

## Clinical Image

# Anterior Inferior Iliac Spine Avulsion Fracture after Kicking a Soccer Ball

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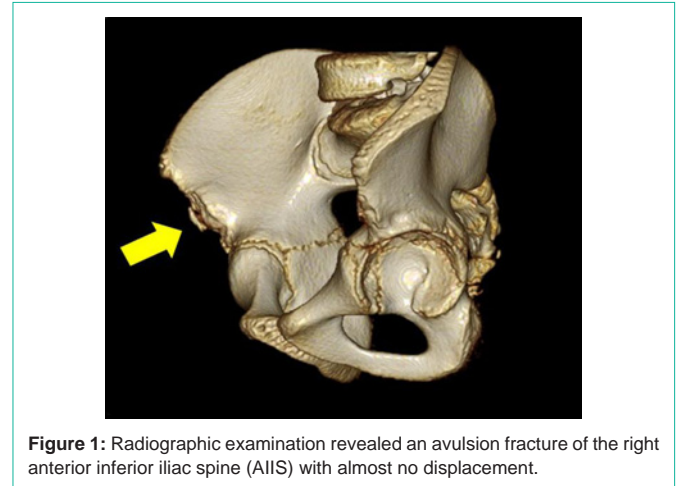
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A 12-year-old man presented to the emergency department with pain in the right groin, sustained when he kicked a soccer ball. Even though he reported experiencing pain, he could walk unassisted. Radiographic examination revealed an avulsion fracture of the right anterior inferior iliac spine (AIIS) with almost no displacement (Figure 1). He was conservatively treated with analgesics, activity limitation, and partial weight bearing using crutches for four weeks. On follow-up, he reported no pain and a complete range of motion without complications.

The AIIS is attached to the straight head of the rectus femoris muscle. AIIS avulsion fractures rarely occur in adolescent athletes during sudden, strong contraction of the muscle attached to growth cartilage [1]. AIIS avulsion fractures are caused by the sudden forceful contraction of the muscle while the hip is hyperextended and the knee is flexed. These fractures are usually noted in player after sports that involve mostly forceful kicking or running, such as soccer, rugby, and tennis [2]. AIIS avulsion fractures occur less frequently than other pelvic avulsion fractures, with an incidence rate between 14.8% and 22.1% [1].

These injuries can be easily misdiagnosed as simple strains and late diagnosis may cause chronic pain with decreased sports performance. The majority of these fractures heal adequately with conservative treatment. However, some patients benefit from surgical treatment, especially those with fragment displacements greater than 15mm and high functional demands [3].



**Figure 1:** Radiographic examination revealed an avulsion fracture of the right anterior inferior iliac spine (AIIS) with almost no displacement.

## References

1. Serbest S, Tosun HB, Tiftikçi U, et al. Anterior inferior iliac spine avulsion fracture: A series of 5 cases. *Medicine (Baltimore)*. 2015; 94: 562.
2. Alhaneedi GA, Abdullah ASA, Ghouri SI, et al. Avulsion fracture of anterior inferior iliac spine complicated by hypertrophic malunion causing femoroacetabular impingement: Case report. *Int J Surg Case Rep*. 2015; 11: 117-120.
3. Eberbach H, Hohloch L, Feucht MJ, et al. Operative versus conservative treatment of apophyseal avulsion fractures of the pelvis in the adolescents: A systematical review with meta-analysis of clinical outcome and return to sports. *BMC Musculoskelet Disord*. 2017; 18: 162.