (26%), untrained dhais (12%), trained dhais (06%) and relatives (02%). The study shows significant p value 0.005

TABLE -7: CHILD REARING PRACTICES DONE / SUGGESTED BY

CRP done by	Study group (n=100)		Chi square	P value
Great grandmother	6	6%	2.14	0.0001
Grand mother	53	53%		
Mother	5	5%		
Elders nearby	36	36%		

This present study shows the incidence of pneumonia in infants associated with traditional CRP done or suggested by Grandmothers (53%) followed by elders nearby (36%), Great grandmothers (6%), Mother (5%) and the significant p value 0.0001.

The mothers who are not equipped with sufficient knowledge about newborn care and using traditional child care methods may sometimes cause harm to their newborn and even cause handicaps in them. In our community women receive information from family members, elders and traditional birth attendants. Hence these groups, expectant mothers and mothers of newborns should be targeted with educational messages. Newborn care, similar to other human behaviour, is influenced by cultural beliefs. Hence exploration of cultural belief and practices of newborn care is essential.

SUMMARY AND CONCLUSION

The traditional beliefs and practices still form a major constituent of the therapeutic modalities employed as primary healing practices and seem to be very common in our country practised by both educated and uneducated people.

Among the acute respiratory infections pneumonia is the most commonly attributed to childhood mortality. For infants with pneumonia following traditional CRP having increased morbidity especially prolonged monitoring and treatment in ICU setting care, increases the expenditure for the Government towards these infants.

The influence on mother's optimal age at marriage, better awareness about child birth, government schemes on institutional deliveries and better educational status may reduce traditional child rearing practices in our country.

Most common traditional child rearing practices influencing outcome pneumonia in infants are blowing into the nose, finger mouth suctioning and sambirani fumes. These traditional the major traditional practices influencing outcome of pneumonia in infants.

Child-rearing customs and beliefs are not the same for all Indians. India is composed of a diverse population with assorted religious, political and cultural views on child-rearing practices. With so many differences among Indians, it is impossible to ascribe a unified set of customs and beliefs about child-rearing to the entire country. Influential factors on child-rearing practices such as socioeconomic status, education and individual experience vary from family to family. The traditional Indian parenting is shaped by the cultural and religious values of the land, generational wisdom, and life experiences.

The goal of parenting is comprehensive development of children and it integrates the cognitive, emotional, and spiritual components of an individual's growth. It includes both the personal and social dimensions of human growth and development.

In India approximately 75 million children did not have adequate nutrition, and shows the social differences related to discrepancies in lifestyle, including health, access to education and attitudes toward child-rearing practices.

In India mothers spend a lot of time in close physical contact with their young children. As babies, Indian children might receive a daily massage and sharing a parent's bed is quite common. For the first six months, around 90 percent of mothers in India breastfeed. Some continue to do so for up to two years. Among Kurubas and Soliga Tribes from South India," reveals that showing affection can greatly benefit a child's personality development.

Childhood clinical pneumonia is more common in India among the developing countries. The most common risk factors are low birth weight, malnourishment, lack of measles vaccination and traditional child rearing practices. Pneumonia can be prevented by administering Hib and pneumococcal vaccines.

Team approach concepts are needed and more social workers and paramedical staff should be in attendance at the out patient department to educate the mothers on various child rearing practices.

REFERENCES:

