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ULTRASOUND ASSESSMENT OF JOINTS AND ENTHESIS IN A COHORT OF PATIENTS AFFECTED BY OCHRONOSIS: HOW MUCH IS COMMON THE INFLAMMATORY INVOLVEMENT?

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Background: Ochronosis, the musculoskeletal manifestation of alcaptonuria (AKU), is characterized by alterations of the spine and large joints of the limbs similar to those of osteoarthritis. However, some cases of spinal involvement that resembles spondyloarthritis (SpA) have been describe, suggesting a prevalent inflammatory involvement of the joints.

Objectives: To evaluate the prevalence of inflammatory abnormalities in peripheral joints and entheses of a cohort of patients affected by AKU.

Methods: consecutive patients with definite diagnosis of AKU (with or without clinical manifestations) referred at our clinic from 2014 to 2016 were enrolled. All patients underwent a US examination of the following sites bilaterally: metacarpo-phalangeal joints (MCP), proximal interphalangeal joints (PIP), radiocarpal/mid carpal joints, elbow, gleno-humeral, hip, knee, ankle and metatarso-phalangeal (MTP) joints; flexor and extensor tendons of fingers and wrist and the ankle tendons. Further, the entheses of the rotator cuff of the shoulder, triceps, quadriceps, patellar and Achilles tendon were assessed. Joints and tendons with a synovial sheath were assessed for effusion, synovial hypertrophy and power Doppler (PD) signal while entheses were evaluated for the presence of PD signal, enthesophytes and calcifications. All the US lesions were scored using a dichotomous scale (presence/absence). All US exams were performed by an expert sonographer blind to clinical history, using an Esaote MyLab70 scanner equipped with high resolution linear probes.

Results: 11 patients (6 women) were enrolled in this study with a mean age of 57 yo (SD±11,50). the mean number of joints with effusion was 3,9 for each patient (median 3, range 2-8) while the mean number of joints with synovial hypertrophy was of 2,9 (median 2, range 2-7). = 0,18 joints (median 0, range 0-2) presented also PD signal. I The mean number of exudative tenosynovitis was 0,81 (median 2, range 0-3) while proliferative tenosynovitis (mean 0,54, median 0, range 0-2) and PD in tendons with sheaths (mean 0,27, median 0, range 0-2) were rare. Finally, the mean number of entheses with PD was 1,27 (median 1, range 0-7), the mean number of enthesophytes was 0,63 (median 0, range 0-3) and for calcifications 4,27 (median 5, range 1-8).

Conclusions: Ochronotic arthropathy is believed to be characterized by a widespread articular damage, correlated mainly to degenerative processes due to the deposition of Homogentisinic Acid in the joints. The results of this US study showed that joint inflammation is common in ochronotic patients, associated in some cases with peripheral entheses involvement confirming previously published data(1). These inflammatory manifestations should be further studied in larger cohorts of patients as they could play an important role in the joint damage process in these patients and provide a rationale for the use of new drugs.

References:

1) Filippou G, Frediani B, Selvi E et al, Tendon involvement in patients with ochronosis: an ultrasonographic study. Ann Rheum Dis 2008 Dec;67(12):1785-6.

Disclosure of Interest: None declared