

Neonatal Varicella: A Case Report

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Abstract

Neonatal varicella is a rare but potentially severe infection acquired perinatally, particularly when maternal varicella occurs near delivery. We present a case of a 19-day-old term neonate with vesicular rash following maternal varicella in the peripartum period. Early diagnosis, intravenous acyclovir, and supportive care led to a favourable outcome. This case reinforces the importance of maternal immunization and timely neonatal intervention.

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I. Introduction

Varicella zoster virus (VZV) infection in neonates is uncommon but can be life-threatening, especially when maternal infection occurs between 5 days before and 2 days after delivery.¹ During this window, transplacental transfer of protective antibodies is insufficient, leaving the neonate vulnerable to disseminated disease.^{1,2} Although universal varicella vaccination has reduced incidence in many regions, sporadic cases continue to emerge where coverage is incomplete.³

II. Case Presentation

A 19-day-old male neonate, born at term via normal vaginal delivery, was admitted to the pediatric ward with vesicular eruptions over the trunk and extremities. The birth weight was 2300 g, and the infant was exclusively breastfed. The mother had developed a vesicular rash consistent with varicella infection around the time of delivery. No significant antenatal or family history was noted apart from the maternal illness.

III. Clinical Examination



On admission, the neonate was alert and hemodynamically stable. Vital signs were as follows: temperature 98.6°F, heart rate 142/min, respiratory rate 46/min, and oxygen saturation 98% on room air. Multiple vesicular lesions on an erythematous base were observed over the trunk, extremities, and face, with some in varying stages of healing. No hepatosplenomegaly or respiratory distress was present. Neurological and systemic examinations were unremarkable.

IV. Laboratory Investigations

The following laboratory values were recorded:

- CBC: Hb 15.2 g/dL, TLC 10,800/ μ L (neutrophils 54%, lymphocytes 38%), platelets 2.5 lakh/ μ L
- LFT: Total bilirubin 1.2 mg/dL, AST 42 U/L, ALT 40 U/L, ALP 130 U/L
- RFT: Urea 24 mg/dL, Creatinine 0.5 mg/dL
- CRP: 6 mg/L
- Blood culture: No growth after 48 hours

These findings indicated no systemic organ involvement at the time of admission.

V. Clinical Course And Management

The neonate was admitted for close monitoring. Intravenous acyclovir was initiated at 20 mg/kg every 8 hours.^{3,4} Supportive care included intravenous fluids, paracetamol for fever, and topical management of skin lesions. Strict infection control measures were implemented to prevent cross-transmission.

Over the next five days, the infant remained clinically stable without signs of respiratory or neurological complications. The vesicular lesions gradually crusted, and no new lesions appeared after 72 hours of therapy. Oral feeding was well tolerated throughout hospitalization.

VI. Outcome And Follow-Up

The neonate showed marked clinical improvement, with resolution of fever and drying of lesions. He was discharged after a 7-day hospital stay in stable condition, with advice for follow-up. At the 2-week follow-up, the infant was thriving, with complete healing of cutaneous lesions and no systemic complications.

VII. Discussion

Neonatal varicella can range from mild cutaneous involvement to severe disseminated disease.³ A case described by Patrizi et al. highlighted uncomplicated neonatal varicella with favorable outcome following early acyclovir therapy, reinforcing the importance of prompt antiviral intervention. Agarwal et al reported a case of neonatal varicella on the fifth postpartum day, who had a complete and uneventful recovery with supportive treatment by twelfth day.⁵ The timing of maternal infection is critical—peripartum exposure poses the highest risk due to inadequate passive immunity.^{1,6} Hyatt et al reported 34 cases of neonatal varicella within the first eight days of life.⁷ Early antiviral therapy with acyclovir significantly reduces morbidity. Preventive strategies include varicella vaccination for non-immune women and administration of varicella-zoster immune globulin (VZIG) to exposed neonates.^{2,8}

VIII. Conclusion

This case underscores the importance of early recognition and prompt management of neonatal varicella. Maternal immunization and timely neonatal antiviral therapy are key to preventing complications and improving outcomes.

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