

## Dysphagia Revealing Cervical Pott's Sickness: A Study of Observation and Review of the Literature

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### Abstract

### Case Report

Cervical Pott's disease is an uncommon spinal location. Spinal cord compression and epidural abscesses are serious complications that can be life threatening. We report a case of cervical Pott's disease revealed by dysphagia due to a minimal retropharyngeal abscess in a 12-year-old Senegalese girl. This observation reveals one of the facets of tuberculosis, rarely described in Africa.

**Keywords:** Dysphagia, Cervical pott's disease, Adolescent girl, Dakar, Senegal.

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## INTRODUCTION

Pott's disease corresponds to the localization of the tuberculous infectious process (due to *Mycobacterium tuberculosis*) on one or more disc-vertebral sets. Tuberculous spondylodiscitis is the classic form, characterized by the involvement of the intervertebral disc and the two adjacent vertebrae. It is serious because of the neurological damage which can be important and definitive, putting the functional prognosis at stake. It dorsal, lumbar location is the most frequent with 80% of cases [1, 2].

Cervical spondylodiscitis represents the tuberculous localization of the last five cervical vertebrae. It is distinguished from other spinal localizations by its rarity (2 to 10%) [3, 4]. Described by Percival Pott between 1779 and 1783[3].

Epidural and retropharyngeal abscesses and spinal cord compression are serious complications that affect the prognosis. Retropharyngeal abscess is the rarest of the peri pharyngeal suppurations and is most often secondary to trauma of the posterior pharyngeal wall [5]. We report a case of cervical tuberculosis revealed by dysphagia.

## CASE REPORT

This case involved a 12-year-old girl, student, without any particular pathological history, who consulted a pediatrician in February 2022 for dysphagia accompanied by odynophagia. The examination revealed a swelling of the oropharynx, and the diagnosis was evoked as a retropharyngeal abscess. The treatment after an evacuation puncture of the abscess was based on 2 g of amoxiclav (amoxicillin + clavulanic acid) and 1g of metronidazole for 15 days without favorable outcome ; it is in front of a chronic inflammatory cervicalgia (VAS 6/10) that a CT scan of the cervical spine was performed which will objectivate a staged spondylodiscitis C3-C4-C5-C6 (figure 1). In front of this picture, she was referred to us for appropriate management. She presented with a vesperal fever (T° 38.5°C), physical asthenia, weight loss not quantified and general condition was altered. The osteoarticular examination showed a cervical spinal syndrome marked by an invincible cervical stiffness (distance between chin and sternum 7cm, left acromion tragus 5cm and 6cm on the right). The neurological examination was unremarkable. On the paraclinical level, an inflammatory syndrome was noted (VS 68mm at the 1st hour, CRP 37.1mg/l).

Bacteriological tests (common germs and BK) were negative on 4 pus samples. However, the tuberculin intradermal reaction (IDRt), the quantiferon and the Gen-expert were positive, and HIV serology

was unremarkable. A disc biopsy could not be performed. A second CT scan of the cervical spine was performed, confirming multistage spondylodiscitis with subchondral erosion with anterior cortical effacement of the superior plateau of C5, adenomegaly of the left posterior cervical triangle measuring 1.05 cm (Figure 1).

Mirrored macrogodes of vertebral plates of C3-C4 anterior, to posterior wall of C3, of anterior margins of C5 and C6 (figure 2), magnetic resonance imaging (MRI) confirmed the presence of extensive spondylodiscitis from C2 to C5 complicated by epiduritis from which the diagnosis of cervical pott's disease was retained (figure 3).

Treatment was based on puncture of the cervical abscess on two occasions and cervical immobilization with a cervical corset, antituberculosis drugs for 12 months, two months of quadritherapy combining isoniazid, rifampicin, pyrazinamide and ethambutol followed by 10 months of dual therapy with isoniazid and rifampicin. The evolution was favorable with the disappearance of neck pain and regression of the swelling. The follow-up CT scan at the end of the treatment showed the disappearance of cervical collections and bone abnormalities but a basilar impression of the cervico-occipital hinge without bone lysis.



**Figure 1: Adenomegaly of the left posterior cervical triangle measuring 1.05 cm in a 12-year-old girl in the rheumatology department of Aristide Ledantec Hospital in Dakar, Senegal**



**Figure 2: Mirroring macrogodes of the plates of C3 of C4 anterior to the posterior wall of C3 in a 12-year-old girl in the rheumatology department of Aristide Ledantec Hospital in Dakar, Senegal**



**Figure 3: Extensive spondylodiscitis from C2 to C5 complicated by epiduritis, referring to cervical pott's disease in a 12-year-old girl in the rheumatology department of the Aristide Ledantec Hospital in Dakar, Senegal**

## DISCUSSION AND COMMENTS

Our observation is that of a cervical pott's disease revealed by dysphagia. It is distinguished from other spinal localizations by its rarity (2 to 10%) [3, 4].

