

The Absence of Internal Jugular Vein Pathology in Lemierre Syndrome

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Lemierre syndrome is a rare but potentially fatal condition; classically described as a triad of anaerobic septicaemia, distant septic emboli and thrombophlebitis of the internal jugular vein (IJV) in the context of recent oropharyngeal infection. However, there remains no standardised definition and management of this condition continues to present a diagnostic dilemma. A 28-year-old man presented to the acute admissions unit with sudden onset, atraumatic left hip pain preceded by a 1-week history of upper respiratory tract infective symptoms. On assessment, he had recurrent temperatures, an antalgic gait and pain on passive internal rotation of his left hip joint. Laboratory studies revealed leucocytosis, 17.7 (4-11 x 10⁹/L) with neutrophilic predominance and C-reactive protein of 129 (0-10 mg/L). Magnetic resonance imaging demonstrated left hip effusion and synovitis. He underwent joint washout for septic arthritis. Blood cultures later grew *Fusobacterium necrophorum* and his antibiotic therapy was tailored accordingly to Benzylpenicillin. A presumptive diagnosis of Lemierre syndrome was made in view of his presentation; an internal jugular vein doppler ultrasonography ruled out IJV thrombophlebitis. On day 5 of admission, he reported new pleuritic chest pain and computed tomography pulmonary angiogram showed multiple, predominantly right sided pulmonary emboli. As these emboli were presumed to be septic in origin, he was not initiated on anti-coagulant therapy. He was discharged home in good health with scheduled follow up at the Infectious Diseases, Respiratory and Orthopaedic clinics. This case typifies Lemierre syndrome in the absence of a key feature which is IJV thrombophlebitis. However, this should not preclude making the diagnosis and highlights the rationale behind the Bacteria-Associated Thrombosis/Thrombophlebitis and Lemierre syndrome (BATTLE) registry which aims to address these discrepancies and provide a systematic approach to this condition. This case also highlights the role for inter-specialty management of Lemierre syndrome given the risk of distant embolic phenomenon.

Keywords: Lemierre syndrome, IJV thrombophlebitis, *fusobacterium necrophorum*

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