

CASE REPORT

Neonatal Chikungunya Infection with Perioral Hyperpigmentation

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ABSTRACT

Background : During outbreak of Chikungunya, Neonatal Chikungunya Infection is not that uncommon and should be suspected as closest differential diagnosis of sepsis

Case characteristics : Both babies had postnatal infection, one presented as signs and symptoms similar to sepsis, both had hyperbilirubinemia and typical perioral hyperpigmented rash after phototherapy.

Message- : Perioral Hyperpigmentation is consistent with Neonatal Chikungunya Infection

INTRODUCTION

Chikungunya fever is caused by RNA virus of Togaviridae family with genus as alphavirus. It is transmitted by Aedes mosquito. The disease typically presents with high grade fever, rash, arthralgia, malaise, body ache in adults and in neonates it can present as fever, refusal to feed, excessive cry, irritability, exaggerated jaundice and in rare but severe cases as encephalopathy, bleeding due to thrombocytopenia, multiorgan failure. The closest differential diagnosis is sepsis.

CASE 1

3 day old new born admitted in NICU with chief complaints of yellowish discoloration of eyes and skin, low grade fever 1 day, refusal to feeds. Baby was LSCS born/ CWAB/2.5kg/Male. Mother was 3Rd Gravida with previous history of twins. Had taken treatment for Infertility in previous pregnancies. G1- LSCS /Twin Delivery, 1 male had imperforate anus, was operated but expired on 2nd day of operation. Female baby A/W. G2- again twins, both male babies IUD at approx. 16 weeks. Mother had no other significant history, was on regular follow-ups and there was no h/o fever during pregnancy. After delivery on 2nd day mother had moderate grade fever with high CRP which was treated with antibiotics. Fever responded in 2 days.

Baby was admitted in NICU, investigations were sent and started on first line antibiotics with single surface phototherapy. Baby was accepting feeds orally. On 5th day of life baby developed episodes of desaturation with

decreased activity and refusal to feeds. CRP was mildly raised. As presentation was similar to early onset sepsis baby was upgraded on antibiotics with oxygen and IV fluids. Baby improved in 24 hours. On 7th Day of life baby developed hyperpigmentation over face and body predominantly around oral and nasal region. It was similar to that of chikungunya infection in new born so Chikungunya IgM was sent which came Positive. As mother also had fever postnatally, her CG IgM was also sent. It also came Positive. Later baby was fine and discharged without any complications. On follow up to 3 months baby's MRI Brain, EYE examination, Hearing examination were normal. ECHO showed small ASD. Growth and milestones are normal.

CASE 2

4 day old male new born was admitted in NICU with complaints of excessive irritability, crying and yellowness of face and body. No H/o fever. Was taking feeds. Baby was FTVD/3Kg/CWAB/AGA and was discharged after 2 days along with mother from postnatal ward. Mother had H/O mild fever on 2nd day of delivery. Treated with paracetamol. No other significant History.

Baby was admitted, basic investigations were sent and started on phototherapy with exclusive breast feeding. After 2 days of admission baby developed typical perioral and paranasal hyperpigmented rash. Repeat investigations including Chikungunya serology was sent. Septic screen was negative. CRP was high and Chikungunya IgM was positive. There was no fever

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Figure : Neonatal Chikungunya Infection with Perioral Hyperpigmentation



or any other complaints. Bay was discharged on 12th DOL. Mother's Chikungunya IgM was sent and it also came positive. On follow up baby's hyperpigmentation decreased and growth and development are normal.

DISCUSSION

Chikungunya (CHIK) virus is member of genus Alpha virus in the family of Togaviridae transmitted to humans by vector like *Aedes aegypti* and *Aedes albopictus*. The incubation period ranges from 3 to 12 days. {1} The onset is usually abrupt and the acute stage is characterized by sudden onset with high-grade fever, severe arthralgias, myalgias, and skin rash. Swollen tender joints and crippling arthritis are usually evident.{2} Chikungunya fever appears to have a direct impact on pregnancy with a higher risk of abortion in the first trimester and mother-to-child transmission in the last trimester. The time of greatest risk of transmission of Chikungunya virus from mother to foetus appears during birth if mother acquired the disease few days before delivery.{3,4,5} Neonates present at 3-5 days of life with fever, excessive crying, dermatological manifestations like maculopapular rash, nasal blotchy erythema, freckle like pigmentation over Centro facial area, vesiculo-bullous lesions, apnoea, in rare but severe cases shock, DIC, and neurological manifestation like seizures, disturbed level of sensorium. Thus, Chikungunya in neonates can present with protean clinical manifestations. Clinical examination and high index of suspicion are essential in clinching the diagnosis as the presentation can mimic other commonly seen emergencies like septic shock or acute CNS infection.{6} Diagnosis is made by CHIK IgM and RT-PCR. Viral culture is the gold standard for the diagnosis of Chikungunya fever. Reverse transcription polymerase chain reaction and real-time loop-mediated isothermal amplification have also been found to be useful. Serodiagnostic methods for the detection of immunoglobulin M and immunoglobulin G antibodies against Chikungunya virus are more frequently

used.{7} Treatment is predominantly symptomatic; however, severe cases of chikungunya may require fluid management and intensive care management and monitoring. {8} Prevention by educating the community and public health officials, vector control measures appear to be the best approach at controlling Chikungunya fever as no commercially available vaccine is available for public use in India for this condition presently. {2}

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