A 75 year-old man originating from Tunisia whose main medical history was a type II diabetes, hypertension and dyslipidemia presented with a lower back pain, weight loss and tiredness lasting for one month. In Tunisia, a CT scan and MRI were performed, showing a L3 L4 spondylodiscitis associated with an epidural and a psoas abscess. Empiric treatment by Oxacillin and Gentamicin (unknown doses) was prescribed and the patient was transferred in our department. At clinical examination, the patient was slightly confused, without neurological focal deficit or meningeal syndrome. He complained of severe lumbar back pains, associated with a psoitis without sphincterial disorders. A 4/6 mitral valve murmur was discovered. The laboratory tests showed an inflammatory disorder with CRP at 267 mg/l, a WBC count at 20 G / L; Hb at 10.5 g / dl; 14 blood cultures and urine culture were sterile, CSF showed 960 elements / mm3 with 86% of neutrophils, 6% of lymphocytes and 1500 erythrocytes/mm3, hyperproteinorachy at 5,49 g/l and normoglycorachy. The culture of the CSF and PCR for HSV, VZV, meningococcus, pneumococcus, enteroviruses, mycobacteria including M.tuberculosis and M avium, and Staphylococcus aureus specific gene, as well as a 16S RNA PCR were negative. Trans thoracic and Tran's esophageal echocardiography showed the presence of an aneurysm of the inter-atrial septum with a patent oval foramen and finally the metabolic activity documented at the aortic valve. 

**Keywords:** Spondylitis; Inter-atrial septum; Oval foramen; 18F-FDG PET/ CT

**Background**

Prevotella species are obligate anaerobic, Gram-negative, pleomorphic rods that belong from the genus Bacteroides and were renamed recently [1]. Most species of the Prevotella genus are part of the oral cavity, and they are most frequently associated with periodontitis and dental diseases especially in children. However, in rare cases, they were also isolated from other site and have been reported as causing endocarditis [2,3],cerebral abscesses [4] and soft tissues infection [5,6]. We report here a case of Prevotella Denticona in the context of spondilodiscitis with epiduritis, meninitis and psoas abscesse.

**Case Presentation**

A 75 year-old man originating from Tunisia whose main medical history was a type II diabetes, hypertension and dyslipidemia presented with a lower back pain, weight loss and tiredness lasting for one month. In Tunisia, a CT scan and MRI were performed, showing a L3 L4 spondylodiscitis associated with an epidural and a psoas abscess. Empiric treatment by Oxacillin and Gentamicin (unknown doses) was prescribed and the patient was transferred in our department. At clinical examination, the patient was slightly confused, without neurological focal deficit or meningeal syndrome. He complained of severe lumbar back pains, associated with a psoitis without sphincterial disorders. A 4/6 mitral valve murmur was discovered. The laboratory tests showed an inflammatory disorder with CRP at 267 mg/l, a WBC count at 20 G / L; Hb at 10.5 g / dl; 14 blood cultures and urine culture were sterile, CSF showed 960 elements / mm3 with 86% of neutrophils, 6% of lymphocytes and 1500 erythrocytes/mm3, hyperproteinorachy at 5,49 g/l and normoglycorachy. The culture of the CSF and PCR for HSV, VZV, meningococcus, pneumococcus, enteroviruses, mycobacteria including M.tuberculosis and M avium, and Staphylococcus aureus specific gene, as well as a 16S RNA PCR were negative. Trans thoracic and Tran's esophageal echocardiography showed the presence of an aneurysm of the inter-atrial septum with a patent oval foramen. MRI confirmed a L3/L4 spondylodiscitis with a contiguous partitioned psoas abscess measuring 17 by 5cm. (Figure 1). We performed radio guided drainage of the abscess with microbiological analysis which grew a gram negative bacterium identified as Prevotella denticona in MALDI-TOF MS and 16S rRNA PCR [7, 8]. A dental panoramic radiograph found multiple granulomas on teeth No.21, 24, 31, 43. Finally a 18 F-FDG PTE/CT was performed and showed multiple hyper metabolic activity foci at L3/L4 level of the spine, of the left psoas muscle, jaw but especially reveal an hypermetabolic activity on the native aortic valve (Figure 2). The diagnosis of L3/L4 spondylodiscitis due to Prevotella denticona complicated with epiduritis and psoas abscess was retained. The patient was prescribed and the patient was transferred in our department.
was treated with vancomycin (300 mg every 12h) and meropenem (2g every 12h) then vancomycin and imipenem (500 every 8h) and finally adapted to the drug susceptibility testing to amoxicillin-clavulanic acid (1g every 8h) and metronidazol (500 every 8h) for a period of 3 months. The patient was followed up and both physical examination, and a controlled MRI at the end of treatment shows a good evolution and the patient was considered as cured on Month 3.

