Clinical Findings: The clinical course of Lemierre’s syndrome begins with oropharyngeal infection and disruption of pharyngeal host defense. An initial bacterial or viral pharyngitis is characterized by sore throat that may cause dysphagia. A preceding illness is thought to allow mucosal penetration by normal oral flora, Fusobacterium necrophorum, with progression to septicaemia and internal jugular vein thrombophlebitis. Symptoms and signs of oropharyngeal infection or inflammation are often resolved by the time the patient presents to a healthcare provider. Fever, neck pain, and tenderness of the internal jugular vein are noted on examination. On physical examination, four to twelve days after the initial sore throat.1 The typical findings at the time of diagnosis were present in our patient, including swelling and tenderness of the anterior border of the sternocleidomastoid, tachycardia, cough, dyspnea, as well as the small left pleural effusion. Doppler ultrasound of the neck veins which can be complicated by septic emboli to the lungs as well as the left upper quadrant pain, nausea, vomiting and loose stools for a few days three days. He denied sick contacts, neck stiffness, photophobia, or recent dental procedure. Vans, showed normalappearing cervical lymphadenopathy and cracks foci upon auscultation of the left lung base. Labs revealed leukocytosis of 40,000. An initial chest radiograph demonstrated a left lower lobe consolidation and small effusion. Ultrasound performed showed thickened enhancing walls, and edema of the adjacent soft tissues. Magnetic resonance angiography has also proved useful for diagnosing jugular vein thrombosis and is advantageous because of its less invasive radiation. Conventional retrograde venography is rarely performed because of its invasiveness. Several authors believe it can be useful in the assessment of the extension of the thrombus when jugular vein injury is considered. Other less commonly used techniques that can lead to the diagnosis of internal jugular thrombosis include gallium scan and radionucleide venography with Tc-99m-labelled RBC.

Case 1: 19 y/o Caucasian male with right-sided constellations and pharyngitis develops right internal jugular thrombophlebitis and subsequent septic pulmonary emboli with cavitary consolidations and effusions. Bilateral neck swelling was noted at presentation. The patient was diagnosed with Lemierre’s syndrome. chest Imaging Findings: Septic emboli arising from the cervical veins most commonly involve the lung, up to 97% of cases. Chest radiographs are the initial study of choice if there is clinical suspicion of septic pulmonary emboli. Chest radiographs frequently demonstrate one or more areas of patchy consolidation or peripheral nodular opacities with or without cavitations in patients with septic pulmonary embolic disease. However, the radiographic findings tend to be nonspecific or the chest radiograph can appear completely normal upon presentation. A single chest radiograph does not exclude Lemierre’s syndrome with septic pulmonary emboli. CT is more sensitive and specific, and thus better characterizes the pulmonary manifestations of septic emboli. CT demonstrates one or more focal infiltrates in the setting of pulmonary emboli, which may be nodular with peripheral distribution within one or both lungs. Cavitations may or may be not present; since the advent of penicillin, catabolic lesions have become less common. The consolidations can rapidly increase in size, number, presence of cavitation and may to consolidation ratio as the disease rapidly progresses, as seen in our case. The variable number, size and consolidation to cavitary ratio upon imaging reflect the varying chronicity of the septic emboli. Associated findings that may be detected radiographically should be sought in patients with septic pulmonary emboli diagnosed on CT, resolution on radiograph does not equate to resolution of disease. Therefore, CT is suggested as the modality of choice for evaluation of pulmonary manifestations even after chest radiographs are negative.

Etiology/Epidemiology: Lemierre syndrome, also known as septic thrombophlebitis, post-anginal septicemia and necrofacialis, was first described by Dr. Andre Lemierre in 1936 in a case series of adolescents with sepsis after an oropharyngeal infection.5 The hallmark of the syndrome include oropharyngeal infection that progresses to sepsis and deep venous thrombosis of the internal jugular vein with subsequent thrombophlebitis and septic embolism. The most common causative agent is the bacterium Fusobacterium necrophorum, a common commensal of the oral cavity that has been described, such as Peptostreptococcus, Streptococcus, and Bacteroides species. Often, pharyngitis is the inciting event, however other initial sites of infection have been noted such as sinuses, mastoiditis, odontomycosis. The incidence of Lemierre’s syndrome decreased significantly after the discovery of penicillin, but appears to be on the increase beginning in the 1990s.9 It is unclear whether it is more prevalent in men or women, with one review citing a 1:1 ratio between men and women, and another showing a 75% male predominance.2

References: