THE ROLE OF URINARY TRACT INFECTIONS AS A SOURCE OF OSSUARYARTICULAR INFECTIONS IN A RHEUMATOLOGY DEPARTMENT DURING THE 2010-2020 PERIOD: A RETROSPECTIVE STUDY

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Background: There are several sources of infection in the pathogenesis of ossuary-articular infections (OAI). Urinary tract infections (UTI) have rarely been involved whereas skin infection and Staphylococcus aureus represent the classic pair.

Objectives: To describe the role of UTI as the source of infection in OAI including septic arthritis (SA) on native joints and infectious spondylodiscitis (SPDI). To compare characteristics of these cases with those of others source and those without any known source.

Methods: Medical records of patients aged 18 years old or above who were diagnosed with a non-tuberculous OAI in the department of rheumatology of our hospital during the 2010-2020 period were selected and retrospectively reviewed. The following cases were excluded: SA on prosthetic joint, OIA after surgical material, osteomyelitis, post-operative OAI, SA after joint injection, brucellosis, Lyme disease. Only proven cases where included on the basis of the diagnosis of brucellosis was based on clinical symptoms, MRI findings and isolation of brucella species in blood or tissue specimens and/or a positive Wright agglutination test.

Results: Twenty-one patients were included. The mean age was 57.5 years (33-74) (13 males and 8 female). The geographical origin of the patients was rural in 76% of the cases. The median duration of symptoms progression before diagnosis was 4.5 months [1-8]. The main symptom leading to seek medical care was an inflammatory back pain and it was found in all cases. It was associated with unilateral radiolucency in 8 cases and with a bilateral radiolucency in 1 case. The other clinical features found were fever in 17 patients, sweating in 14 cases, weight loss in 10 cases and hemoptemegaly in 1 patient. The physical examination revealed tenderness on palpation in 12 cases, a motor weakness of the two lower limbs in 2 cases. Brucella agglutination test was ≥1/160 in all cases. Blood cultures were negative in all cases. The median erythrocyte sedimentation rate (ESR) and serum C-reactive protein level were 40 mm/h and 11 mg/dl respectively. Spondylodiscitis was located in the lumbar dorsal and cervical spine in respectively 10, 8 and 3 cases. The most affected level was the L4-L5 level in 5 cases followed by the T10-T11 level in 3 cases. The involvement of more than 2 vertebrae was found in 4 cases. Associated sacroiliitis was found in one patient. All MRI images of the affected vertebra showed hypo intense signal on T1 weighted image and hyper intense signal on T2 weighted image. Disc space narrowing was found in 8 cases. Vertebral body osteosclerosis was found in 10 cases. Epidural collection was documented in 3 cases with a size up to 5cm. Paravertebral and peri-vertebral abscesses were detected in 5 cases. Intradiscal abscesses were observed in 3 cases. Cord compression and involvement of root nerve were noted in respectively 5 and 1 cases. Biopsy was performed in 5 cases, but bacteriological examination was contributory to the diagnosis in 1 case. Treatment was combined with a combination of two or three drugs, corticosteroids were prescribed in 5 patients and one patient underwent a surgical intervention. The evolution was good in 16 patients, 3 patients suffered from chronic back pain, one patient had persistent neuropathic pain and one patient had paresis.

Conclusion: Brucella spondylodiscitis is still a serious public health problem in developing countries. MRI findings associated with clinical symptoms may establish the diagnosis even if bacteriological examinations are negatives.

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