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Key Words

Methicillin-Resistant Staphylococcus Aureus (MRSA); Panton-Valentine Leukocidin (PVL); Deep Neck Infection; Pediatric; Surgical Drainage

Case report

Retropharyngeal and Posterior Laterocervical Abscess Caused by Methicillin-Resistant Staphylococcus Producing Panton-Valentine Leukocidin in A 7-Month-Old Infant

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Introduction

Methicillin Resistant Staphylococcus Aureus (MRSA) is a major human pathogen associated with significant antimicrobial resistance. It shows particular affinity for skin and mucosal surfaces and may cause bacteremia and persistent infections [1]. Between 70% and 86% of MRSA strains produce Panton–Valentine Leukocidin (PVL), a cytotoxin associated with tissue necrosis and recurrent abscess formation [2].

Case presentation

A previously healthy 7 month old infant presented to the emergency department with fever and a right cervical swelling. Physical examination revealed a laterocervical mass suggestive of abscess formation. Laboratory studies showed elevated inflammatory markers. Ultrasound confirmed the presence of a submaxillary and laterocervical abscess and broad spectrum intravenous antibiotics were initiated (Figure1).

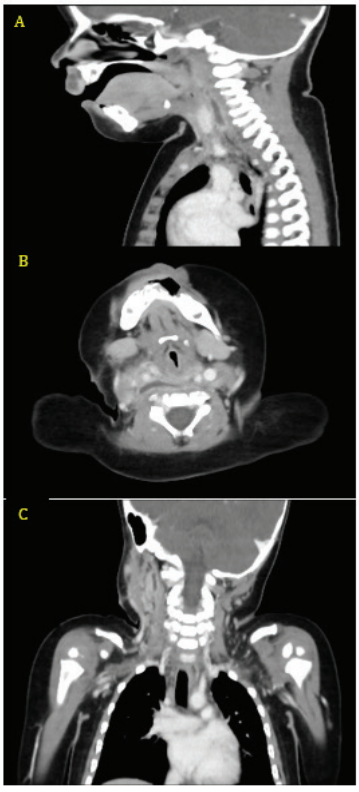

Figure 1: Contrast-enhanced cervical CT. A: sagittal view. B: axial view. C: coronal view.

Results

Surgical drainage was performed through an external cervical approach. Purulent material and lymph node samples were collected for microbiological analysis. Culture identified MRSA and polymerase chain reaction confirmed the presence of PVL genes. The patient showed progressive clinical and laboratory improvement after targeted therapy with linezolid.

Discussion

PVL producing MRSA strains are associated with increased virulence, leukocyte destruction, and tissue necrosis [3]. Management of deep neck infections often requires systemic antibiotic therapy combined with surgical drainage. These infections may progress rapidly in pediatric patients and early diagnosis is essential to avoid complications.

Conclusion

PVL producing MRSA can cause severe deep neck infections in pediatric patients. Early diagnosis and combined medical and surgical management are essential to prevent complications and recurrence.

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