According to the World Health Organization (WHO) report published in 2018, there are many African countries with high tuberculosis endemicity, with an incidence of 35 cases per 100,000 inhabitants. Pott's disease is a rare form of bone tuberculosis, and cervical involvement is exceptional, [5]. According to the studies, because of the clinical latency and the progressive evolution, the diagnosis of tuberculosis cannot be evoked initially even in endemic countries with a variable delay of management between 2 months and one year according to Diom ES *et al.*, [6]. The association of this bone location of tuberculosis with cervical suppurations is possible. According to Pollard *et al.*, [7], a retropharyngeal abscess may be associated with cervical Pott's disease in 57% of cases, and three cases of association with a retrostyliar abscess have been reported by Diom ES *et al.*, [6] and Kodio B *et al.*, [13]. Our case is one of the rare presentations of cervical Pott's disease complicated by epiduritis.

According to the studies, the most frequent clinical signs are dysphagia, odynophagia, dyspnea and dysphonia. Depending on the size and extension of the abscess, compression of the spinal cord could occur, leading to spinal pain and even sensory-motor deficit of the upper limbs [8]. Our patient presented with dysphagia without sensory-motor deficit or other neurological disorders. The torticollis is a non-specific sign, it is found in more than 80 other causes, nevertheless, it can orientate towards the presence of a retrostyliar abscess [6]. In our patient, the anatomopathological examination was not performed. The clinical examination is often poor, it could find a bulging of the posterior wall of the oropharynx, a

sensory-motor deficit in cases of spinal cord compression and the presence of cervical adenopathies noted in 70% of cases [10].

In the literature, the biological analyses (NFS, CRP and IDRt) are non-specific and can be negative. However in our patient, IDRt came back positive on two occasions, lymphopenia is frequent in patients followed by tuberculosis. It is essentially a CD4 lymphopenia and is more frequent in extra pulmonary forms [6, 11, 12].

The standard X-ray of the cervical spine is often without abnormalities at the beginning of the infection, which may delay the diagnosis. At a more advanced stage, it may show osteolytic lesions ranging from simple erosion to real bone destruction [5].

Computed tomography (CT) is more sensitive than standard radiography in the diagnosis of pott's disease. It shows, at an early stage, a hyperdensity of the intervertebral disc suggesting an infectious origin, and at a more advanced stage, erosions and subchondral geodes of the vertebrae. It may also reveal the presence of soft tissue abscesses [10].

Magnetic resonance imaging (MRI) is the reference examination for spondylodiscitis. It is the most sensitive, which allows a definite and early diagnosis. The usual appearance of Pott's disease is expressed in T1 sequence by a hypo signal of the disc and vertebral body and by a hyper-intense T2. It is also used to assess the locoregional extension of the disease, detect retropharyngeal abscesses and eliminate differential diagnoses [10]. Confirmation of the diagnosis is often obtained by disco-vertebral biopsies or by puncture of an abscess in the retro or parapharyngeal spaces, which reveals the bacillus of Koch (BK) [8]. In the absence of bacteriological or histological confirmation, the diagnosis of cervical

vertebral tuberculosis is based on epidemiological and clinical-radiological evidence, with recourse to a therapeutic test [10].

The management of cervical Pott's disease complicated by an abscess is based on surgical drainage of the abscess associated with antitubercular treatment. The route of drainage varies according to the size of the collections. Endo-buccal drainage is indicated in small symptomatic abscesses to avoid contamination of the tissue planes. External drainage is indicated in large abscesses greater than 5 cm. Neurosurgery may be indicated in the case of spinal cord compression [11, 13, 14]. In our case, we opted for drainage of the cervical abscess by two punctures since the collection was accessible to avoid the usual poor skin healing following surgical drainage of tuberculous abscesses. Regarding the treatment of tuberculosis, the studies opted for a quadritherapy, i.e. rifampicin (10 mg/kg/day), isoniazid (5 mg/kg/day), pyrazinamide (25-30 mg/kg/day), ethambutol (15 mg/kg/day), for 2 months, followed by a bitherapy (rifampicin and isoniazid) The total duration of anti-tuberculosis treatment varies according to the learned societies. The World Health Organization suggests a total duration of 6 months, the American Society of Thoracic Surgery recommends 9 months of treatment, and the Canadian Thoracic Society recommends a total duration of treatment of 9 to 12 months [11]. Our patient had 12 months of treatment with good clinical and radiological evolution. The prognosis of cervical Pott's disease is variable according to the extent and severity of the surrounding lesions. It is conditioned by the presence or not of a retropharyngeal abscess which can lead to an epidural abscess or a medullary compression. However, the evolution is often favorable with early and adequate treatment.

