

Suppurative Thrombophlebitis Of Facial Vein: A variant of Lemierre's syndrome

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Background

- Lemierre's syndrome refers to infectious thrombophlebitis of the jugular vein most commonly caused by *Fusobacterium Necrophorum*. The thrombophlebitis is a serious condition that may lead to systemic complications if not treated promptly.

Patient presentation

Introduction

- A 33-year-old Hispanic female with no significant past medical history presented with a 6-day history of fever, chills, nausea, vomiting and profound diarrhea.

Physical exam

- No acute distress, dry oral mucosa
- Abdomen non-distended, with hypoactive bowel sounds, tenderness to palpation to RUQ, no rebound/guarding
- Blood pressure 76/47 mmHg, respiratory rate 28, pulse 96 and temp 98.6 °C

Initial Work up

- CBC with leukocytosis; CMP with hyponatremia, hypokalemia and creatinine of 1.62 (baseline WNL)
- Lactic acid 2.4; Urine analysis
- Blood culture obtained
- CXR and abdominal ultrasound unremarkable

Clinical course

- Patient received aggressive hydration and pressors for persistent hypotension, and she was on broad spectrum antibiotics for sepsis of unknown origin
- Her gastrointestinal symptoms resolved with above treatment; however, she continued to have fever and significant leukocytosis, accompanied with new onset respiratory distress
- Meanwhile, she complained of swelling of her right neck with palpable lymph nodes
- She reported history of right sided dental abscess 3 months ago but denied any current symptoms

- Initial blood cultures grew *Fusobacterium necrophorum* on day 3
- Although no typical history of pharyngitis, given the suspected submandibular lymph nodes and blood cultures result, Lemierre's syndrome was suspected and neck/chest/abdomen/pelvis CTs were obtained to investigate the source of infection and possible systemic septic emboli
- Neck CT indicated purulent thrombophlebitis of the right facial vein and periapical abscess of the right maxillary incisor, where a branch of the right facial vein was draining from (Figure 1 & 2)
- Chest CT with multiple pulmonary cavitory and non-cavitory opacities highly suspicious for septic emboli (Figure 3 & 4)
- Antibiotic de-escalated to metronidazole, after improvement of respiratory status patient was discharged with a regimen of metronidazole and amoxicillin for three weeks

Figure. 1 & 2 CT neck with contrast: right facial vein filling defect

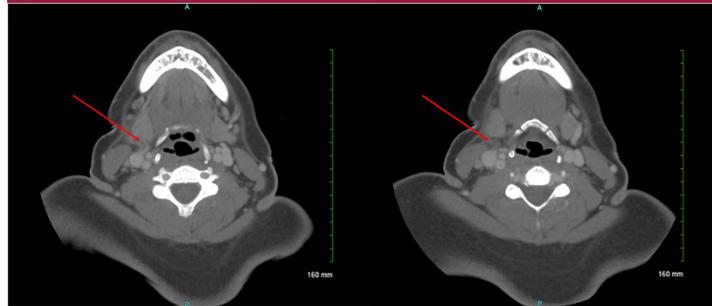
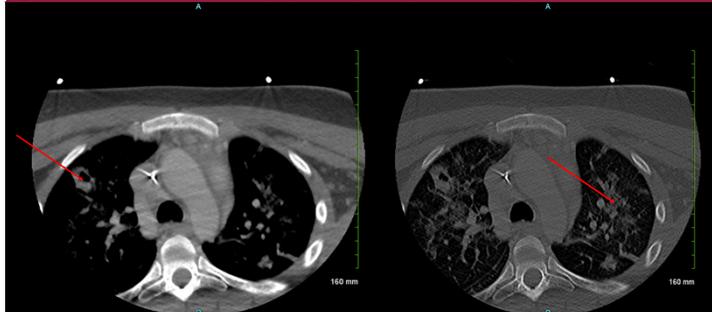


Figure. 3 & 4 CT chest with contrast: multiple pulmonary cavitory and non-cavitory opacities



Discussion

- Suppurative thrombophlebitis usually involves the internal jugular vein (IJV) and is also known as Lemierre's syndrome, and it is always preceded by pharyngitis. However, it can also involve vena cava or branches of IJV with atypical presentations
- Suppurative thrombophlebitis should be suspected in patients with persistent bacteremia after 72 hours of appropriate antimicrobial therapy, especially in the setting of an intravascular catheter
- The most useful radiographic tool is high resolution CT scan with contrast, and the CT scan is always extended to include chest as septic emboli to the lung involves 97% of the cases
- Empiric antibiotic treatment should include beta-lactamase resistant beta lactam antibiotic
- The role of anticoagulation is controversial, this patient was not put on anticoagulation as there was no thrombus in her internal jugular vein

Conclusion

- This case illustrates a variant of Lemierre's syndrome that does not have preceding pharyngitis, involves the facial vein, and presents with prominent gastrointestinal symptoms. Recognizing atypical presentations of Lemierre's syndrome is essential as prompt treatment is the key to prevent serious systemic complications.

Reference

- Chrinos JA, Lichtstein DM et al. The evolution of Lemierre syndrome: report of 2 cases and review of literature. *Medicine (Baltimore)*. 2002; 81 (6): 458
- Cox ER, Amoroso A et al. Pannus attack: septic thrombophlebitis. *Am J Med*. 2012; 125 (12): 1175. Epub 2012 Oct. 9