

Case study

Vertebral osteomyelitis as a rare manifestation of Lemierre's syndrome[☆]Takahiro Matsuo^{a,*}, Nobuyoshi Mori^a, Aki Sakurai^a, Yumiko Mikami^b, Keiichi Furukawa^a^a Department of Infectious Diseases, St. Luke's International Hospital, 9-1, Akashi-cho, Chuo-ku, 104-8560 Tokyo, Japan^b Department of Clinical and Laboratory Center, St. Luke's International Hospital, 9-1, Akashi-cho, Chuo-ku, 104-8560 Tokyo, Japan

ARTICLE INFO

Keywords:

Fusobacterium nucleatum
Lemierre's syndrome
Vertebral osteomyelitis

A 55-year-old man without a significant past medical history presented to an emergency department with the symptoms of right neck pain for 2 weeks and high-grade fever up to 38 °C for 10 days, followed by acute onset of dyspnea on exertion. On admission, computed tomography (CT) scan with contrast revealed a 4cm-diameter of retropharyngeal abscess (Fig. 1A), right internal jugular vein thrombosis (Fig. 1B) and bilateral multiple septic pulmonary emboli. He was diagnosed as Lemierre's syndrome accompanied by retropharyngeal abscess and underwent urgent surgical drainage on the same day. Blood culture revealed *Streptococcus anginosus* group sensitive to penicillin (MIC, 0.064 µg/mL: E test) and drained pus culture revealed *Streptococcus anginosus* group and *Fusobacterium nucleatum*. We started ampicillin IV 2 g every 4 h and clindamycin IV 600 mg every 8 h. Enhanced

magnetic resonance imaging revealed vertebral osteomyelitis on the 2nd cervical spine (Fig. 2). The patient was treated with the combination therapy for 6 weeks, followed by oral amoxicillin/clavulanate 1.5 g per day for four weeks without any adverse event.

Lemierre's syndrome accompanied by vertebral osteomyelitis is uncommon [1]. In this case, poor oral hygiene was associated with retropharyngeal abscess and eventually spreaded directly to the cervical spine. Duration of therapy for Lemierre's syndrome is not well established, ranging from 4 to 112 days depending on severity and patient response [2]. Evaluating the presence of vertebral osteomyelitis is important because optimal duration of antibacterials differs accordingly [3]. Shorter duration of antibiotics can result in treatment failure.

[☆] This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

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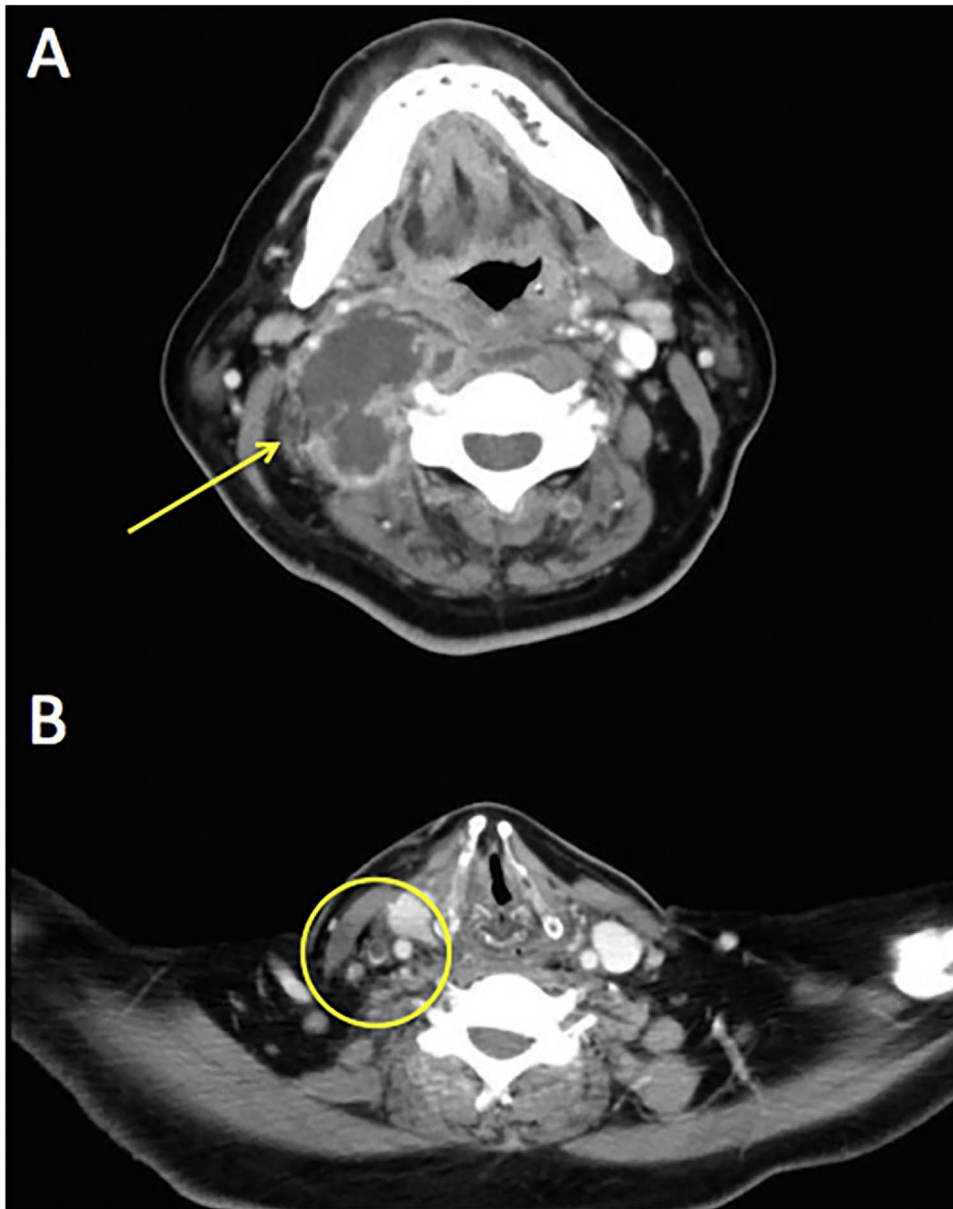


