



Tuberculous spondylodiskitis : about 23 cases

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ABSTRACT

Tuberculous spondylodiskitis is a violation of the intervertebral disc to tuberculosis. This is a rare condition. Aims: of this study is to analyse the clinical profile, the contribution of radiological assessment in the positive diagnosis of evil Pott, and bring different means of confirmation, treatment and evolution of our patients. Methods: It is a study descriptive retrospective from January 2000 to June 2015, we collected 23 observations of evil Pott in the department of pneumology at hospital 20 August from Casablanca. Results: The warning signs are dominated by spinal and chest pain. Eight patients had neurological signs. The diagnosis was made by the detection of Mycobacterium tuberculosis on direct examination and culture in the paravertébral abscess in 7 (3%), by histological examination of discovertebral biopsy in 6 cases (2.6%), biopsy another website tuberculosis in 2 cases and in front of a beam of radio-clinical arguments with good evolution under anti bacillary treatment in 8 cases (3.4%). Surgical drainage was associated in 5 cases (2%). The evolution was good in all cases. Conclusion: The diagnosis of Tuberculous spondylodiskitis may be delayed in the absence of neurological signs, spinal imaging may allow early diagnosis since the introduction of MRI. The prognosis is good when the treatment is early.

Keywords : Tuberculous spondylodiskitis, Mycobacterium tuberculosis, paravertébral abscess, discovertebral biopsy

INTRODUCTION

The spinal tuberculosis is an infection of the intervertebral disc and the vertebral body due to mycobacterium tuberculosis. This is a severe form of neurological damage which may be important and ultimately putting the functional prognosis. The thoracic and lumbar spine are most commonly affected in 80% of cases [1, 2]. Spinal destruction due to tuberculosis can cause spinal deformities realizing kyphosis or hump pottique. Pott's disease may have variable clinical expressions, ranging from simple back pain, severe forms that can involve severe neurological disorders and major spinal deformities. The objective of this study was to illustrate the different epidemiological, diagnostic and therapeutic aspects of spinal localization of tuberculosis in a group of patients admitted to our training between January 2000 and June 2016.

MATERIALS AND METHOD

This is a retrospective study of 23 cases of spinal tuberculosis, collected at the service of respiratory diseases hospital August 20, during a period of 16 years (from January 2000 to June 2016). A previously established record raised the epidemiological, clinical, diagnostic, therapeutic and evolutionary meet the inclusion criteria of this study. The diagnosis was confirmed by bacteriological be the highlight of mycobacterium tuberculosis on direct examination and / or culture, or histological highlighting a granuloma epithelioid giant , is presumed to radio - clinical arguments Our patients all Plain radiographs were scanners with chest sometimes supplemented by spinal MRI.

RESULT AND DISCUSSION

Epidemiologically, the number of cases per year was estimated at 2 cases of 28 cases of thoracic tuberculosis. The average age of our patients was 43 years (range 30-47 years), with a slight female predominance (53%). Over 60% of our patients were from urban areas. All patients were of low socioeconomic level. The existence of a recent TB contagion was reported in 17 patients (20%). The consultation period between the first symptoms and confirmation of diagnosis was on average 10 months (range 6 months to 15 months). Clinically 56% of patients consulted for back pain occurring in a context of poor general condition, weight loss and anorexia, and night sweats. The fever was found in 52% of cases. Spinal stiffness was present in 96% of cases. The neurological deficit was noted in 41% of cases, with paraparesis in 39% of cases. The erythrocyte sedimentation rate was accelerated in 72% of cases. All patients received standard radiography, which objectified image spindle paravertébral in 26% of cases (Fig. 1), associated with pleural opacity of any type of a hemithorax in one case. There was no associated parenchymal disease. Chest computed tomography (CT) was performed in 86% of cases. The spinal MRI was required in 19 patients. The search for pulmonary involvement was systematically by chest radiography face. The tuberculin skin test was performed in 85% and was positive in 50% of cases. Disco-vertebral biopsies were performed in 6 patients and lymphadenopathy biopsies in 2 cases. The search for Mycobacterium tuberculosis (BK) in the abscess to drain pus (direct examination and positive culture) was positive in eight cases. According to the recommendations of the national TB program, all patients received antituberculous treatment over a period of six to nine months including streptomycin (S) associated with rifampicin (R), isoniazid (H) and pyrazinamide (Z) during the initial phase that lasts two months, followed by four to seven months of R and H. the scheme is based since 2009 on quadruple the first two months (Rifampicin, Isoniazid, Ethambutol and Pyrazinamide). The four months, the system is based on dual therapy with Isoniazid and Rifampicin. Eight patients had associated neurological signs and were put on steroids. Immobilization by strict rest and corset port has been indicated in the initial phase of treatment (two months). A surgical drainage paravertebral abscess was carried out in five cases. The evolution was judged on clinical improvement, recovery of weight and radiological cleanup. It supported or price minimal effects (vertebral compression without major destruction) with a decline of two years on average.

