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# Lemierre's Syndrome: An Unfortunate Sequela

IMAGE

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## CASE DESCRIPTION

A 17-year-old male with no known comorbidity complained of odynophagia for the duration of two weeks. His condition progressively worsened during the last four days, wherein he experienced fever with chills and rigors. He denied presence of any symptoms of dyspnea, dysphagia, voice changes, neck swelling, or limited neck movement.

The patient appeared severely ill and poorly hydrated at the time of presentation. Oral and neck movements were observed to be functioning normally. Examination of oral cavity revealed inflamed tonsils of Brodsky grade 2 with medialization of the soft palate towards the left side. Neck palpation elicited tenderness along the anterior border of the left sternocleidomastoid muscle. White blood cell count and C-reactive protein levels were markedly elevated at $17.58\times10^9$/L and 15.55 mg/dL, respectively. Contrast-enhanced computed tomography of the neck revealed a long segment of thrombosed internal jugular vein (IJV) along with left peritonsillar abscess (Fig. 1, 2).

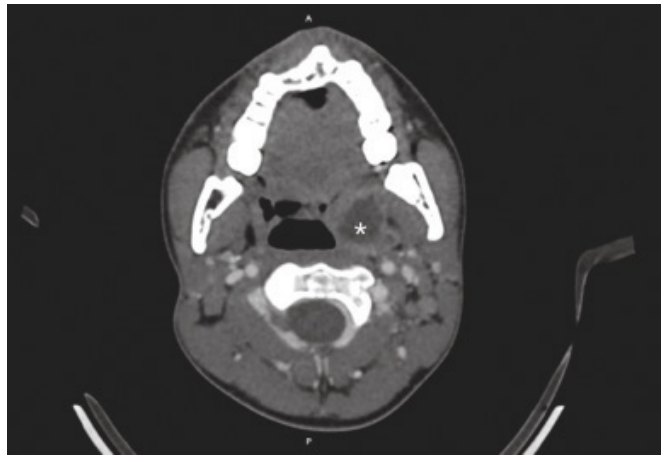

**Figure 1. Axial view of contrast-enhanced computed tomography (CT) of the neck in a soft tissue window revealed a rim-enhancing collection over the left peritonsillar space, suggestive of peritonsillar abscess (*)**

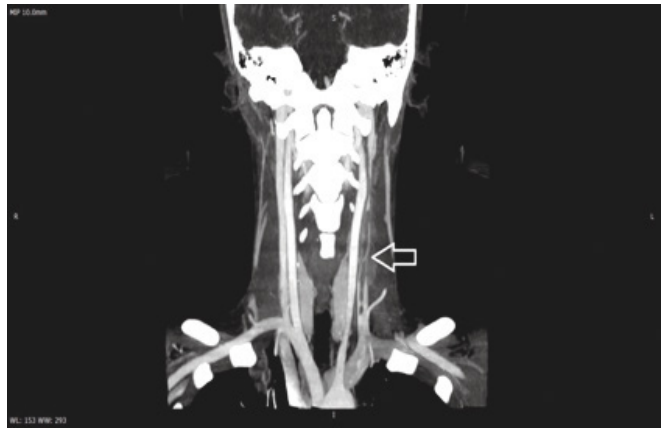

**Figure 2. Re-constructed computed tomography (CT) venogram in coronal view revealed a long segment filling defect over the left internal jugular vein (IJV) (arrow in white)**

Treatment was initiated with intravenous administration of ampicillin-sulbactam and metronidazole. The peritonsillar abscess was drained orally, and its culture yielded ampicillin-sulbactam and metronidazole sensitive *Fusobacterium necrophorum*. Anticoagulant therapy was initiated for a period of six months as a treatment approach for the long segment of venous thrombosis. The patient showed tremendous improvement after six weeks of antimicrobial treatment. Six months later, ultrasonography of the neck revealed resolution of the venous thrombosis.

## DISCUSSION

Lemierre syndrome (LS) was first described by the French bacteriologist Andre Lemierre in 1936. It is defined as a cascade of events of oropharyngeal infection resulting in septic thrombophlebitis of

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the jugular vein (1). It is characterized by a prolonged duration of oropharyngeal infections, neck abscess, IJV thrombosis, and multiple "seedlings" of septic emboli. Diagnostic criteria include positive blood cultures with radiological evidence of IJV thrombophlebitis (2).

The common culprit for LS is *F. necropharum*, with other microorganisms rarely reported (3). Prolonged administration of antimicrobial agents is the primary treatment approach for LS. However, effectiveness of anticoagulant therapy and surgical excision of the thrombus remain controversial. Despite the modern age of antibiotics and development of detection methods with improved sensitivity, the mortality rate of LS can still be as high as 17% (1). Therefore, the treating physician needs to be familiar with the clinical presentation for better management and care of patients.

**Informed Consent:** Written informed consent was obtained from patients who participated in this study.

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