**Discussion**

We searched PubMed for English articles using the terms “spondylitis bacteroides OR spondylitis prevotella” because the genus Prevotella belonged to the genus Bacteroides before 1990. A total of 30 articles were identified, among which 10 were relevant to our case report; 7 cases of spondylitis due to Bacteroides fragilis, one to Prevotella melanogenica one to Pintermedia and 2 with Prevotella spp unidentified. When the terms were used “endocarditis bacteroides OR endocarditis prevotella” 135 articles were recovered among them 10 cases due to B. fragilis, 1 B. oralis and 4 due to Prevotella spp among one due to P. denticola [9-23]. Prevotella denticola has rarely been reported in systemic infection in human. Only 2 cases of such infections are listed in the literature. A tricuspid valve endocarditis has been reported in a 34 year-old drug abuser patient HIV positive with CD4 at 74 cells / mm3. He did not mention recent dental manipulation history. The patient has well progressed following treatment with Amoxicillin-Clavulatic acid for a total of seven weeks. The authors hypothesize transmission by cleaning needles and injection sites with saliva [3]. More recently, multiple brain abscesses due to Prevotella denticola found both in accesses and in blood cultures has been reported in a young man without comorbidities [4]. The dental origin was suggested in the context of tooth extraction nine days before. He was treated by cefitixime (2 g every 8h) and metronidazole( 500 every 8h), adapted to penicillin and metronidazole as recommended in brain abscesses of dental origin and relay orally with chloramphenicol (500 every 6h) for a total of 10 weeks. Good clinical and radiological progression thereafter. In our patient the appropriateness of the diagnosis of spondilitis can be discuss. The modified Duke criteria do not allow the diagnosis of endocarditis with only two minor criteria [24]. The patient was on antibiotics on arrival which may explain the absence of fever and bacteremia. The presence of an aneurysm of the inter-atrial septum with a patent oval foramen and a controlled oval foramen and the presence of a spondylosdicitis, the identification on an involvement of Prevotella spp in endocarditis, the dental origin of the C.burnetti endocarditis [27]. To conclude, the already described in the diagnosis of native valve endocarditis except in the context of [26]. The interest of 18F- FDG PET/ CT has not yet been fully assessed to 97%) of the modified duke classification and allowed for an earlier inclusion of this new criterion significantly increased the sensitivity (70 to 97%) of the modified duke classification and allowed for an earlier diagnosis, especially when echocardiography was normal or doubtful [26]. The interest of 18F- FDG PET/ CT has not yet been fully assessed in the diagnosis of native valve endocarditis except in the context of C.burnetti endocarditis [27]. To conclude, the already described involvement of Prevotella spp in endocarditis, the dental origin of the bacteria, the presence of a spondylodiscitis, the identification on an aneurysm of the inter-atrial septum with a patent oval foramen and finally the metabolic activity of the aortic valve and teeth revealed by 18F- FDG PET/ CT must evoke the diagnosis of endocarditis with spinal secondary location. The input of the 18F- FDG PET/ CT on the diagnosis of native valve infectious endocarditis would be valuable in these clinical situations but needed more studies.

**References**


