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Neonatal COVID-19 Presenting as Sepsis: A Case Report

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Abstract: ***This case report describes a term neonate presenting with clinical signs of sepsis who was ultimately diagnosed with COVID-19 infection. The case highlights the importance of considering SARS-CoV-2 in the differential diagnosis of neonatal sepsis during the ongoing pandemic.***

Keywords: Neonatal COVID-19, Sepsis, Case report, Newborn, SARS-CoV-2, Neonatal infection

1. Introduction

COVID-19, caused by the SARS-CoV-2 virus, has affected all age groups, including neonates. Although most neonates experience mild or asymptomatic infection, some may present with sepsis-like features. Timely recognition is essential for appropriate management and infection control.

2. Case Presentation

A male neonate, born at 39 weeks via normal vaginal delivery to a healthy mother, presented at 5 days of life with fever and poor feeding. Initial examination revealed heart rate of 160 bpm, respiratory rate of 60/min, and oxygen saturation of 92% in room air. The baby appeared lethargic but hemodynamically stable. Presumed diagnosis of neonatal sepsis was made, and full sepsis workup was initiated. The baby was started on intravenous antibiotics and supportive care.

3. Investigations

Initial laboratory evaluation showed mildly elevated inflammatory markers. Blood culture was sterile. COVID-19 RT-PCR from a nasopharyngeal swab returned positive. Chest X-ray, if done, may be noted as unremarkable or showing subtle changes.

4. Clinical Course

The infant showed clinical improvement within 48 hours. Oxygen saturation normalized, feeding improved, and fever subsided. Antibiotics were discontinued after negative cultures. The baby was discharged home in stable condition with appropriate follow-up.

5. Discussion

Neonatal COVID-19 may mimic bacterial sepsis, especially in the early postnatal period. This case underscores the need to include SARS-CoV-2 in differential diagnoses when evaluating neonates with sepsis-like presentations, especially during community surges. Judicious use of antibiotics and early testing can guide appropriate management.

6. Conclusion

Clinicians should maintain a high index of suspicion for COVID-19 in neonates presenting with sepsis-like symptoms. Early recognition allows for optimized care and reduced unnecessary antibiotic exposure.

References

[1] CDC Guidelines on Pediatric COVID – 19
[2] WHO Clinical Management of COVID – 19
[3] AAP Neonatal COVID-19 Guidance