

## **The Perils of a Sore Throat**

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We present two cases of previously well adolescent females with a prodrome of tonsillar infection leading to rare, life-threatening complications.

Patient one presented with fourteen days of sore throat and fever; progressing to coughing, vomiting and respiratory distress. At presentation there was evidence of a large left pleural effusion, CRP 447mg/L, neutrophils  $25.710^9/L$ . Co-amoxiclav, tobramycin and azithromycin were commenced; thoracic ultrasound confirmed organized empyema. A chest drain was inserted but despite intrapleural urokinase there were minimal losses. HRCT chest confirmed the empyema. Further urokinase was instilled, following which copious fluid losses resulted in sudden-onset laboured breathing, oxygen requirement and hypotension. Imaging was consistent with re-expansion pulmonary oedema requiring invasive ventilation for two weeks. She developed renal impairment and septic ileus. 16S PCR detected fusobacterium necrophorum from pleural fluid. Antibiotics were rationalized to clindamycin and metronidazole.

Patient two presented with fourteen days of sore throat, vomiting and fever. She developed respiratory distress and had bilateral pleural effusions with left-sided pneumothorax. She was septic with raised inflammatory markers, anaemia, thrombocytopenia and deranged renal function. HRCT chest revealed a non-occlusive thrombus in the right internal jugular vein, bilateral effusions and multiple emboli throughout the lungs. The patient required BiPAP and bilateral chest drains. She was persistently febrile despite broad spectrum antibiotics but given her history, metronidazole was commenced early. Pleural fluid PCR confirmed fusobacterium necrophorum and drains were removed after fifteen days.

Lemierre's syndrome is a rare but important differential for patients presenting with sepsis, empyema and a history of recent sore throat. Fusobacterium necrophorum is a gram-negative anaerobe that causes severe infection in previously healthy individuals. It is the commonest pathogen in Lemierre's syndrome and a prolonged course of metronidazole is recommended. Re-expansion pulmonary oedema is extremely rare in children but we recommend prevention by limiting drain losses to 10ml/kg/hr.