## CONCLUSION

Cervical Pott's disease is exceptional. It is characterized by clinical latency and diverse symptomatology at the origin of a delay in management. It is a Pott's disease revealed by dysphagia, of which complications such as epidural abscess and epiduritis are the most frequent.

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## CONFLICTS OF INTEREST

None.

## REFERENCES

- Cohen, A., Filippo, R., & Drouat, E. (1996). Tuberculose vertébrale - Etude des aspects cliniques et radiologiques à partir d'une série de 82 cas. *J Radiol*, 77, 419-426. [PubMed] [Google Scholar]
- Janssens, J., & De, H. (1990). Spinal tuberculosis in a developed country - A Review of 26 cases with special emphasis on abscesses and neurologic complication. *Clin Orthop*, 257, 67-75. [PubMed] [Google Scholar]
- Berges, O., Sassoon, C. H., Roche, A., & Vanel, D. (1998). Abcès du Psoas d'origine tuberculeux Sous Spondylodiscite Visible: A propos d'un cas. *J radiolo*, 62, n°8-9, 467-470 [PubMed]
- Yahyaoui, S., Majdoub, S., Zaghouni, H., Fradj, HB, Bakir, D., Bouajina, E., & Kraiem, C. (2013). An exceptional localization of spinal tuberculosis Pott's disease suboccipital. *The Pan African Medical Journal*, 14, 163.
- Nalini, B., & Vinayak, S. (2006). Tuberculosis in ear, nose, and throat practice: Its presentation and diagnosis. *Am J Otolaryngol - Head Neck Med Surg*, 27(1), 39-45.
- Diom, E. S., Ndiaye, C., Djafarou, A. B., Ndiaye, I. C., Faye, P. M., Tall, A., ... & Diop, E. M. (2011). A case of cervical Pott's disease revealed by parapharyngeal abscess. *European Annals of Otorhinolaryngology, Head and Neck Diseases*, 128(3), 151-153.
- Pollard, B. A., & El-Beheiry, H. (1999). Pott's disease with unstable cervical spine, retropharyngeal cold abscess and progressive airway obstruction. *Can J Anaesth*, 46(8), 772-775.
- Christoforidou, A., Metallidis, S., Kollaras, P., Agathangelidis, A., Nikolaidis, P., Vital, V., & Markou, K. (2012). Tuberculous retropharyngeal abscess as a cause of oropharyngeal dysphagia. *American journal of otolaryngology*, 33(2), 272-274.
- Hsu, H. E., & Chen, C. Y. (2019). Tuberculous retropharyngeal abscess with Pott disease and tuberculous abscess of the chest wall: A case report. *Medicine (Baltimore)*, 98(27), 16280.
- Fedoul, B., Chakour, K., & El Faiz Chaoui, M. (2011). Pott's disease: report of 82 cases. *Pan Afr Med J*, 8, 22.
- Rachdi, I., Fekih, Y., Daoud, F., Aydi, Z., Ben Dhaou, B., & Boussema, F. (2018). Cervical Pott's disease revealed by retropharyngeal abscess. *Press Medicale*, 47(10), 918-921.
- Raberahona, M., Rakotoarivelo, R. A., Ratsarazaka, M., Andrianasolo, R. L., & Randria, M. J. D. (2014). K-02: Lymphopénie CD4 dans les différentes formes de tuberculose chez les patients non infectés par le VIH. *Médecine Mal Infect*, 44(6, Supplement), 57.
- Kodio, B., Cissé, H., ETI, E., Ouattara, B., & Koné Gbané, M. (2017). Mal de Pott cervical révélé par une dysphagie : À propos d'un cas. *Revue Malienne d'Infectiologie et de Microbiologie*, 10, 1-8.
- Maftah, M., Lmejati, M., Mansouri, A., Abbadi, N. E. L., & Bellakhdar, F. (2001). Mal De Pott à

Propos de 320 Cas. *Médecine du Maghreb*, 90, 19–

22.