Unusual ossification: psoriatic arthritis or not?

Sirs,

Chronic low back pain (LBP) is a complex and multifaceted condition characterised by persistent pain, discomfort, and poor quality of life (1). It can be a manifestation of spondyloarthritis (SpA), but also a clinical feature of numerous morbidities (1).

Here, we present a peculiar case of a young man with chronic low back pain (LBP). In January 2020, a 38-year-old man with a negative family history for psoriasis or arthritis was admitted to our Spondyloarthritis Clinic Center for recurrent LBP and worsening episodes of right hip pain during walking and climbing stairs, associated to elbows and knees psoriasis. Laboratory tests revealed slightly increased cholesterol levels and normal/negative blood-cell-count, kidney and liver function, inflammatory indices and HLA-B27. No significant comorbidities were reported. Previously, based on LBP, big enthesophytes and psoriasis was diagnosed as psoriatic arthritis (Fig. 1) and the patient was treated with non-steroidal-anti-inflammatory drugs and methotrexate, but without any clinical benefit. Our clinical examination revealed tenderness of lumbar spine spinous processes and of anterior-inferior iliac spine (AIIS), limited right hip flexion, no signs of peripheral arthritis. Spine radiographs (December 2019) showed accentuation of the lumbosacral angle, non-degenerative or appositive bone signs (*i.e.* osteophytes, pseudo-syndesmophytes). Pelvis radiographs showed regular sacroiliac joints, a prominent AIIS deformity engaging the femoral neck and a partial bridge in the pubic-symphysis (Fig. 1). In particular, the AIIS deformity appeared as a bony process proximally pseudo-articulating with the right iliac bone in the AIIS area and directed downward parallel to the femoral head. Besides, the pubic symphysis presented with a hypertrophic and fluent osteophyte bridging incompletely over the superior margin (Fig. 1).

These atypical radiographic findings are scantly described in the literature. Carton and Filan reported that abnormal AIIS hypertrophy could be due to chronic traction strain from the head of rectus femoris and – to a lesser degree – to the iliocapsularis muscle. This can occur after intense physical activity during puberty, from malunion or abnormal migration of the apophyses during bone development, or from abnormal ossification (2). In post-traumatic cases, the secondary ossification process affecting the rectus femoris (muscle or tendon) might result in a myositis ossificans. Furthermore, bleeding and haematoma within the tendon sheath may evolve into ossification between the pelvis and the fibrocartilage of the retracted tendon, with a subsequent bony exostosis (3, 4). This injury mechanism is commonly observed in runners, football players, or in sports with rapid torsion and spinning (2, 5). Otherwise, congenital abnormalities during bone embryogenesis have been described in sites around the pelvis (4). With regard to pubis osteophytes, pelvic X-rays often shows bridging ossification. Caramaschi identified a robust bony bridge on the pubic-symphysis upper edge in a patient affected by metabolic syndrome, who later developed diffuse idiopathic skeletal hyperostosis (5). Pubic-symphysitis could be also reported in crystal disorders (6). No comorbidities, spine-hyperostosis or crystal-deposition were present in our patient. However, he had been played football until the age of 30; his pain characteristics were mostly mechanic; thus, the abnormal AIIS and the pubic-symphysis bridge were very likely post-traumatic rather than signs of SpA. Knowledge of the anatomical size and location of atypical ossification/big osteophytes and their relationship to adjacent structures allows the physician to differentiate causes of LBP other than SpA.