Fig. 1. A (above). Neck CT: Large abscess mostly in retropharyngeal space extending from C1 to C6/C7. B (below). Right internal jugular vein thrombosis.

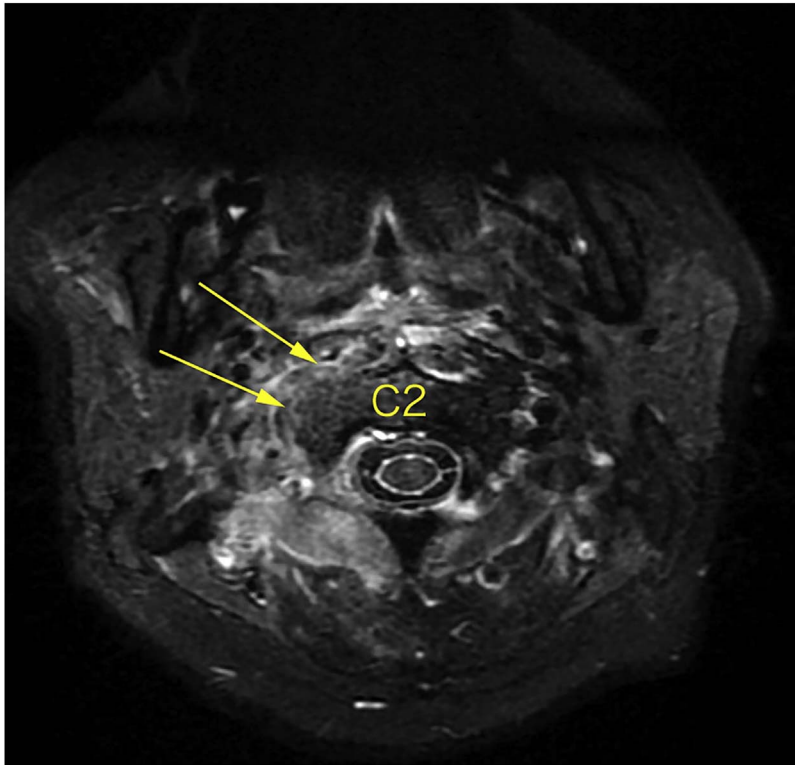


Fig. 2. The right side of C1/C2 vertebral bodies demonstrating abnormal marrow signal and enhancement consistent with osteomyelitis on cervical spine MRI (short tau inversion recovery).

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