

Avulsion Fracture of the AIIS – case report

Traumatology

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Introduction

Avulsion fractures of the AIIS are uncommon and occur mostly in adolescent boys during physical activity. Non-operative treatment is usually recommended. The early diagnosis will allow the proper treatment so that the patient can return to sports as soon as possible. These fractures must be considered when there is pain in the groin area and if the history is compatible. Clinical history associated with radiologic findings allow the diagnosis and the proper management. We present the case of a 13 year old boy with a AIIS fracture.

Methods and results

Teenage boy, 13 year's old, no relevant personal history, admitted in the ER after a sports accident. He presented with persistent pain in the groin area and inability to walk without pain. Active flexion and passive hyperextension of the hip were painful.

An avulsion fracture was diagnosed on the X-ray. Immediate care was carried out consisting in bed rest and analgesia and passive range of motion was permitted as soon as the pain allowed. He initiated active range of motion at week 4 with a good clinical result.

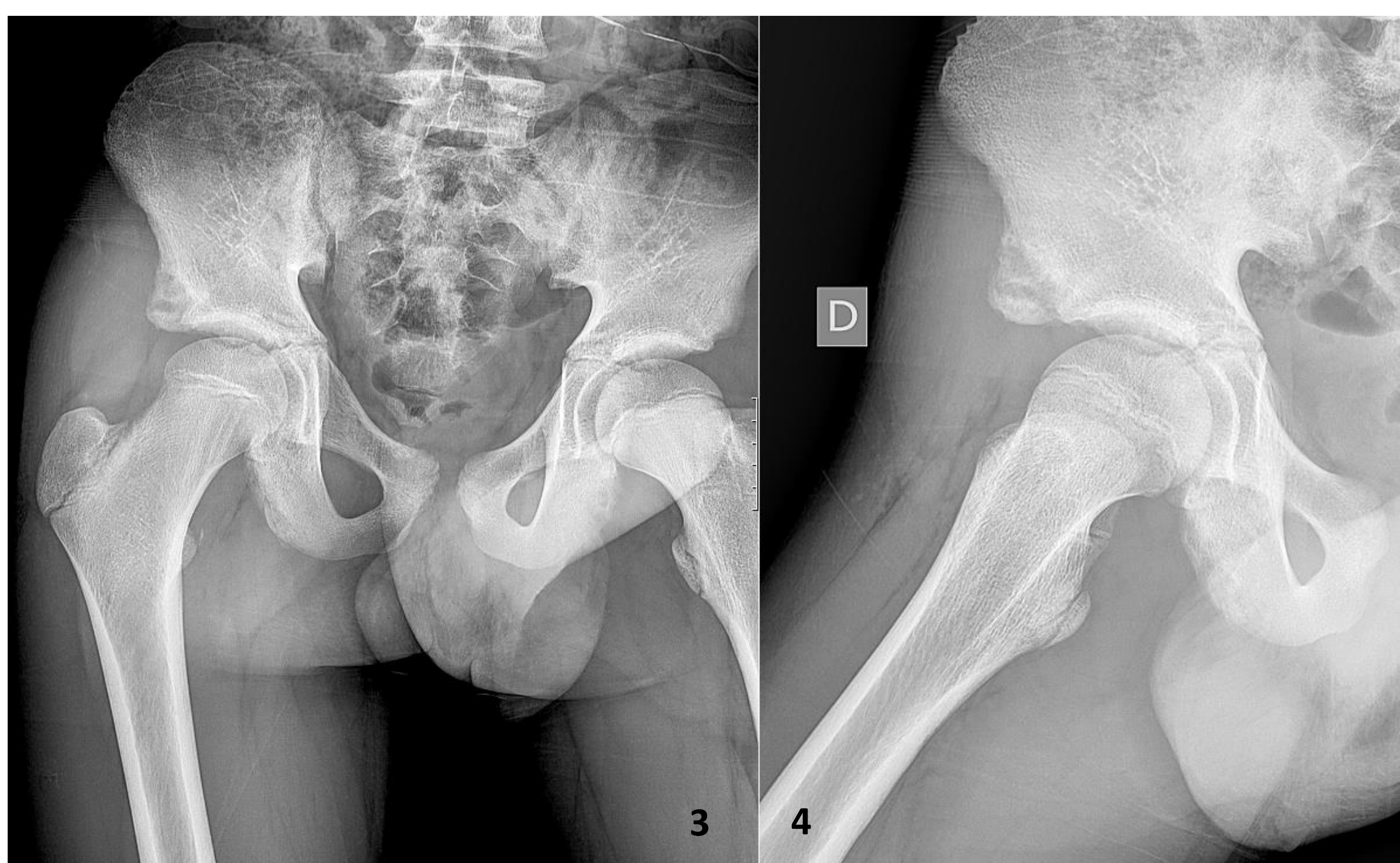
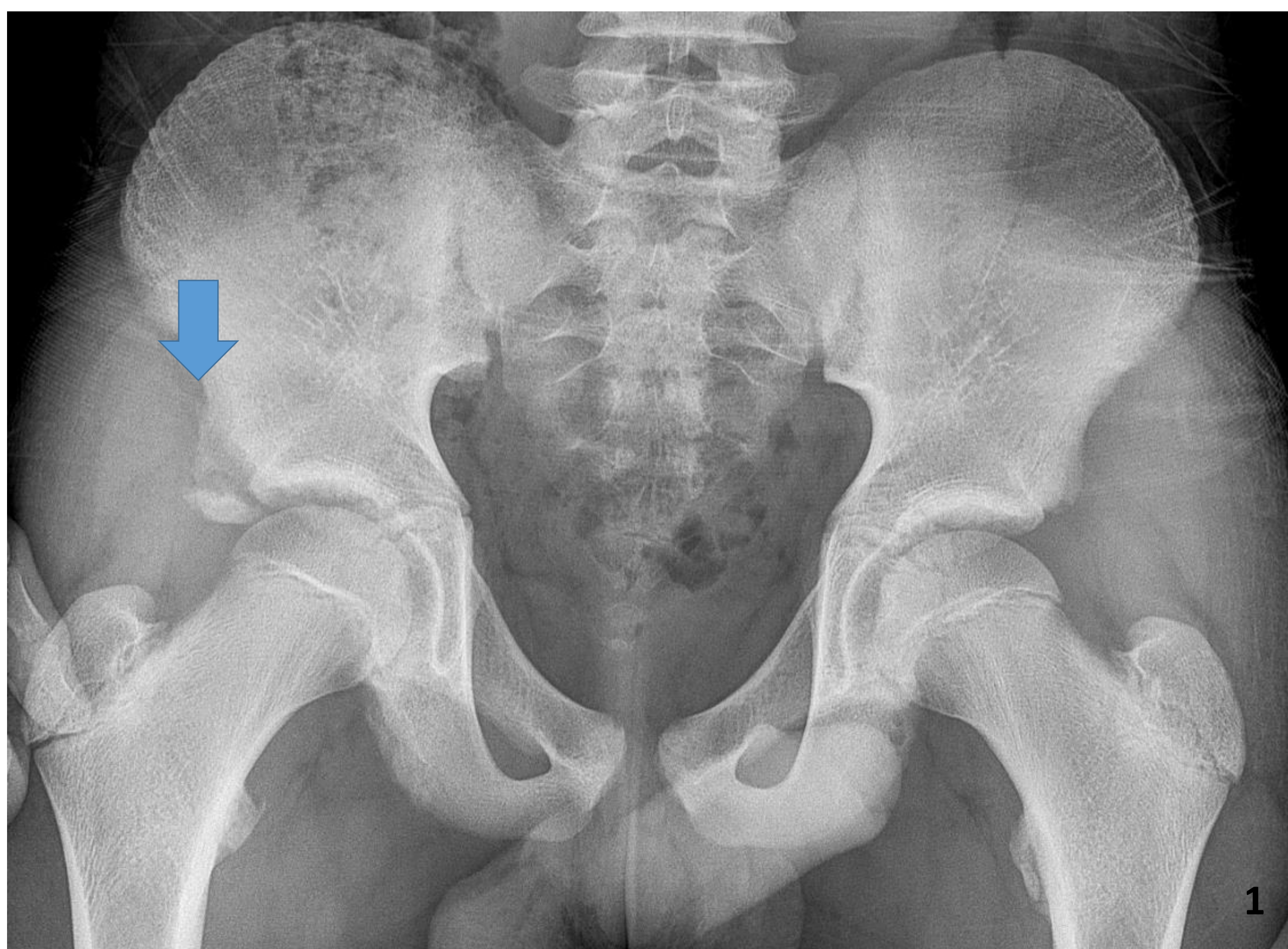


Figure 1. Anteroposterior radiograph with evidence of right avulsion fracture of the AIIS.

Figure 2. Profile radiograph showing right avulsion fracture of the AIIS.

Figura 3. e 4. Anteroposterior and profile radiograph showing evidence of fracture consolidation.

Discussion:

Avulsion fractures of the AIIS occur mainly in adolescent boys near the end of skeletal growth during athletic activity due to a sudden contraction of the knee with the hip hyperextended. It is an uncommon lesion in teenage occurring before the growth plate closes. Symptoms include sudden onset of pain associated with inability to weight bear without pain.

Physical exam may include tenderness at the groin area generally without swelling or hemarthrosis but with limited hyperextension of the hip. Radiographs (AP) are recommended and allow to confirm the diagnose. The prognosis is good with appropriate treatment so it is important to consider this diagnosis in cases of groin pain with a compatible history of trauma.

References:

- Anterior iliac spine avulsion fractures treatment options in young athletes. Inigo Anduaga et al; Journal of investigative surgery, 2018
- Avulsion fracture of the anterior inferior iliac spine in a soccer player. Mustafa usiu et al; American Academy of Physical Medicine and Rehabilitation, Vol 5 732-733, August 2013