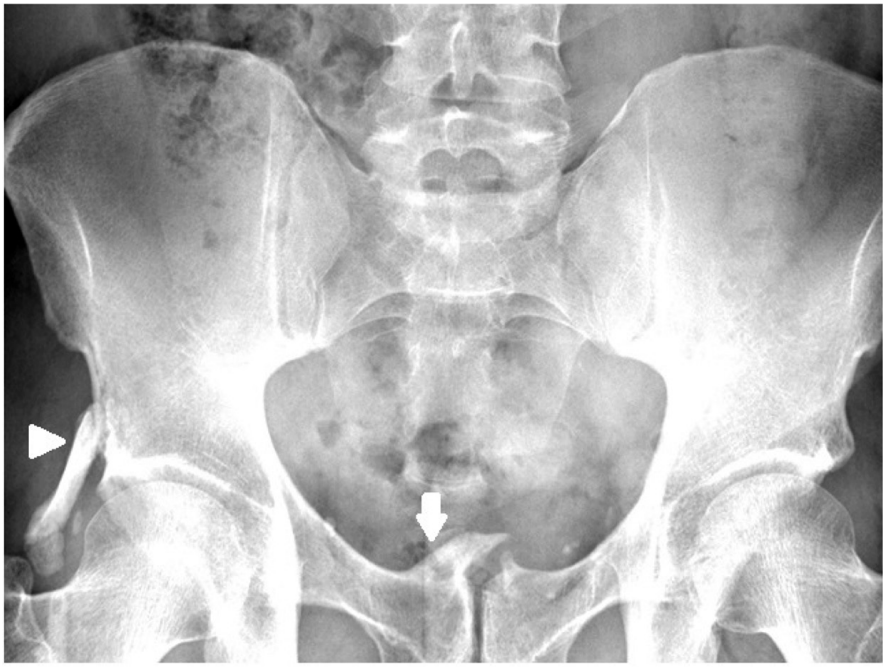

Fig. 1. Anterior-posterior view of pelvis: a "finger" like bony process encasing the right hip joint in the AIIS area and distally with a smaller stocky process directed downward (white triangle); an hypertrophic and fluent osteophyte bridging incompletely over the superior margin of the pubic symphysis (thick white arrow).
Written informed consent was obtained from the patient for the publication of this image.

R. RAMONDA[1], *MD, PhD*
S. VIO[2], *MD*
A. ORTOLAN[1], *MD*
M. LORENZIN[1], *MD, PhD*

[1]Rheumatology Unit, Department of Medicine - DIMED, University of Padova;
[2]Radiology Unit, University of Padova, Italy.

Please address correspondence to:
Roberta Ramonda,
U.O.C di Reumatologia,
Dipartimento di Medicina - DIMED,
Università di Padova,
Via Giustiniani 2,
35128 Padova, Italy.
E-mail: roberta.ramonda@unipd.it

Competing interests: none declared.

© Copyright CLINICAL AND EXPERIMENTAL RHEUMATOLOGY 2021.

References

1. MAHER C, UNDERWOOD M, BUCHBINDER R: Non-specific low back pain. *Lancet* 2017; 389: 736-47.
2. CARTON P, FILAN D: Anterior inferior iliac spine (AIIS) and subspine hip impingement. *Muscles Ligaments Tendons J* 2016; 6: 324-36.
3. MYERS CA, REGISTER BC, LERTWANICH P *et al.*: Role of the acetabular labrum and the iliofemoral ligament in hip stability: an in vitro biplane fluoroscopy study. *Am J Sports Med* 2011; 39 (Suppl.): 85S-91S.
4. GOYEN M, BARKHAUSEN J, MARKSCHIES NA, DEBATIN JF: The pelvic digit-a rare developmental anomaly. A case report with CT correlation and review of the literature. *Acta Radiol* 2000; 41: 317-9.
5. CARAMASCHI P, BIASI D: Unusual bridge ossification of pubic symphysis in diffuse idiopathic skeletal hyperostosis. *Rheumatol Int* 2012; 32: 3701.
6. RAMONDA R, CRISTIANI B, OLIVIERO F, FELICETTI M, ORTOLAN A, IACCARINO L: Severe abdominal pain as a manifestation of pseudogout in pubic symphysis. *J Clin Rheumatol* 2020; 26: e30-e31.