

Clinical case / Cas clinique

Anterior superior iliac spine avulsion in a young soccer player

Fracture-avulsion de l'épine iliaque antérosupérieure chez un jeune adulte footballeur

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Abstract

Avulsion fractures of the anterior superior iliac spine are rare. They usually occur in teenagers during sport activities. Cases concerning adults are very uncommon. We report here the case of a 23-year-old man who was admitted for recent pain of the left hip that worsened while kicking a ball in a soccer match eight days earlier. The examination found pain when moving the left hip in extension. Radiographs showed an avulsion fracture of the left anterior superior iliac spine, which was confirmed by computer tomography. The treatment was conservative consisting in rest and non-weight bearing with releasing of pain a few weeks later.

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Keywords: Avulsion fracture; Anterior superior iliac spine; Sartorius; Sport; Conservative treatment; Adult

Résumé

Les fractures-avulsions de l'épine iliaque antérosupérieure sont rares. Elles surviennent le plus souvent chez des adolescents au cours d'activités sportives. Les formes chez l'adulte sont exceptionnelles. Nous rapportons un cas chez un jeune adulte de 23 ans. Il avait consulté pour une douleur inguinale gauche intermittente récente qui s'était exacerbée après un coup de pied dans un ballon lors d'un match de football huit jours auparavant. L'examen clinique retrouvait une douleur à la mobilisation de la hanche gauche en extension. La radiographie standard du bassin a montré une fracture-avulsion de l'épine iliaque antérosupérieure gauche, qui a été confirmée par une tomodensitométrie. Le patient a été traité orthopédiquement par du repos et mise en décharge du membre inférieur gauche, avec disparition de la douleur quelques semaines plus tard.

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Mots clés : Fracture-avulsion ; Épine iliaque antérosupérieure ; Sartorius ; Sport ; Traitement orthopédique ; Adulte

1. English version

1.1. Introduction

Avulsion fractures of pelvic apophyses are uncommon. They are often overlooked because confused with tendinitis or muscle tears. They occur in adolescents practicing sports. These fractures occur during growth from early apophyses ossification until their fusion with the corresponding pelvic tuberosities. They occur at the cartilaginous plate of the

apophysis. During this period, apophyses where are inserted strong muscles, are the weakness zone of the musculoskeletal apparatus of young people. This weakness is reflected in the fragility of the enchondral ossification of the apophyses compared to biomechanical constraints exerted by the muscles. The lesions are usually due to a mechanism in tension at high sporting activities in subjects with an immature skeleton. Considering the number of teenagers practicing sport, apophyseal avulsions are rare. The most involved sports are football, athletics, skating and gymnastics.

Several cases of avulsion fractures of the anterior superior iliac spine (ASIS) were described in the literature, the majority involved children or teenagers practicing sport [10]. Very rare cases have been reported in adults [15]. We report a case of

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avulsion fracture of the ASIS in a young non-professional soccer player adult.

1.2. Observation

Mr RH is a 23-year-old young adult who presented for consultation with left groin pain. He had no particular medical history except unequal leg length unmatched. He complained for several weeks of intermittent left groin pain. The beginning was brutal during a shoot in the ball and did not result in functional impairment, the player continued the match. The patient had previously had, before the accident, some groin pain during hip flexion, but no grounds, because of their low intensity, to consult. Since the accident, the pain was mechanical in nature, absent at rest increasing in movement, without nocturnal awakenings. Given the persistence of pain, and after an exacerbation of pain after a soccer match played eight days ago, the patient consulted.

The clinical examination did not find on inspection any obvious deformity, ecchymosis or hematoma. On palpation, there was a sensitivity of the left ASIS and the area below. The flexion against resistance of the left hip was also sensitive. There was groin pain when moving the left hip in extension, free range of motion of the left hip and unequal leg length of 18 mm at the expense of the left limb. The neurological examination was normal.

Plain radiographs of the pelvis found an avulsion of the left anterior superior iliac spine (Fig. 1). The radiographic data were confirmed by a pelvic CT scan that showed an old avulsion of the left ASIS (Figs. 2 and 3) with two fragments clearly at a distance. It showed also the avulsion of the sartorius and a calcic tonality condensing located to level of the left ASIS and going up along the internal cortical of the left iliac wing,



Fig. 1. Pelvic plain radiograph showing the avulsion fracture of the left anterior superior iliac spine (Black arrow) and the avulsed fragments (White arrow).



Fig. 2. Sagittal CT scan of the pelvis showing the avulsion fracture of the left anterior superior iliac spine (black arrow) and the avulsed fragment (white arrow).

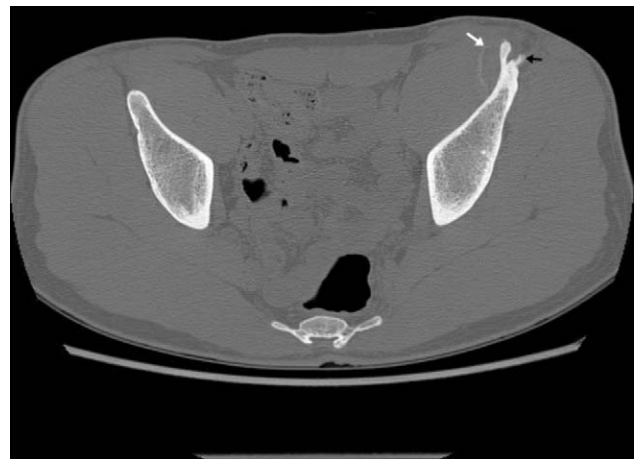


Fig. 3. Axial CT scan of the pelvis showing the avulsion fracture of the left anterior superior iliac spine (black arrow) and the hematoma (white arrow).

evoking an old calcified hematoma (Fig. 4). There was no contralateral injury.

The patient was treated by rest and partial non-weight bearing of the left leg with crutches during six weeks. There was no introduction of anticoagulant therapy or prescription of rehabilitation. The results were good with a disappearance of pain after a few weeks and a resumption of sporting activities after six weeks. There were no complications. Furthermore, compensation of leg length discrepancy was also recommended.

1.3. Discussion

Ossification of pelvic apophyseal nuclei occurs during adolescence. When the musculoskeletal chain of the adolescent

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