

Awareness of Atypical Presentations in Deep Neck Space Infections

Derin Boyun Enfeksiyonlarında Atipik Etkenlerin Farkındalığı

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Dear Editor,

Deep neck space infections (DNSIs) constitute a group of infective suppurative diseases involving deep neck spaces and cervical fascia (1). These infections typically arise secondary to upper respiratory tract infections and are polymicrobial (1). Patients commonly present with neck swelling, dysphagia, pain, and trismus. Despite the reduced frequency of DNSIs due to increased antibiotic usage, they continue to represent a significant clinical condition with potentially severe complications such as airway obstruction, jugular vein thrombosis, carotid artery aneurysm or rupture, mediastinitis, and sepsis (2). Diagnostic tests such as ultrasound, magnetic resonance imaging, and computed tomography (CT) evaluate deep neck infections.

Management of deep neck infections involves airway preservation, abscess drainage, and intravenous antibiotics (3). While empirical antibiotic therapy plays a significant role in the regression of infection, culture-guided antimicrobial therapy is ideal (4). Despite geographical variations in microbiological samples, various studies have demonstrated streptococci and *Staphylococcus* species as the primary pathogens of deep neck infections (5). Migrations from regions with high tuberculosis prevalence due to wars or natural disasters may introduce vaccine-resistant views, adding new components to epidemiology.

The group of patients presenting with neck swelling and exhibiting either no response or an inadequate response to antibiotic therapy were hospitalized for further investigation and treatment. The clinical presentation of these patients did not correlate with a noisy deep neck infection, and there was no significant fluctuation in the lesions. A moderate increase in infection markers was observed in the patients. The patients were evaluated with contrast-enhanced Neck CT, revealing abscess foci with thick walls (Figure 1). Puncture, culture sampling, and drainage were performed under imaging guidance.

An evaluation was conducted for *Francisella tularensis*, *Mycobacterium tuberculosis*, and *Brucella*, revealing that these lesions indicated tularemia and tuberculous lymphadenitis. Targeted antibiotic therapy and recurrent aspirations under ultrasound guidance were performed in treatment. Clinicians should be mindful of the possibility of these agents in patients presenting with persistent neck swelling unresponsive to treatment. Diagnostic tests for these agents should be promptly conducted, and specific treatment should be planned immediately. Otolaryngologists must be cognizant of the diagnostic challenges encountered in these patients to avoid misdiagnosis and unnecessary treatment delays, particularly in cases

where lung involvement is absent. In conclusion, it is essential for clinicians to be aware of atypical and misleading presentations and to consider tuberculosis and tularemia as significant differential diagnoses, even in immunocompetent individuals in the head and neck region.

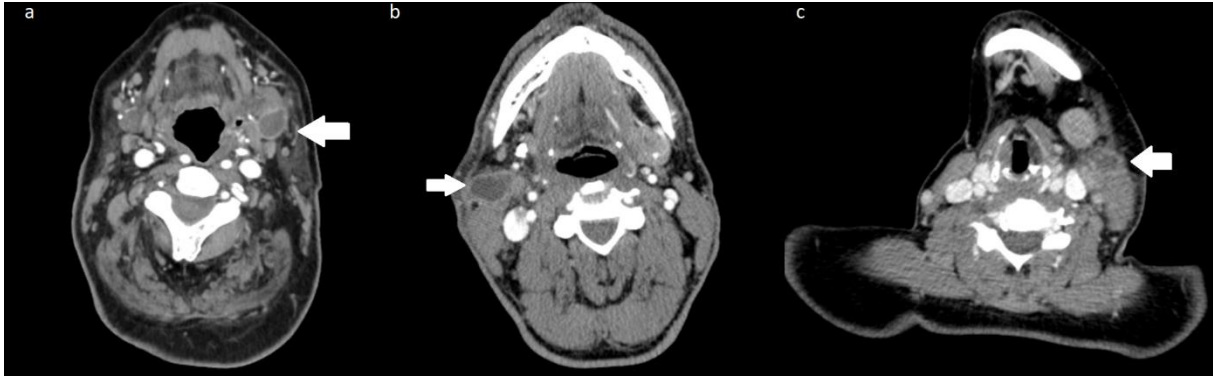


Figure 1: Axial BT image. Computed tomography (CT) of the neck with contrast, axial plane, performed on the day of presentation. **a and c;** Tuberculosis, showing peripheral contrast enhancement with central cystic-necrotic density lymphadenopathy on axial CT section (thick white arrow). **b;** Tularemia, showing lymphadenopathy with cystic-necrotic density on axial CT section (thick white arrow).

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