

Sacral Stress Fractures: They See You, But Are You Seeing Them?

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Sacral stress fractures can be particularly difficult to recognize and diagnose. Although uncommon, sacral stress fractures should be suspected in athletes, particularly female runners presenting with low back or buttock pain (2–4,6). Sacral stress fractures are most commonly found in female distance runners, but also have been reported in other sports such as tennis, basketball, gymnastics, volleyball, and track and field (5). Patients typically report buttock pain, but also can report low back pain, groin pain, and muscle spasms. Pain is particularly noticeable with impact loading and change of direction.

Differential Diagnosis

Sacroiliitis, spondylolysis (pars defect), piriformis pain, sacroiliac joint dysfunction, back strain, radiculopathy, scoliosis, juvenile disc disorder, Scheuermann's kyphosis (1,4).

Physical Examination

Characterized by pain with single-leg hop; tenderness to palpation of the sacrum; positive flexion, abduction, and external rotation tests; negative straight leg raise; and normal neurologic examination.

Diagnostic Tests

X-rays commonly negative, typically visualized with MRI and CT scan.

Treatment

Weight bearing as tolerated until able to ambulate without pain (10 to 14 d). Nonimpact cross-training for 6 to 8 wk, then resumption of running or impact activity. Correction of risk factors: pelvic obliquity, core strength, and presence of female athlete triad (4,5) (Figure).

Pearls

- Most commonly found in female distance runners
- Pain in sacral area with single-leg hop
- Point tenderness on sacrum
- Presence at anteroinferior sacral wing may mimic sacroiliitis

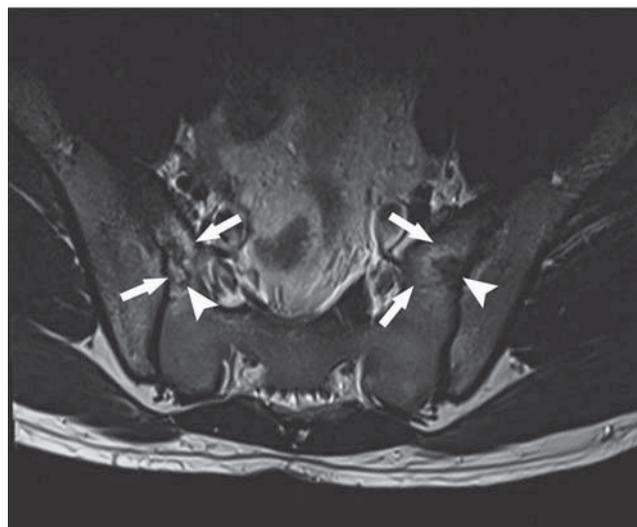


Figure: Axial fat sat T2M image demonstrating bone edema within the sacral alae (arrows). The sclerotic fracture line is identifiable as a central, low-signal, irregular zone within the edema (arrowhead). (Reprinted from Marchinkow A, Mallinson PI, Coupal T, Lloyd-Smith DR, Munk PL, Ouellette HA. Sacral stress fractures in a sprint and throw athlete — a case report. *Curr. Sports Med. Rep.* 2014; 5(13):297–98. Copyright © 2014 The American College of Sports Medicine. Used with permission.)

- Involvement of anterior sacral foramina may mimic lumbar radiculopathy (2)
- Index of suspicion should increase in patients being treated for back pain who are failing to respond to conservative care (2,4,5)

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