

IMAGES IN EMERGENCY MEDICINE

Infectious Disease

The forgotten disease

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1 | CASE PRESENTATION

A 22-year-old man with no significant past medical history presented to the emergency department for the third time in 1 week with chief complaints of sore throat and neck pain. On the patient's initial visit, he was thought to have had viral tonsillitis. However, his symptoms progressively worsened despite a trial of amoxicillin/clavulanate. On examination, he had significant swelling over the left neck, tender to palpation, trismus, and odynophagia. Based on vital signs, he met systemic inflammatory response syndrome criteria on arrival. Because of the concern for neck infection on examination, he was treated for sepsis and subsequently given flagyl, clindamycin, and dexamethasone.

Computed tomography of the neck with intravenous contrast revealed intraluminal thrombi involving the left internal jugular vein and external jugular vein in facial vein likely secondary to inflammation within the left parapharyngeal and peritonsillar space consistent with a diagnosis of Lemierre's syndrome (Figures 1–4). The patient was then admitted to the hospitalist service for inpatient management.

2 | DIAGNOSIS

2.1 Lemierre's syndrome

Lemierre's syndrome has historically affected healthy, young adults. Often called "the forgotten disease" because of the use of antibiotics, Lemierre's syndrome affects only 1 in 1 million patients per year, but a missed diagnosis can be fatal. Defined as septic thrombophlebitis of the internal jugular vein attributed to local deep space neck infection, Lemierre's syndrome can have a spectrum of symptoms, includ-

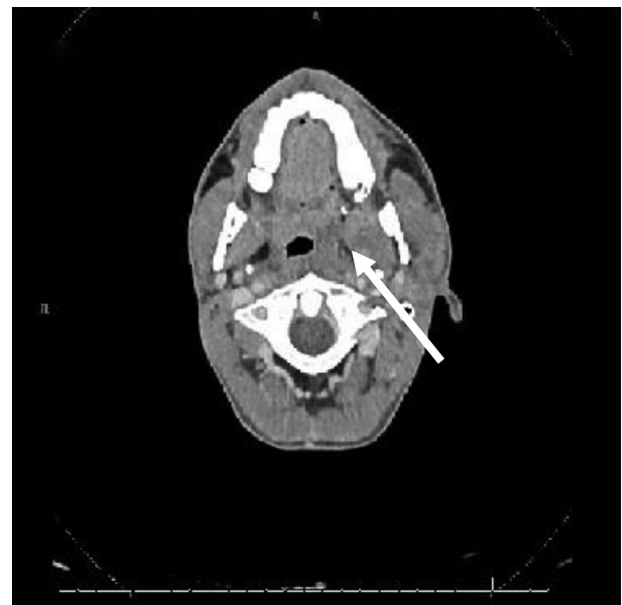


FIGURE 1 Thrombotic disease in transverse view on computed tomography of the neck with intravenous contrast from day of admission. Arrow identifies hypoattenuation in left palatine tonsil and left medial pterygoid, the likely origin of infection

ing fever, rigors, odynophagia, neck pain/tenderness, swelling, and limited neck range of motion. Commonly, these infections originate from oropharyngeal sources with direct extension, which is often normal anaerobic flora of the oropharyngeal cavity (ie, *Fusobacterium necrophorum*). Often, patients may present with sepsis and require aggressive resuscitation, including antibiotic coverage. They may also require definitive surgical treatment.

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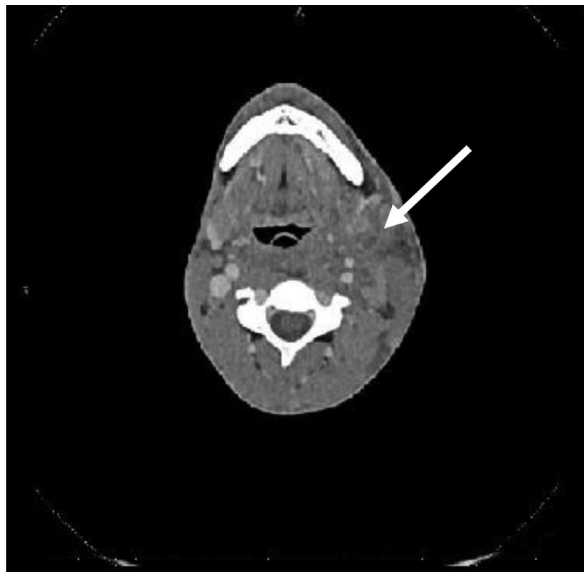


