

## If Diffuse Hyperpigmentation is Present with Signs of Sepsis in a Newborn, Think of Congenital Chikungunya

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**Key words:** Congenital Chikungunya, Pediatrics, Post Inflammatory Hyperpigmentation

**Citation:** Bilkhiwal E, Janagond AB, Charki S, Kurra C. If Diffuse Hyperpigmentation is Present with Signs of Sepsis in a Newborn, Think of Congenital Chikungunya. *Dermatol Pract Concept*. 2026;16(1):6031. DOI: <https://doi.org/10.5826/dpc.1601a6031>

**Accepted:** April 22, 2025; **Published:** January 2026

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**Funding:** None.

**Competing Interests:** None.

**Authorship:** All authors have contributed significantly to this publication.

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### Introduction

Chikungunya is an acute infectious condition caused by alphavirus and transmitted by vector *Aedes* mosquito, which is also responsible for transmission of dengue virus and Zika virus [1]. The condition is characterized by fever and musculoskeletal symptoms. The disease also affects skin, mucosa and other body systems.

Chikungunya fever is endemic in 24 states and six union territories in India, underscoring the severity of this health issue in the country [2]. We hereby report a case of diffuse cutaneous hyperpigmentation in a neonate secondary to congenital chikungunya from one of the endemic areas of India.

### Case Presentation

A full-term male neonate with birth weight of 3 kg, born by cesarean section in one of the endemic areas of India, was

brought to pediatric outpatient department with complaints of poor feeding, fever, and irritability. The child was admitted to NICU for suspicion of late onset sepsis due to the presence of high-grade fever, decreased activity, and rapid breathing and was started on antibiotics and oxygen support. The patient's mother also complained about blackish discoloration of the child's skin all over the body, which developed on the third day of life; dermatology opinion was sought for the same on the second day of admission. On examination, diffuse hyperpigmentation with islands of normal skin (Figure 1) was present all over the body along with crusting and erosions over lips (Figure 2) and scrotum. The fever and tachypnea subsided on the third day of admission, but fever recurred on the sixth day. The patient was suspected to develop nosocomial infection in view of temperature variability and further increase in C-reactive protein (CRP) (Table 1) and was started on second-line antibiotic empirically. The

**Table 1. Hematological, inflammatory, and serological investigation findings of the neonate at admission, during hospitalization, and at discharge.**

Investigations		On admission	On day 5	day 10 (discharge)
CBC	TC	14.84/ $\mu$ L	13.90/ $\mu$ L	11.94/ $\mu$ L
	Neutrophils	26.0%	35.9%	22.9%
	Eosinophils	2.0%	0.0%	0.1%
	Lymphocytes	59.7%	53.2%	68.6%
	Monocytes	11.9%	10.8%	8.0%
	Basophils	0.4%	0.1%	0.4%
	Hb	13.8 g/dl	12.3g/dl	12.3g/dl
	Platelet counts	81mcL	302mcL	469mcL
CRP		12.8 mg/dl	51.5 mg/dl	9.1 mg/dl
S. Bilirubin (Total)		0.9 mg/dl	-	-
Chikungunya serology	IgM positive			
Lumbar puncture	Normal			
Blood culture	Sterile			
Arterial blood gas analysis (ABG)	Showed respiratory alkalosis with compensatory metabolic acidosis			



**Figure 1.** Diffuse hyperpigmentation with islands of normal skin.

immediate postnatal period of the baby was uneventful. The mother gave history of a single episode of fever one day prior to the day of delivery without any musculoskeletal symptoms. Considering all the findings, a probable diagnosis of chikungunya infection was made, and serology was advised for both patient and mother. The serology came out positive for IgM antibodies in the child. Mother refused for the serological test. Presence of typical cutaneous manifestations and positive serology in a child from an endemic area confirmed the diagnosis of congenital chikungunya. The patient's attendants were explained about the self-healing nature of the skin condition and counselled.

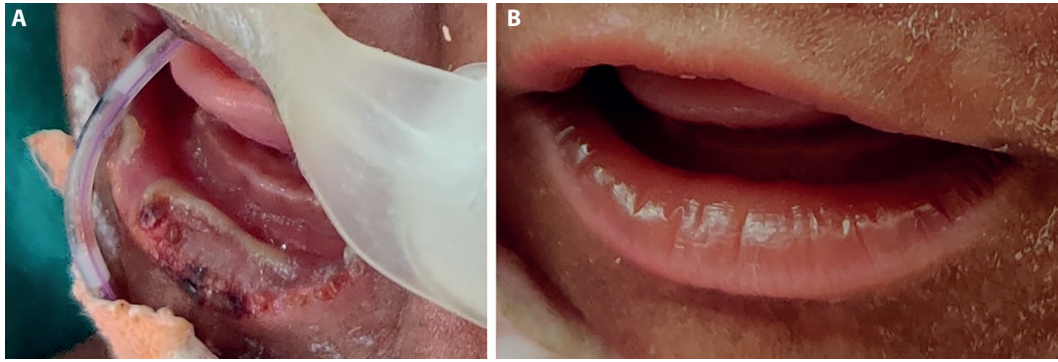


Figure 2. Clinical images showing (A) erosions with crusting over lips. (B) Lips with healed erosions.

## Conclusion

In a newborn presenting with diffuse hyperpigmentation with signs of sepsis, congenital chikungunya infection should be considered as a differential diagnosis, especially in endemic areas. As the hyperpigmentation improves spontaneously, proper patient counselling is all that is needed.

## References

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