Abstract 018

Five – Year Analysis of Rickettsial Fevers in Children in South India: Clinical Manifestations and Complications

Rwituja Thomas*[1]*, *Preethi Puranik*[1]*, Bhuvanesh Kalal*[2]*, Carl Britto*[1]*, Savitha Kamlesh*[2]*, Sylvan Rego*[1]*, Anita Shet*[1]
[1]*Department of Pediatrics and* [2]*Dept of Microbiology, St Johns' Medical College Hospital, Bangalore, India*

Address for Correspondence: Dr ***Rwituja Thomas,*** K22, MIMS Arden Dale, Kannamangala, Whitefield, Bangalore 68. Email: rwituja.thomas@gmail.com

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Abstract:

Introduction:
Rickettsial infections are re-emerging in the Indian subcontinent, especially among children. Understanding geographical and clinical epidemiology would facilitate early diagnosis and management.

Methods:
A retrospective medical chart review was performed at St John's Hospital, Bangalore. Hospitalized children aged <18yrs, admitted with a clinical diagnosis of rickettsial fever were analysed.

Results:
A total of 262 children were admitted between Jan 2005-Dec 2009. Median age was 5yrs (IQR 3,8), and 61% were males. The highest burden of cases (74%) occurred between September and January each year. Patients hailed from Bangalore and surrounding districts in Karnataka (49%); Andhra Pradesh (41%) and Tamil Nadu (10%). Mean duration of fever was 11.5 days (±5). Rash was present in 54% of children, and 37% had involvement of palms and soles (Table). Prevalence of malnutrition was high (underweight-45%; stunting-28%). Retinal vasculitis was seen in 14%(37/262), and this risk appeared higher in females (OR2.3; p=0.02). Severe complications were seen in 29% (purpura fulminans-8%; meningoencephalitis-24%; septic shock-2%; ARDS-1%). They were more likely to occur in anemic children (OR2.1, p=0.03) and during December-January each year. Positive Weil Felix (titres≥1:160) was seen in 60%(142/238). Elevated OX-K titres suggestive of scrub typhus was seen in 45%(106/238). Patients were treated with chloramphenicol (32%) or doxycycline (68%). Mortality was 3%.

Conclusion:
This is the first 5-year analysis from South India that shows a high burden of rickettsial infections among children. The occurrence of retinal vasculitis and a high rate of severe complications draw attention to the need for early diagnosis and management of these infections.

Table:

No	*Clinical features of rickettsial fever in children*	*Prevalence (%)*
	Symptoms	
1	Rash in palms and soles	97 (37)
2	Upper respiratory features	53 (20)
3	Altered sensorium	64 (24)
4	Seizures	50 (19)
5	Arthalgia	10 (4)
	Signs	
6	Periorbital edema	100 (38)
7	Hepatomegaly	228 (87)
8	Splenomegaly	131 (50)
9	Lymphadenopathy	57 (22)
10	Eschar	14 (5)
	Investigations	
11	Anemia (Hb<11 mg/dl)	180 (72)
12	Elevated liver enzymes (AST ALT>2 ULN)	93 (51)
13	Hyponatremia (Na<130 Meq/L)	30 (12)
14	Hypoalbuminemia (serum albumin <2.5 mg/dl)	55 (21)
15	Thrombocytopenia (platelet count <1,00,000)	71 (27)
16	CSF evidence of aseptic meningitis (protein >40g/dl + cells >7/hpf)	64 (24)

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