



A CASE REPORT ON CONGENITAL MILIARIA CRYSTALLINA – A DIAGNOSTIC DILLEMA

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ABSTRACT **Background:** Miliaria crystallina is a benign condition that typically occurs in neonates after birth due to obstruction of eccrine sweat ducts. Congenital presentation is exceedingly rare. **Case presentation:** A term male neonate (38 weeks) delivered via LSCS exhibited multiple superficial 1–2 mm translucent vesicles on the trunk, limbs, and genitalia at birth. Laboratory investigations were normal. A clinical diagnosis of congenital miliaria crystallina was made. The lesions resolved spontaneously within 3–4 days after application of calamine lotion and cooling. **Conclusion:** Early recognition of congenital miliaria crystallina is essential to prevent unnecessary investigations and antimicrobial therapy in neonates with vesiculobullous lesions.

KEYWORDS : congenital miliaria crystallina, neonatal vesicles, eccrine duct obstruction, heat rash

INTRODUCTION

Vesicular and pustular lesions are frequently encountered in the neonatal period. Miliaria crystallina is a benign dermatologic condition usually developing within 48 hours of birth. It is caused by superficial obstruction of eccrine sweat ducts, leading to non-inflammatory, thin-walled vesicles. However, presentation at birth is rare, with fewer than two dozen cases reported and may mimic more serious dermatologic conditions, leading to diagnostic confusion.

CASE REPORT

A male infant was delivered by lower segment cesarean section (LSCS) at 38 weeks of gestation due to cephalopelvic disproportion. Birth weight was 3.6 kg, and APGAR scores were 7 and 9 at 1 and 5 minutes respectively. The mother was a 22-year-old primigravida with an unremarkable antenatal history.

At birth, the infant presented with multiple, closely packed, fluid-filled vesicles over the trunk, face, and all four limbs. The baby was active, afebrile, and feeding well.



Figure 1: Superficial translucent vesicles on trunk illustrating classic lesion morphology.

Examination

On physical examination, the infant had numerous 1–2 mm, clear, thin-roofed vesicles on non-erythematous skin distributed across the trunk, face, and limbs. Some lesions had ruptured, leading to fine desquamation. Pearly white papules were observed over the penile skin. Oral and ocular mucosa were normal, and systemic examination was unremarkable.

Investigations

- Routine blood tests: Normal
- Tzanck smear and Gram stain: Negative
- C-reactive protein (CRP) and blood culture: Negative
- TORCH screening: Negative
- The clinical presentation supported diagnosis of congenital miliaria crystallina.



Figure 2: Showing Pearly White Papule Over Penile Skin

Management And Outcome

Treatment included topical calamine lotion and cooling. The vesicles resolved completely within 3–4 days without scarring or recurrence. Parents received reassurance; no systemic therapy was required.

DISCUSSION:

Miliaria crystallina occurs due to eccrine sweat duct occlusion at the stratum corneum, causing superficial vesicle formation. Fever, maternal peripartum conditions (e.g., chorioamnionitis), humid intrauterine environments, or congenital duct immaturity may trigger onset at birth.

Most neonatal vesicle eruptions manifest within 48 hours of life; congenital presentation at birth is rare. Incidence in neonates ranges 1.3–4.5%, while only a handful of congenital cases have been documented.

Differential Diagnosis

Key mimickers include neonatal herpes, staphylococcal scalded skin, congenital varicella, erythema toxicum, and bullous impetigo.

Distinguishing features of miliaria crystallina are superficial, clear vesicles without an inflammatory base or systemic symptoms.

Treatment And Prognosis

Management is supportive-cooling environments and light clothing. Calamine lotion or mild emollients can soothe lesions. No systemic therapy is necessary. Remission usually occurs within days without recurrences or sequelae.

CONCLUSION

Although rare, congenital miliaria crystallina should be on the radar for neonatologists and pediatric dermatologists when evaluating vesicular eruptions at birth. Accurate recognition prevents unnecessary laboratory testing or empirical antimicrobials and ensures appropriate parental counseling. Reporting such cases enhances clinical awareness and literature depth.

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