Discussion

The preferred site of Pott's disease is the thoracolumbar spine [1]. The lumbosacral junction is affected only in 2-3% of cases [2]. The history of Pott's disease began with Percival Pott between 1779 and 1783 describing an impotence of the lower limbs due to a curvature of the spine. This evil, characterized by abscesses, hump and paralysis bear his name "evil vertebral Pott" [3]. The geographic location and the recruitment period are two parameters which determine the incidence of tuberculosis. The first explains the high incidence in developing countries compared to developed countries. For the second, Flipo showed that the annual incidence of sore Pott was stable

between 1966 and 1991 to increase again to 4 cases in 1992; 5 in 1993 and 1994. This increased incidence was related to the period of immigration of North African and the increasing rate of HIV positive patients [4]. It is estimated that the rest of the population, the risk of developing tuberculosis is 20-37 times higher among people living with HIV. In 2010, there were 8.8 million new TB cases, 1.1 million among people living with HIV. In the series of Maftah et al [5] 54% of patients were female, which joined our results; as the series of Ghadouane et al [6] showed a male predominance (79.31%), this is explained by the population studied by Ghadouane et al. For Loembe et al [7] there is a frequency equal in sex. The existence of active or scarred tuberculous lesion is a good argument in favor of tuberculous lesions. This possibility was found in 24.3% of cases by Maftah et al [5] This figure is close to that of our series. The concept with tuberculosis in the series Maftah et al was 16.5% [5], and in al Ghadouane and in 20.6% of cases, which is consistent with our results. The diagnostic delay is usually long between 5 and 12 months in the raised series [5-7]. This long delay is explained by the intramuscular abscesses constituting a form of drainage of tuberculous focus after tensioning; allowing a better tolerance of the symptoms and thus a delay in diagnosis. Spinal pain is the main symptom of the disease that causes the patient to consult in almost 90% of cases [4-7], as in the case of our patients, the pain can be according to the site of injury or even neck pain cervicobrachial neuralgia; intercostal neuralgia or lombosciatalgies and sometimes diffuse back pain. They are usually mechanical type insidious onset; little intense exacerbated by exercise and relieved by rest and analgesics; it is rarely inflammatory. This pain is accompanied in most cases of moderate infectious syndrome with low-grade fever, poor general condition and at an advanced stage it is accompanied by muscle weakness or neurological type of motor deficit. Neurological disorders differ from series to each other; and for Maftah et al [5] 50% of patients had neurological deficits, and Loembe et al [7] 81% of patients were in deficit, this can be explained in part by the late diagnosis. Spinal deformities expressed clinically by a simple shift of a spinous process, or fully a major hump can be observed, they were found in 34.1% of patients in our study, which joined the series Maftah et al. [5] In the series of Ghadouane et al [6], more than half or 68.96% had spinal deformities dominated by kyphosis. The combination of spinal tuberculosis with other extra-spinal localization is very common, and should be sought systematically. The imaging supply is undoubtedly a pillar of the diagnosis of Pott's disease; it specifies the standard radiography reaches the number of home and interested vertebrae; to show the existence or not of a clinically silent abscess; eliminate another root cause of the symptoms; search for other tuberculous lesions (pulmonary, musculoskeletal); and finally to monitor the development of lesions [8-11]. The disc space narrowing is the earliest sign [1.10]. Geodes are characteristic lesions but not pathognomonic. They can be single or multiple, round or oval more or less blurred, they vary in size. These geodes interested mostly two adjacent vertebrae, and achieve the classic look of hand mirror geodes side of a pinched disc. Bone receivers are very evocative view pathognomonic of tubercular nature of spondylitis, they can appear within geodes lesions or abscesses in [12,13]. Computed tomography (CT), is a more sensitive technique than standard radiography in the diagnosis of spondylitis. At the beginning stage, the intervertebral disc is the seat of an evocative hyperdensity infectious lesion. The destruction of the plates is difficult to assess the axial, frontal and sagittal reconstructions are very helpful however to look erosions and subchondral cysts. CT also allows a good study of the paravertebral soft tissue, through research abscesses. The magnetic resonance imaging (MRI) in the field of bone infection and especially disco-vertebral became the gold standard after standard radiographs, especially in the presence of a neurological deficit. The usual appearance in sore pott translates into T1 sequence, hypointense interesting disc and vertebral body, it becomes hyperintense signal on T2. The Gadolinium shows heterogeneous enhancement of the signal discosomatique which limits the geodes and seek the achievement of soft parts. MRI allows early diagnosis, an assessment of locoregional extension, highlight abscesses and intra extracanalaires who have great interest in both diagnosis and prognosis [14], and the

