A Suspected Case of Lemierre's Syndrome with Neck Abscess

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We report a suspected case of Lemierre's syndrome with a neck abscess. A 27-year-old man without any significant past medical history visited our hospital with a complaint of right neck pain which had lasted for three days. His tonsils were mildly infected and the uvula was shifted a bit toward the left side. He complained about severe pain in his right neck, which is not usually seen in cases of tonsillitis or peritonsillitis. He was treated with intravenous antibiotics for four days, however, his symptoms did not improve, and contrast-enhanced CT and MRI were performed. These images revealed the existence of a right parapharyngeal abscess and fresh thrombus in the right internal jugular vein extending into the lateral sinus. These findings suggested Lemierre's syndrome, but there was no abnormality on chest CT. Therefore, he was diagnosed as being suspected as having Lemierre's syndrome. After intraoral incisional drainage of the parapharyngeal abscess, his symptoms disappeared rapidly. Bacterial culture of the pus in the abscess showed growth of *Fusobacterium necrophorum*. Anticoagulant therapy with heparin and warfarin was also started and continued after discharge. On the 43rd day from onset of symptoms, remarkable reduction of thrombus was observed on the follow-up MRI. In this case, enhanced MRI was more useful than enhanced CT for detecting the presence of thrombus and confirming the extension of the thrombus. In examining patients with a peritonsillar abscess and severe neck pain, it is important to take Lemierre's syndrome into consideration because the disease may sometimes be life threatening if overlooked.

Keywords : Lemierre's syndrome, CT, MRI, anticoagulant therapy, neck pain

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Contrast-enhanced axial CT scan of the neck on the fifth hospital day

The low density area in the right parapharyngeal space is more obvious than that of the second day (white arrow), and it was thought to be an abscess. The right internal jugular vein is not observed. The black arrow indicates the right styloid process.

Gadolinium-enhanced axial MRI of the neck on the fifth hospital day

(a: transvers sinus level, b: from sigmoid sinus to transvers sinus level, c: sigmoid sinus level)

From the sigmoid sinus to transvers sinus, both of the vascular wall and intravascular lumen are enhanced on the left side (white arrow), while only the vascular wall was enhanced on the right side (white arrowhead). From these findings, thrombus formation was suspected. The black arrow indicates the bone marrow of the occipital bone.

Gadolinium-enhanced axial MRI on the 43rd day from onset of symptom

(a: transvers sinus level, b: from sigmoid sinus to transvers sinus level, c: sigmoid sinus level)

The majority of the right internal jugular vein, transvers sinus and sigmoid sinus has been recanalized (arrow head), and a small residual thrombus can be observed only in the transition between the right sigmoid sinus and transvers sinus (arrow).