

Neonatal facial hyperpigmentation

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DESCRIPTION

Chikungunya virus (CHIKV) is an emerging arboviral infection with a global distribution with various cutaneous manifestations.¹ The virus can cause infections of the fetus and newborn after maternal CHIKV infections during gestation. An infection rate up to 49% in neonates born from mothers with active viraemia during labour has been observed. Perinatal infection could result in serious complications and potential cognitive impairment. Infected newborns will be either asymptomatic or present symptomatically during their first week of life, but not at the time of birth.^{2,3} Common symptoms can be: fever, irritability, rashes, hyperalgesia syndrome, diffuse limb oedema, bullous dermatitis and occasionally also meningoencephalitis.

A newborn presented with dark pigmentation over the face which was more noticeable over centro-facial area (figure 1). There was a history of fever and joint pain in the mother a week before delivery and fever was continued in postpartum period also. An empirical clinical diagnosis of congenital chikungunya was made and was confirmed with IgM antibodies in CHIKV in both newborn and mother.

The rare occurrence of cutaneous pigmentation prominent over was the only clue to the retrospective diagnosis of neonatal chikungunya.³ It can serve as a clue to looking for long-term neurodevelopment delays in symptomatic neonatal CKG infections.⁴

In a first of its kind study of skin manifestations of chikungunya H&E-stained histopathological preparations of skin biopsy specimens from patients with hyperpigmented lesions showed an intact basal layer with diffuse hypermelanosis of the entire epidermis. There was no melanin incontinence in the dermis, but a sparse perivascular lymphocytic infiltrate was

observed. This is suggestive of increased intraepidermal melanin dispersion/retention triggered by the virus.¹ The above para explains the proposed pathomechanism of hyperpigmentation in the index case.

Usually the hyperpigmentation resolves by 6–12 weeks. No active treatment is necessary.

Learning points

- ▶ Given the high perinatal transmissibility rate of chikungunya virus, 'facial hyperpigmentation' in every newborn should be considered as 'clinical pearl' suggestive of chikungunya with positive maternal history in areas where chikungunya is prevalent.
- ▶ Viral triggered increased intraepidermal melanin dispersion/retention may be the pathomechanism involved in the causation of facial hyperpigmentation.
- ▶ Neonatal facial hyperpigmentation can be a clue to looking for long-term neurodevelopment delays associated with chikungunya.

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Case reports provide a valuable learning resource for the scientific community and can indicate areas of interest for future research. They should not be used in isolation to guide treatment choices or public health policy.

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REFERENCES

- 1 Inamadar AC, Palit A, Sampagavi VV, *et al.* Cutaneous manifestations of Chikungunya fever: observations made during a recent outbreak in South India. *Int J Dermatol* 2008;47:154–9.
- 2 Gérardin P, Barau G, Michault A, *et al.* Multidisciplinary prospective study of mother-to-child Chikungunya virus infections on the island of La Réunion. *PLoS Med* 2008;5:e60.
- 3 Vasani R, Kanhere S, Chaudhari K, *et al.* Congenital Chikungunya—A Cause of Neonatal Hyperpigmentation. *Pediatr Dermatol* 2016;33:209–12.
- 4 Shukla A, Bandyopadhyay T, Vallamkonda N, *et al.* Long-Term neurodevelopmental outcomes of neonatal Chikungunya: follow-up of a series of cases till 1 year. *J Trop Pediatr* 2021;67:fmaa053.



Figure 1 Ill-defined dark pigmentation over the face with more prominent pigmentation over centro-facial area and hard palate.



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