

A Case of Lemierre's Syndrome Following a Dental Procedure

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Lemierre's syndrome is a rare but severe bacterial infection that begins with oropharyngeal infection and spreads to the nearby jugular vein, causing infected thrombus within the vessel and involving inflammation within the surrounding soft tissue and other organs. We report a case of a Lemierre's syndrome with oropharyngeal infection of *Klebsiella pneumoniae*. A 43-year-old man with a history of diabetes mellitus visited a local dentistry and underwent a dental procedure. Subsequently, he developed edema in the right cheek and was referred to the Seoul National University Hospital for further evaluation. On physical examination, swelling around the cheek was noted and bilateral basilar crackles were heard. Laboratory tests revealed WBC 25,420/ μ l, CRP 9.50 mg/dl and procalcitonin 15.09 mg/ml. During the stay in the emergency room, the presence of fever (39°C) prompted the performance of a blood culture, revealing the identification of *Klebsiella pneumoniae*. A neck CT was conducted, showing soft tissue infiltration accompanied by air bubbles in the right premaxillary area, and septic thrombus in right external jugular vein and chest CT revealed multiple nodular and patchy opacities in both lungs, with an evidence of pulmonary septic embolism. Lemierre's syndrome was diagnosed based on the odontogenic infection, septic thrombus in the right external jugular vein, septic pulmonary embolism, and metastatic lung infection. He was given a dose of piperacillin/tazobactam for the *Klebsiella* infection. On hospital day 4, right complete ptosis occurred, so an orbit MRI was conducted, confirming right orbital cellulitis with extraocular muscle involvement. We changed antibiotics to ceftriaxone and metronidazole, which are considered to penetrate the blood-brain barrier better. Two sets of blood cultures drawn on hospital day 5 grew no organisms, and CRP decreased.

Conclusion: Despite the development of antibiotics and diagnostic methods, the mortality of Lemierre's syndrome has been reported to be between 5% and 18%. Lemierre's syndrome is a medical emergency, and prompt diagnosis and treatment with antibiotics.

