

**(Refer to page 256)**

**Answer: Avulsion of the right Anterior Superior Iliac Spine (ASIS) apophysis**

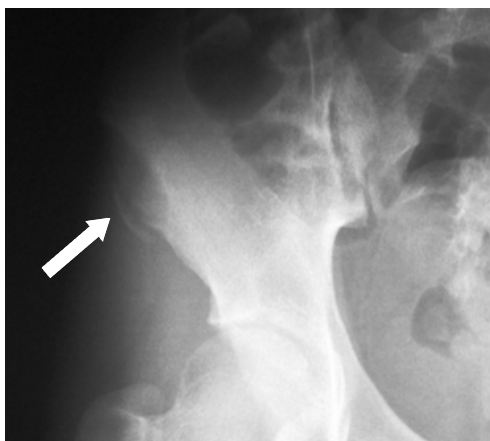
Avulsion fractures of the pelvis (**Panel**) results when sudden, forceful contraction of the attached muscle occurs during sporting activities particularly in skeletally immature subjects. In a radiographic study of 203 avulsion fractures, ASIS avulsion was the third most common, seen in 39 cases. Only the ischial tuberosity and anterior inferior iliac spine avulsion being more common.<sup>1</sup> The average age reported is 16.8 years (range 13-43 years) with males being affected more (84%).<sup>2</sup>

The apophysis of the ASIS starts to ossify between 13-15 years of age and it fuses with the ilium between 21-25 years. The Sartorius muscle and some fibres of the ten-

flexion with hip in extension as seen in kicking (soccer, football etc..) and sprinting, leads to sudden pull at the attachment of Sartorius at the ASIS resulting in avulsion injury.<sup>3</sup>

The clinical presentation is similar to that of a muscle strain therefore avulsion fracture should always be considered in a skeletally immature athlete with a typical history. The diagnosis can be made on plain radiographs in most cases but advanced imaging like CT scan (for better delineation of bone in doubtful cases and cases requiring surgery) or MRI scan (allows direct visualisation of the tendon attached to the apophysis) may be needed in some cases. A few cases of bilateral ASIS avulsion have been reported.<sup>2,3</sup>

In the absence of significant displacement (as noted in the present case), conservative treatment consisting of analgesics, activity modification and progressive ambulation and rehabilitation is recommended. It usually takes 4-6 weeks for return to normal activities, generally without any long term consequences though permanent disability and limitation of sporting activities has been reported with other sites of avulsion injuries of pelvis. Surgery is recommended if the displacement is more than 2 cm.<sup>2,3</sup>



**Avulsion of the ASIS (Arrow).**

**REFERENCES**

- 1:** Rossi F, Dragoni S. Acute avulsion fractures of the pelvis in adolescent competitive athletes: prevalence, location and sports distribution of 203 cases collected. *Skeletal Radiol* 2001; 30:127-31.
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- 3:** Kjellin I, Stadnick ME, Awh MH. Orthopaedic magnetic resonance imaging challenge: apophyseal avulsions at the pelvis. *Sports Health* 2010; 2:247-51.