Sore throat... don't forget Lemierre's syndrome

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DESCRIPTION

A young man in his 20s presented to the emergency department reporting of a sore throat, fever, chills and cough beginning 3 days prior. On the basis of a negative rapid streptococcal antigen test, he was discharged with supportive care for a presumed viral upper respiratory infection. He returned 2 days later with fever, cough productive of yellow sputum, shortness of breath and right-sided pleuritic chest pain. He quickly developed respiratory distress requiring intubation. A CT of the chest (figure 1 and video 1) demonstrated a right pleural effusion that was later confirmed to be an empyema, and scattered nodular infiltrates consistent with septic emboli. Lemierre's syndrome most often occurs in adolescents and young adults following an oropharyngeal infection not treated by antibiotics or treated with antibiotics that do not cover *Fusobacteria* and should be suspected with new or worsening symptoms several days after initial presentation.^{1 2} Oral anaerobes, classically *Fusobacteria necrophorum*, spread to adjacent tissues causing septic thrombophlebitis of the internal jugular vein.² Symptoms of fever, chills, respiratory distress, neck pain and swelling usually occur within a week of the initial infection and are due to septic thrombi and emboli.² Physical examination often reveals tenderness or swelling on the side of the affected vein, and typical laboratory findings include leucocytosis, thrombocytopenia and bacteraemia. Diagnosis is performed through blood cultures and imaging demonstrating thrombosis of the internal jugular vein. Treatment consists of antibiotic therapy directed at the offending organism, and in select circumstances surgical exploration of the internal jugular vein or anticoagulation.^{1 3}

Video 1 CT review of anatomy.

Learning points

- ▶ In a patient presenting with sore throat, pain or a mass palpable in the neck should raise the suspicion for Lemierre's syndrome.²
- ▶ The incidence of Lemierre's may be increasing due to less antibiotic use for non-streptococcal pharyngitis.²
- ▶ Although often cited as the first to describe this syndrome, André Lemierre gave credit in his original paper to the German physician Schottmüller for describing this entity in 1918, and it had been described even earlier by Courmont and Cade in 1900.

Figure 1 (A) CT of the chest demonstrating empyema (green arrow), and nodular infiltrates (blue arrows) typical of septic emboli. (B) CT of the neck showing thrombosis of the left internal jugular vein (red arrow).

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