

*Case Report***Hyperpigmentation in a newborn: Not to forget this common cause in tropical countries: A case report**

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*Sri Lankan Journal of Infectious Diseases 2021Vol.11(1):38-41*DOI: <http://dx.doi.org/10.4038/sljid.v11i1.8315>**Abstract**

Neonatal hyperpigmentation secondary to chikungunya infection is very common in tropical countries where chikungunya is endemic. Acquired infection in the perinatal period should be suspected in all neonates presenting with neurological or dermatological manifestations in the immediate postnatal period. We present a newborn baby who had hyperpigmentation which started from day 5 of life with lethargy and on extensive evaluation was found to have neonatal chikungunya. Babies with perinatal chikungunya infection are prone to developmental delay and require long term neuro-developmental follow-up. Hence the importance of following appropriate preventative vector measures and prompt diagnosis of infective conditions in tropical countries.

Keywords: *Hyperpigmentation, Newborn, Chikungunya, tropical infections*

Introduction

Differential diagnosis of hyperpigmentation in a neonate includes congenital skin disorders and metabolic and endocrine causes. However, in tropical countries, infections, especially chikungunya, presents with skin hyperpigmentation with or without other systemic features. Chikungunya may also mimic neonatal sepsis, meningitis or purpura fulminans. A high degree of suspicion, with a proper history and investigations are needed to arrive at the right diagnosis as the various etiologies have different management and prognosis. In addition, any diffuse dermatological manifestation in a newborn is associated with social stigma and mental stress for the family. A proper diagnostic workup and management of neonatal hyperpigmentation is therefore essential.

We present a newborn baby who had hyperpigmentation which started from day 5 of life with lethargy and on extensive evaluation, was found to have neonatal chikungunya.

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Case report

A term male baby with a birth weight of 2.5 kg born to a 25 year old primigravida mother with no antenatal complications by normal vaginal delivery presented on day 5 of life with complaints of lethargy, poor feeding and progressive darkening of the skin since birth. On examination, the baby was dull, cry and activity were weak, with diffuse hyperpigmentation of the skin (Figure 1) predominantly over the face and ears, and sparing the buccal mucosa, palms and soles. The baby was hypotonic with depressed neonatal reflexes. His anterior fontanelle was depressed and there were no meningeal signs. The baby weighing 2.1 kg at presentation had lost around 400 grams since birth in the past 4 days. The possibility of late onset neonatal sepsis with or without meningitis, purpura fulminans, congenital adrenal hyperplasia (salt losing form) and metabolic disorders like alkaptonuria were considered.



Fig 1. Baby on day 7 of life showing diffuse hyperpigmented maculopapular rash with occasional peeling of skin

On investigation, the baby had a total white cell count of 4600 with 40% neutrophils and no immature forms. His CRP and procalcitonin were normal. The platelet count was 130,000/ μ L, with normal serum electrolytes, urea, creatinine, thyroid profile and 17 hydroxy progesterone levels. The CSF was acellular, with normal protein and sugar. Blood and urine cultures were sterile.

The baby was started on cefotaxime and amikacin on the day of admission along with intravenous fluids. His feeding and activity improved by day 4 after admission and gradually fluids were stopped and replaced with exclusive breast feeding. Repeat hemogram on day 4 of hospital stay showed mild thrombocytopenia (110,000/ μ L). In view of negative cultures, antibiotics were stopped on day 5 of admission. However, the skin hyperpigmentation was worsening, becoming more prominent over the tip of the nose and ear auricle. A dermatology opinion was obtained, and we were advised to do a skin biopsy and IgM and IgG chikungunya antibody in both mother and baby. On reviewing the history, we discovered that the mother had fever with arthralgia 4 days before delivery. The skin biopsy was therefore not done. Anti-chikungunya IgM was positive in the baby and IgG was positive in the mother, resulting in the diagnosis of neonatal chikungunya. The baby was treated with emollients and topical steroids for 1 month with clinical improvement (Figure 2).



Fig 2: Baby on day 20 of life showing resolving hyperpigmentation

Discussion

Neonatal chikungunya is a well-known cause of skin hyperpigmentation in the neonatal period as shown by various case reports.^{1,2,3} The typical characteristic feature is the perioral predilection

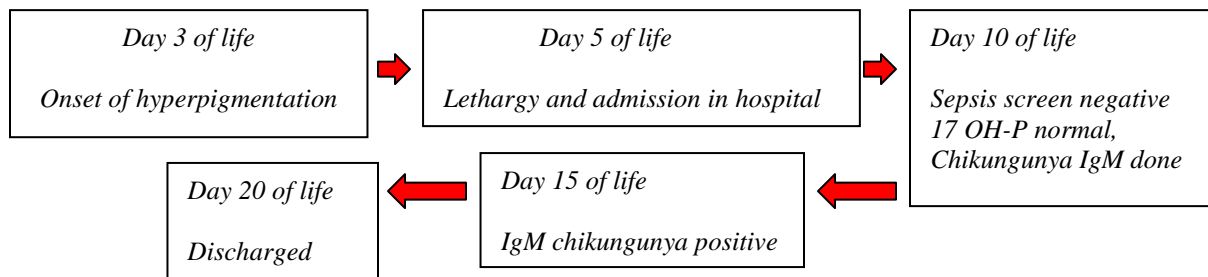
which can spread to the entire body. In countries like India, where vector borne diseases are endemic, infectious causes should be considered before evaluating for metabolic disorders.¹

Neonatal chikungunya was quite common during the chikungunya outbreak in many tropical countries. Congenital infection was more frequent than acquired. Postnatal chikungunya is rare but vertical transmission has been described. Fetal risk is rare if the gestation period is less than 22 weeks. Maximum transmission is during birth if mother had acquired infection a few days before delivery. Other than hyperpigmentation, another striking clinical feature is neurotropism, which was evident in many cases in as refusal to feed, lethargy and seizures.^{2,3} Laboratory features were characterized by thrombocytopenia and positive serum anti chikungunya IgM. Some atypical dermatological manifestations have been described in the literature.⁴ More severe neonatal chikungunya with apnea, seizures with encephalitic picture have also been reported.⁵

Dermatological manifestations of the disease have been reported in about 40-50% of patients. The hypermelanosis appears to be post inflammatory in nature and may develop rapidly. The hyperpigmentation may be of different types including Centro-facial and freckle-like, diffuse pigmentation of face, pinna, and extremities, flagellate pigmentation, and pigmentation of existing acne lesions.⁶

Babies with perinatal chikungunya infection are prone to developmental delay and require long term neuro-developmental follow-up.^{7,8} Hence the importance of following appropriate preventive vector measures and prompt diagnosis of infective conditions in tropical countries.

Timeline of events



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