differential diagnosis with other infectious spondylitis and neoplastic lesions. The tuberculin skin test (TST) is a presumed diagnosis of tuberculosis element [15]; its percentage of positivity in our series was 85%; this figure is close to that of Loembe et al (86.36%). The pathology is diagnostic certainty, showing epithelial and giant cell granuloma with caseous necrosis [16,17]. It makes histological analysis with a sensitivity of 72% [18]. In practice, the diagnosis of spinal tuberculosis certainty is difficult to bear. [19] The therapeutic management of pain pott remains controversial among different schools. The vis-a-vis the vertebral focus continues to be shared between the exclusive medical treatment and medical and surgical treatment. The question that always arises when to operate ?, which first does it achieve? The antibacillary can cure spinal tuberculosis as long as one is sure of the diagnosis and absence of neurological compression. According Debeyre et al [20] the antibacillary be full dose immediately and as a chemotherapy involving at least three antibacillary; to avoid resistance of BK, continuous and sustained way. The duration of treatment varies between 6 and 18 months. The general principle of surgical treatment remains the same, with a large anterior approach of tuberculous focus, complete excision of lesions, drainage of abscesses and removal of bone receivers and Discal providing decompression of the spinal canal and the filling of loss resulting substance by corticocancellous graft. Andrey et al [21], Africa, the surgery is normal, given the importance of the lesions at the stage of diagnosis; it is the same design to be found among surgeons of the Far East who operate all tuberculous spondylitis. In our study we carried 71.5% of patients, while in al Maftah and this figure was 61.8%. In world literature, Sefarino and DFA [22] and Fustec et al [23] have made 41% of their patients; Luis et al [24] have made 92% of their patients. In general and as in our series surgery is indicated in spinal tuberculosis at very destructive lesions with instability, major spinal deformations or neurological disorders. [25] At the dorsal anterior approach the floor is difficult and involves a thoracotomy right or left according to the predominance lesions, trans or rétropleurale according to the surgeon's experience. The posterolateral way in evil dorsal Pott adopted by some authors [7], it consists of the resection of one or two transverse processes at their base, and corresponding costal arches at their posterior quarter; pleura we take off to the front and inside to discover quite extensively the anterolateral aspect of the vertebral bodies; this method exposed to multiple risks especially ostéoméningées breaches. [6] Sore pott of the thoracolumbar junction pose a therapeutic problem due to the anatomical complexity of this region. According Zlitini and Kassab [26], the laminectomy is an intervention to reject because it allows only transient relief and may aggravate preexisting kyphosis hence the importance of the anterior approach consisting in thoracic phreno lumbotomy allowing access to all of the thoracolumbar junction; in our series, it was performed in 7.3% of patients; in Ghadouane et al in 6.89% of cases. Sore lumbar Pott relatively easy access by anterior approach (lumbotomy retroperitoneal), generally has a better prognosis because of the scarcity of neurological involvement and deformations [6]; its diagnosis is often made at the stage of psoas abscess. The cast immobilization remains a classic therapeutic complement to all authors. The duration varies according to the spinal location. Rehabilitation is essential, it aims to compensate muscular atrophy resulting from the capital, to prevent bedsores, vicious attitudes and re-educate the viscera, muscles and mobility in paraplegics. The favorable clinical evolution under medical treatment is the rule with disappearance of fever, back pain gradually fade and disappear in a few weeks. Neurologically, the surgery by anterior decompression associated with antibacillary puts the patient in the best conditions for a good recovery of the deficit. This was demonstrated in our study all patients operated on by anterior approach. The radiological evolution of disco-somatic tuberculous lesions treated is generally towards the constitution of a solid bone block obtained in less than a year. Radiation cure can be achieved with persistent bone images of destruction. [26] Some items may condition the prognosis in Pott's disease [27, 28] as the time of disease progression, the general condition of the patient, bone health and neurological status before the treatment and age the patient and the surgical treatment anterior or posterior.