1. Praveen devagan et al, Ideal child rearing practices by educated parents. IOSR, April 2013.
2. A Balachandran et al. Traditional child rearing practices in children with persistent and recurrent pneumonia Indian Medical Gazette CXXXIV (12); 388-391 1990.
3. Nitin B et al, Infant Rearing Practices in South India: A Longitudinal Study, 2013, jan-march 2(1), 37-43.
4. Jyotsna shrivastava et al, Assessment of impact of counselling and education to the mothers of malnourished children admitted in NRC, Food Sci. Res. J., 3(1): 100-102.
5. Ritu Gupta, Traditional Beliefs & Practices Among Graduate Mothers Regarding Various Pediatric Ailments, Vol. 3 No.3, July-September 2001.
6. Gupte S. Viral infections. In : Gupta S (Ed.), Short textbook Of pediatrics. 9th Edn. Jaypee Brothers, New Delhi 2001: 165.
7. Srinivasa OK, Alfonso E. Community perception and practices in childhood diarrhoea. Indian Pediatrics 1993; 20: 859-861.
8. P Kapoor, VJ Rajput, Maternal knowledge, Attitudes and practise in diahorrea, vol 30, jan 1993.
9. Gupta, M.L, Mathur P.S. et al- A review of child rearing practices prevalent in the families of hospitalized children at Gwalior, Indian pediatrics 1980, 17; 261.
10. Shukla R.S, Bhambal S.S, Bhandari W.B; study of superstitious practices in under fives Indian pediatrics 1979 16:403.
11. Mohamed Asif Padiyath, Knowledge attitude and practice of neonatal care among postnatal mothers, Vol. 14, No. 2 (2010-07 - 2010-12).
12. Reshma & Sujatha R, cultural practices and beliefs on newborn care among mothers in a selected hospital of mangalore taluk, nujhs Vol. 4, No.2, June 2014.
13. Canturk et al, Traditional infant care practices of mother with 6-12 months old infants in turkey, Indian journal of traditional knowledge, vol 13, april 2014, pg 266-274.
14. Langman's Medical Embryology, 13th edition.
15. Grays anatomy, Anatomy of basis of clinical practice, 14th edition.
16. chaurasia, Anatomy book 7th edition.
17. Nelson textbook of pediatrics 20th edition.
18. Eric A. F. Simoes et al, Acute Respiratory Infections in Children, Disease Control Priorities in Developing Countries, pg 483-497.
19. Robbins basic pathology, 8th edition.
20. A. Kaur, Mothers' Beliefs and Practices Regarding Prevention and Management of Diarrheal Diseases, May 19, 1993, pg 55-57
21. Maria Angeles Marcos, Viral pneumonia, current opinion in infectious disease april 2009 vol 22-issue 2 pg 143-147.
22. Suhlutz GE, Joacob RF : Management of Community acquired bacterial pneumonia in hospitalized children, Pediatr Infect Dis J 11; 60, 1982.
23. McCarthy PL, Spiesel SZ, Stashwick CA, et al. Radiographic findings and etiologic diagnosis in ambulatory childhood pneumonias. Clin Pediatr 1981; 20:686-91.
24. Friis B, Eiken M, Hornsleth A, et al. Chest X-ray appearances in pneumonia and bronchiolitis. Correlation of virological diagnosis and bacterial findings. Acta Paediatr Scand 1990; 79:219-25.
25. Advances in pediatrics, 2005; 14: 338-339.
26. Maimunah AH, Patmanathan I. The under fives : Acute respiratory illness. National Health and Morbidity Survey Report 1987; 3: Ministry of Health Malaysia.
27. Azizi BHO, Zulkifli HI and Kasim MS. Protective and risk factors for acute respiratory infections in hospitalized urban Malaysian children: a case control study. Southeast Asian J Trop Med Public Health 1995; 26: 280-85
28. KENNETH MCINTOSH, COMMUNITY-ACQUIRED PNEUMONIA IN CHILDREN, February 7, 2002, The New England Journal of Medicine.
29. Shann F. Etiology of severe pneumonia in children in developing countries. Pediatr Infect Dis J 1986; 5:247-52.
30. Mulholland EK, Simoes EAF, Costales MOD, et al. Standardised diagnosis of pneumonia in developing countries. Pediatric Infect Dis J 1992; 11:77-81.

31. Bruyere_Case13_001-012.qxd 6/26/08 6:22 PM Page 13-5 DS13-6 Case Study 13
32. *Annales Nestle* 2000; 58: 49-57.
33. Caffey's Pediatric Diagnostic Imaging 10th Edition Vol.1, 994-1006.
34. Donowitz GR, Mandell GL. Acute pneumonia. In: Mandell GL, Douglas RG, Bennet JE, editors. Principles and practice of infectious diseases. New York Churchill Livingstone, 1990:540-54
35. Chan PWK, Lum LCS, Ngeow YF, Yasim YM. Mycoplasma pneumoniae infection in Malaysian children admitted with community acquired pneumonia. *Southeast Asian J Trop Med Public Health* 2001; 32: 375 – 401 18. Shann F, Barker J, Poore P. Clinical signs that predict death
36. Garcia-Elorriaga G, Basic Concepts on Community-Acquired Bacterial Pneumonia in Pediatrics, Vol.1 No.1:3, February 12, 2016.
37. World Health Organisation. Classification of acute respiratory infections in WHO/ARI/91.20 Geneva. World Health Organisation 1991: 11-20.
38. Rohani MY, Rauzah A, Ng AJ, Zaidah AAR, Asmah I, Murtaza M. Epidemiology of streptococcal pneumonia infection in Malaysia. *Epidemiol Infect* 1999; 122: 77
39. Wallis C, Prasad A. Who needs chest physiotherapy? Moving from anecdote to evidence. *Arch Dis Child* 1999; 80: 393 – 397.
40. Technical bases for WHO recommendations on the management of pneumonia in children at first-level health facilities. WHO/RI/91.20. Geneva: World Health Organization, 1991.
41. Sudha Basnel et al, Hypoxemia in Children with Pneumonia and Its Clinical Predictors, *Indian Journal of Pediatrics*, Volume 73—September, 2006.
42. Manju Salaria, Atypical pneumonia in children, *Indian paediatrics* 2002; 39: 259-266.
43. JOSEPH L MATHEW, Acute Respiratory Infection and Pneumonia in India: A Systematic Review of Literature for Advocacy and Action: UNICEF-PHFI Series on Newborn and Child Health, India, International Health, Center for Global Health & Development, VOLUME 48 __MARCH 17, 2011.
44. Ritu Gupta mothers educational status Vol. 3 No.3. July-September 2001.
45. Igor Rudan, Epidemiology and etiology of childhood pneumonia, *Bulletin of the World Health Organization* 2008; 86: 408-416.