

Cutaneous manifestations of chikungunya in children

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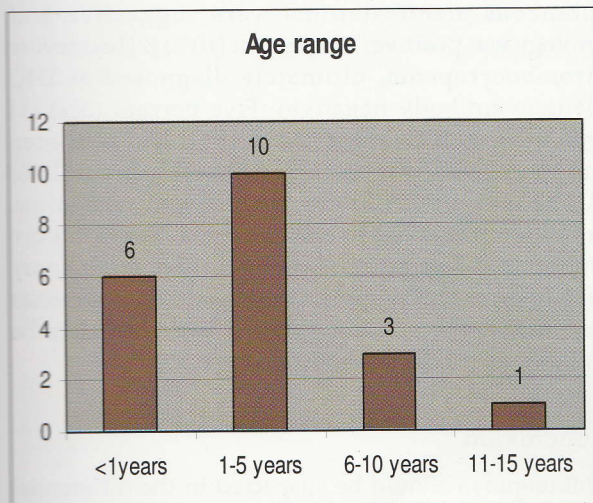
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Introduction

Chikungunya fever is a mosquito borne disease characterized by fever, rash and severe arthritis. Incubation period is usually 3-7 days with a range of 1-12 days. Infection is transmitted by the bite of virus carrying mosquitoes of the species *Aedes aegypti* and *Aedes albopictus* [Asian tiger mosquito]. Chikungunya is mostly confined to people living in tropical Africa and Asia. It is a re-emerging disease in Asia. The first case was reported in Sri Lanka in 1969¹.

Cutaneous manifestations of chikungunya fever were recently published. Hyperpigmentation is a common and prominent cutaneous manifestation of the disease². Neonates often present with fever but can present without fever due to perinatal transmission.

Results



Clinical presentation of neonates can be similar to those of septicaemia, pyogenic meningitis or metabolic encephalopathy³. Perinatally transmitted disease can lead to encephalitis and disseminated intravascular coagulation (DIC).

This study was carried out to identify the cutaneous manifestations and also the outcome of vertically transmitted chikungunya infection at Lady Ridgeway Hospital during a 6 month period.

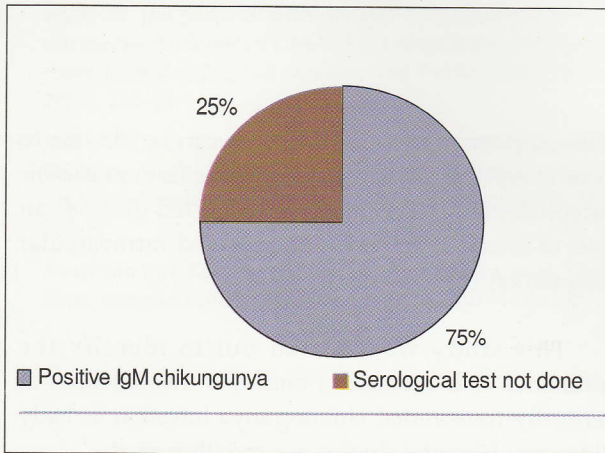
Method

The study was carried out in 20 children with cutaneous manifestations of chikungunya who attended the skin clinic at LRH from May to October 2008. The diagnosis of chikungunya was made clinically and confirmed serologically.

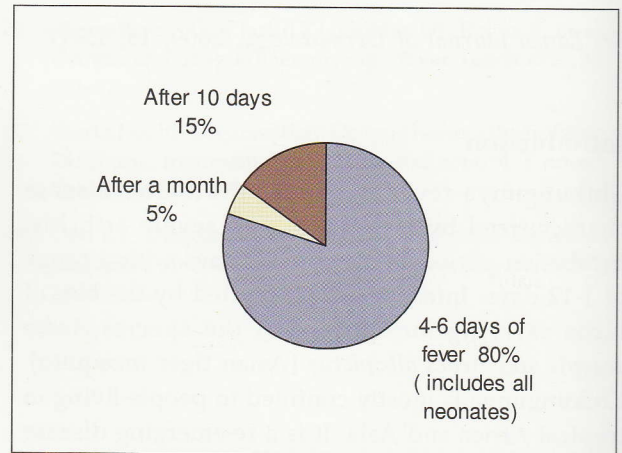


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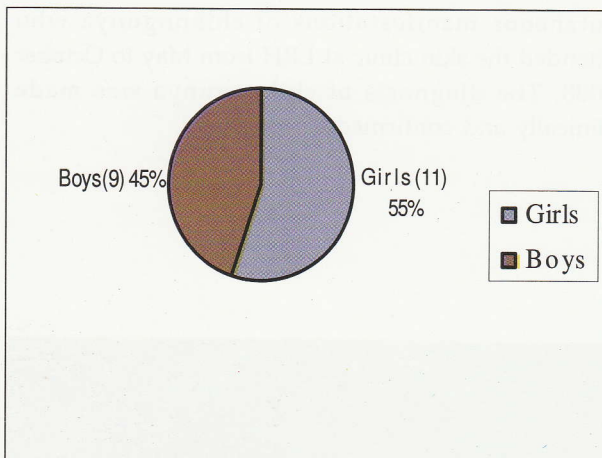
Serology



Onset of rash



Sex distribution



Localised hyperpigmented lesions were the most common presenting complaint in our patients. Diffusely distributed lesions were arranged in mottled, streaky, irregular or in a spot like manner. Trunk and extremities were the most common sites affected though a few patients additionally had involvement of face, palms and soles. The rash was asymptomatic in 80% of the patients though few older children complained of mild pruritus. The rash started after 4-6 days of fever in majority (80%) of the patients. In 15% it started after 10 days and 5% after 5 months of fever. Tenderness and oedema of palms and soles were noted in 40%. The oedema usually lasted for 3-4 weeks.

Occurrence of haemorrhagic manifestations in association with chikungunya fever was reported, though in our series of patients we did not encounter similar symptoms.

In 70% [14] of children cutaneous manifestations were resolved completely after a month. Fifteen percent (15%) had persistent dyschromia upto 2 months on follow up. Membranous desquamation of palms and soles was noted in 10% at follow up.

In our study population 50% [10] children had lymphadenopathy, 35% [7] had peripheral odema and 10% [2] had arthritis.

In our study 30% [6] were neonates, all had cutaneous manifestations after 4-6 days of fever. Ten percent (10%) [2] presented without fever but cutaneous manifestations were suggestive and serology was positive. Ten percent (10%) [2] had severe thrombocytopenia, ultimately diagnosed as DIC (dengue antibody negative). Five percent (5%) [1] presented with frequent convulsions had MRI scan and encephalitis was confirmed. Fifteen percent (15%) [3], neonates with foetal distress and meconium aspiration presented like septicaemia. Blood culture and other investigations were negative. Preliminary diagnosis of chikungunya was made on cutaneous manifestations. Subsequently all were found to be chikungunya IgM antibody positive.

Conclusion

Chikungunya should be suspected in the differential diagnosis of patchy, diffuse or streaky hyperpigmentation⁴. Diagnosis of chikungunya has been missed on a considerable number of occasions in the absence of fever.

Pigmentation without fever can be the presenting feature in neonates.

Congenital transmission of the virus leads to congenital chikunguniya syndrome⁵.

Neonates can present like septicaemia or pyogenic meningitis or metabolic encephalopathy. DIC and neurological manifestations may complicate neonatal chikungunya infection⁶. Neurological follow up is mandatory in neonates.

References

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