Prevertebral abscess mimicking a retropharyngeal abscess and revealing a double-location spondylodiscitis: case report

A 46-year-old woman arrived in emergency with torticollis, violent nuchal pain and a muffled, ‘hot potato’ voice. There was no fever, but there was a mild inflammatory syndrome. Her recent previous medical history mentioned a right wrist fracture, about a month ago, treated with intramedullary pinning and followed by septicemia (Staphylococcus aureus).

A nasofibroscopy was performed and showed major anterior swelling of the pharyngeal soft tissue leading to a retropharyngeal abscess. The lateral radiograph of the cervical spine (Fig. 1) was also suggesting this diagnosis as well as signs of spondylodiscitis (loss of disc height and erosion of adjacent end plates). A cervical contrast-enhanced CT scan (Fig. 2), performed before emergency surgical drainage, showed a huge retropharyngeal abscess (from C1 to C4), two areas of spondylodiscitis (levels C3–C4 and C4–C5) and a severe epidural reaction from C1 to C5.

During the evening, she started to feel neurological symptoms (left-hand paresthesia), and surgery was performed to clear out the abscess. The following day, a total-spine MRI (Fig. 3) showed a decreased size of the retropharyngeal abscess, the cervical spondylodiscitis with an epidural reaction and revealed a second site of spondylodiscitis (at the level of L4–L5) with an epidural reaction and a large right major psoas abscess.

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**Figure 1** Lateral radiograph of cervical spine showing severe kyphosis, an increased thickness of the retropharyngeal soft tissue, loss of the fourth cervical disc height and erosion of adjacent end plates.

**Figure 1** Radiographie de profil du rachis cervical : cyphose sévère, épaissement important des tissus rétropharyngés, diminution de la hauteur du quatrième disque intervertébral et érosion des plateaux vertébraux adjacents.

**Figure 2** Sagittal 2D reformatted view of a cervical enhanced CT scan showing a prevertebral abscess at the level from C1 to C4, and an epidural reaction from C1 to C5.

**Figure 2** Reconstruction sagittale du scanner cervical injecté : abcès rétropharyngé de C1 à C4 et réaction épidurale de C1 à C5.
It was decided to treat the major psoas abscess nonsurgically. The patient underwent antibiotic therapy (intravenous, then oral) and was restricted to a dorsal decubitus position for three months before being allowed to leave hospital. The pathogen in the retropharyngeal abscess was found to be *S. aureus*.

Retropharyngeal abscesses represent 12% of all deep neck abscesses. Most of them have an infective (pharyngitis) or a dental cause, and they rarely occur with spondylodiscitis. It has been postulated that younger children (under 6 years old) are more likely to develop such abscesses because retropharyngeal lymph nodes spontaneously regress after 5 years of age. Half of the adults with a retropharyngeal abscess are in their third or fourth decade, and a third of them have a systemic disorder (which was not the case here).

Symptoms are common, and physical examination may show nothing unusual. A lateral soft-tissue X-ray of the neck can be performed, but a CT-scan is considered the investigation of choice. The microbiology of these abscesses is polymicrobial, with predominant anaerobic and aerobic organisms, including *Streptococcus*, *Staphylococcus* (44%, half being *S. aureus*) and *Haemophilus influenzae*.

A pyogenic spondylodiscitis can spread through the anterior longitudinal ligament, causing (rarely) a prevertebral abscess. In such a case, the size and the anterior location of the abscess make it difficult to differentiate a retropharyngeal from a prevertebral abscess and, in both, the clinical presentation is nearly the same, including sore throat, fever, torticollis, dysphagia and a neck mass. The clinical presentation may be less obvious in the presence of spondylodiscitis or a second abscess nearby producing similar symptoms.

In 91% of patients with spondylodiscitis, back pain is the presenting symptom, and 68% have fever and an increased erythrocyte sedimentation rate. In half the patients with spondylodiscitis, there is preexisting degenerative spinal disease. In this case, however, preexisting discectomy was unlikely, although no prior examination had been done. In almost every case, there is a delay in presentation (more than 2 weeks).

References


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