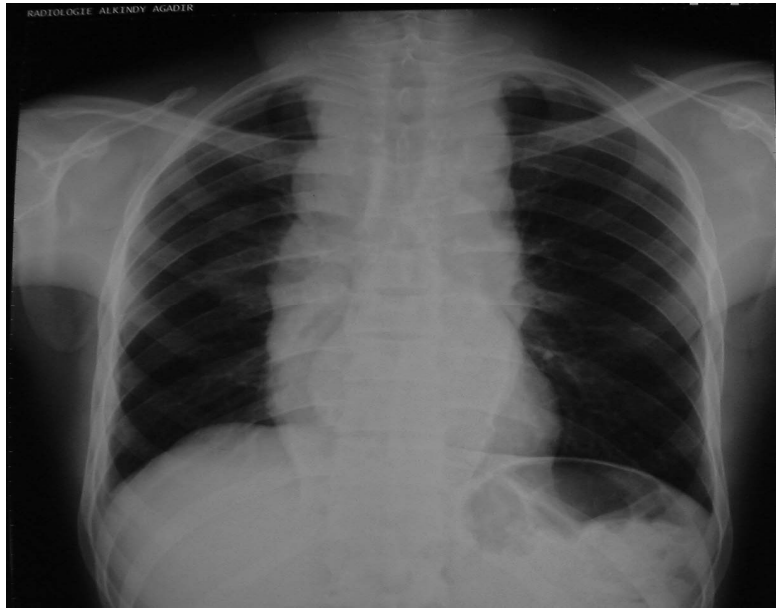


Figure 1: Chest X Ray : picture time (spindle image)

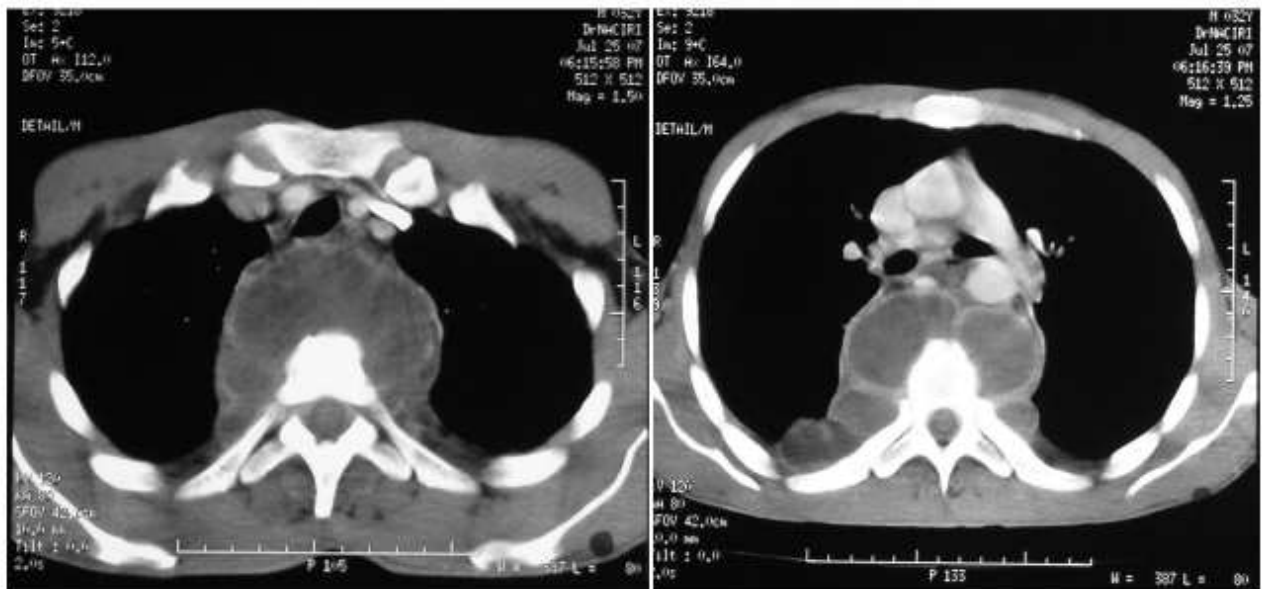


Figure 2 : CT Scan : para- vertebral abscess.

