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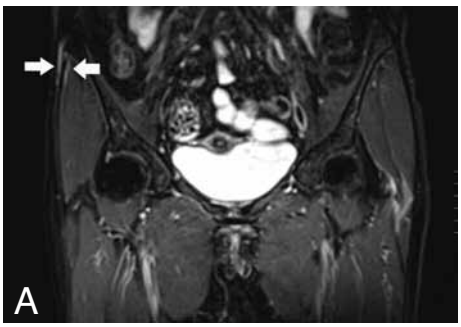
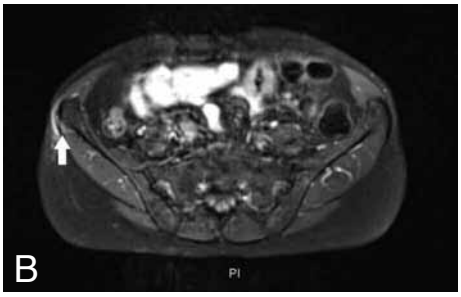
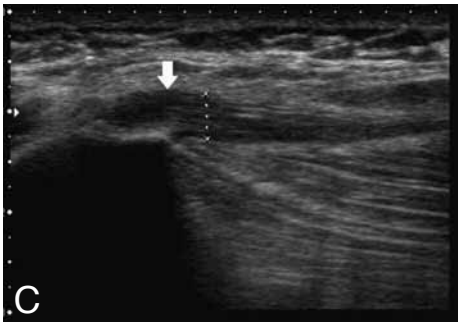
IMAGES IN CLINICAL RADIOLOGY







Proximal iliotibial band enthesopathy

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A 58-year-old female presented with sudden-onset pain and tenderness at the lateral aspect of the right pelvis occurring after long-distance walking. Physical examination showed a normal range of movements. Magnetic Resonance Imaging (MRI) was performed in order to exclude a stress fracture. Coronal fatsuppressed intermediate weighted images (WI) showed focal thickening and increased signal at the proximal insertion of the right iliotibial tract (ITT) at the iliac tubercle. There was also increased signal surrounding the deep and superficial layers of the ITT (Fig. A, arrows). Axial fatsuppressed T2-WI demonstrated also subtle muscular edema in the adjacent anterior part of the gluteus medius muscle (Fig. B, arrow). There was no evidence of tendon rupture. Based on the imaging findings, the diagnosis of proximal iliotibial band enthesopathy was made. The patient was treated with local infiltration of corticosteroids followed by kinesitherapy.

Comment

Enthesopathy of the proximal ITT is an uncommon condition, often neglected in medical literature. It occurs most frequently in female athletes (runners, golfers, dancers) or older overweighted women.

The pathogenesis is believed to be related to acute or repetitive microtraumatic injuries at the insertion of the ITT at the iliac tubercle of the iliac crest. The ITT is anatomically intimately related to the anterior part of the gluteus medius muscle. Although the tensor fasciae latae does not play a major role in hip movements, it acts as a supporting muscle in flexion and abduction. An imbalance between the system of agonist and antagonist hip muscles, their dynamic relations and postural factors such as increased anterior pelvic tilt may cause overloaded forces acting on tensor fasciae latae during any sport activity.

Radiographs do usually not contribute to the diagnosis in the acute phase of the disease. Enthesophyte formation at the anterior aspect of the iliac crest and adjacent calcifications are rarely specific.

If the pain is localised at the iliac crest, ultrasound is the preferred examination, showing thickening of the ITT (Fig. C, arrow) and adjacent gluteus medius muscle, loss of normal fibrillar architecture and sometimes signs of hypervascularity on color Doppler in up to 50% of cases.

As the complaints and clinical examination are often misleading, particularly in chronic overuse injuries, MRI is often performed as initial examination to exclude a stress fracture or other more common peri-articular hip pathology. MRI typically shows thickening and increased T2-signal in and around the ITT. Adjacent muscular edema in the anterior part of the gluteus medius muscle and subtle bone marrow edema in the iliac tubercle may be seen as well. To allow an appropriate diagnosis, it is of utmost importance that the Field of View (FOV) of the coronal images of the pelvis is large enough to visualise the iliac crest.

The main differential diagnosis include partial or complete tear of the tendon, an avulsion fracture of the anterior superior iliac spine, injury of the sartorius muscle, bone or soft tissue neoplasm in this region, and neuropathy of the cutaneous femoris lateralis nerve.

The treatment consists of local infiltration with corticosteroids, kinesitherapy, and recommendations on avoiding any improper loading forces during sport activities.

Reference

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