UNIVERSITÀ DEGLI STUDI DI TRIESTE

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# Adalimumab-associated spondylodiscitis: A new or underestimated side effect?

Dear Editor,

To date, cases of spondylodiscitis occurring in patients with erythrodermic psoriasis on treatment with anti-tumour necrosis factor alpha (anti-TNF-α) adalimumab have not been reported in the literature. We present the case of a 70-year-old man admitted to our Dermatology Department for the sudden development of erythrodermic psoriasis, on treatment for a month with adalimumab (40 mg every other week) for the severe clinical manifestations. During hospitalization, he developed a methicillin-susceptible *Staphylococcus aureus* bacteremia of unknown origin site, which was treated with oxacillin 2 g six times a day. Furthermore, the patient developed an insidious low back pain, accompanied by reduced lumbar range of motion, bilaterally positive Lasegue's sign and negative Wasserman's sign. Paresthesias and bilateral weakness in upper extremity were not noticed. After the start of treatment with oxacillin, the patient became apyretic, white blood cell count normalized, and the value of C-reactive protein was 196 mg/L but the back pain increased, limiting patient's daily activities. Based on these data, he underwent a contrast-enhanced magnetic resonance imaging (MRI) that demonstrated erosive lesions involving L3 and L4 vertebral bodies, consisting of hypointensities on T1-weighted images and hyperintensities on T2-weighted images, extending epidural phlegmon, typical of spondylodiscitis (Figure 1). Definitive diagnosis typically requires image-guided biopsy, but clinical and radiological framework was evocative of spondylodiscitis. The disease did not require surgery and it was treated with bed rest, back lumbar rigid bust, and antibiotic therapy, with a complete response to treatment in 20 days.

**FIGURE 1** Magnetic resonance imaging of T2-weighted image showing the extension of epidural phlegmon with inflammation of paravertebral muscles, typical of spondylodiscitis

Adalimumab is a human monoclonal antibody belonging to the group of TNF-α inhibitors. Their common side effects are usually mild and self-limiting; however, they can also lead to serious side effects, in particular infectious complications and malignancies.[1]

There is evidence that the risk for infection is related to the overall condition of the patient in terms of comorbidities such as older age, chronic disease, diabetes, cigarette smoking, previous infection history, and recent use of immunomodulating therapy.[1-3]

Spondylodiscitis is a rare infection involving the intervertebral disc and adjacent vertebrae. Differential diagnosis includes osteomyelitis of the spine, vertebral malignancy, osteoarthritis with Schmorl's nodes, polymyalgia rheumatica, vertebral hemangioma, Langerhans cell histiocytosis, osteoporosis with compression fractures and ankylosing spondylitis. Its diagnosis is based on clinical, laboratory, and radiological features and it is often delayed due to the insidious onset of symptoms, in particular low back pain which is very common in general population.[4]

MRI is the gold standard for the diagnosis, since it allows the radiological demonstration of the condition. The most common bacterial cause of spondylodiscitis in Europe is *S. aureus*, so antibiotic therapy is a fundamental measure in all cases. Surgical treatment is required in case of neurologic deficits, sepsis, intraspinal empyema, failure of conservative treatment, and spinal instability. The heterogeneity of causes and clinical presentations of spondylodiscitis limits the creation of a univocal algorithm of scientific evaluation and protocol of treatment.[5]

Our case demonstrates that the onset of lumbar/dorsal/cervical pain in patients on treatment with adalimumab can be related to spondylodiscitis. It is possible that such a biological therapy might have favored the onset of the infectious complication in our patient, but further reports are needed to confirm this hypothesis.

## CONFLICT OF INTEREST

The authors declare no potential conflict of interest.

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