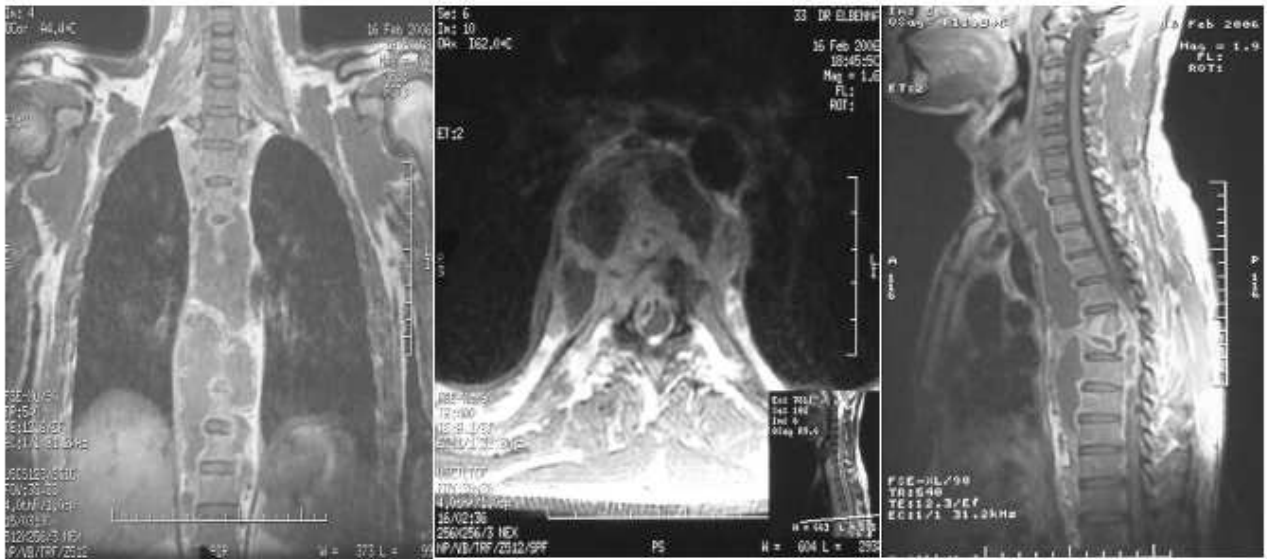


Figure 3: MRI chest: para- vertebral abscess with bone destruction of the vertebral body

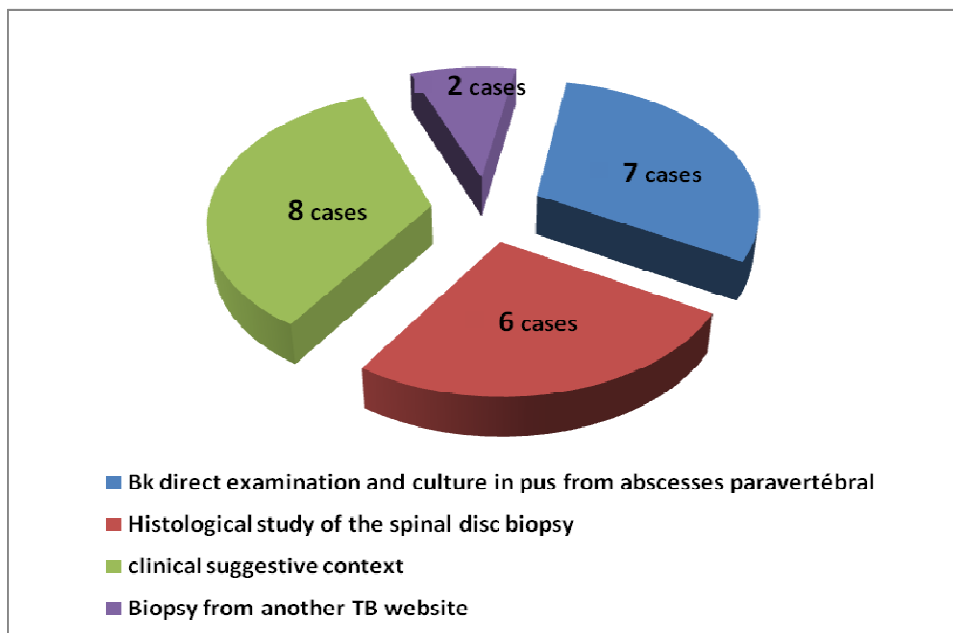


Figure 4 : Positive diagnosis confirmation means

CONCLUSION

Through this study, we find that Pott's disease often affects young adults, coming from a disadvantaged background. Unfortunately many patients are still seen at an advanced stage of the disease with neurological disorders. Modern imaging (CT and MRI) can guide the diagnosis, giving the morphological assessment and plan the therapeutic strategy. Certainty of the diagnosis requires histological confirmation, however, it can be based on clinical and laboratory elements of

presumption. In simple forms, a well conducted medical treatment alone may heal Pott's disease without sequelae, while in complicated forms, the combination of medical treatment early surgery provides a quick neurological recovery and spinal stabilization.

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