FIGURE 2 Thrombotic disease in transverse view on computed tomography of the neck with intravenous contrast from day of admission. Arrow identifies hypoattenuation in left palatine tonsil and left medial pterygoid, the likely origin of infection

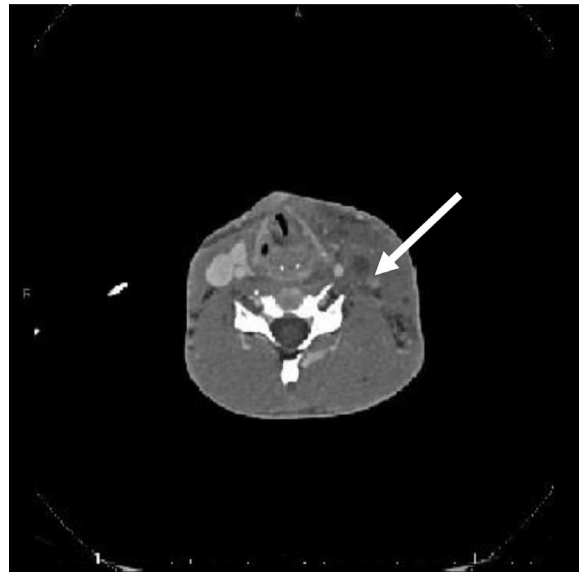


FIGURE 4 Thrombotic disease in transverse view on computed tomography of the neck with intravenous contrast from day of admission. Arrow identifies thrombosis of the left internal jugular

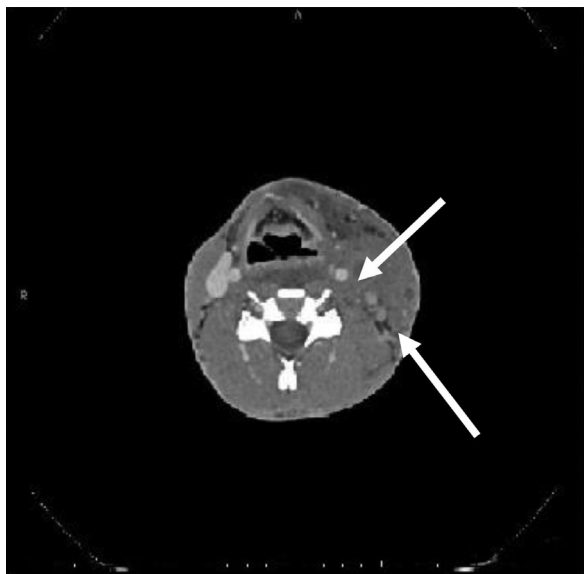


FIGURE 3 Thrombotic disease in transverse view on computed tomography of the neck with intravenous contrast from day of admission. Arrows identify thrombosis of the left internal jugular (seen again in Figure 4) and left external jugular

3 | CASE RESOLUTION

No organism was identified on blood culture. The patient was also found to have septic pulmonary emboli on computed tomography angiography after 2 days, at which time he had redemonstration of known venous thrombosis without further extension (Figure 5). He subsequently had an 8-day admission with otolaryngology, oral surgery, infectious disease, and hematology evaluations and intra-



FIGURE 5 Left internal jugular vein in coronal view on computed tomography angiography of the neck

venous antibiotics. He was noted to have improvement in swelling by day 3 and significant improvements in trismus and odynophagia by day 4. He was discharged on perioral flagyl and cefdinir with resolution of symptoms on follow-up visits. No interval imaging was obtained to demonstrate resolution.

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