Clinical Image

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Os trigonum identified after trauma to heel

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A 47-year-old man presented to the Emergency Department in November 2021 with right foot pain and difficulty walking. The patient had undergone trauma to the right ankle after a cut tree trunk snapped back and hit his posterior heel. He presented the next day after developing mild pain in the right lateral midfoot and pain with ambulation. He had full range of motion of the ankle and foot without difficulty. There were no open wounds. There

was no tenderness to palpation over the Achilles tendon, and the patient was able to fully dorsiflex and plantarflex the foot. There was some mild tenderness to palpation in the proximal, dorsal midfoot with mild associated swelling. The patient had no prior history of injuries or pain in the ankle. Oblique and lateral right ankle X-rays were obtained and demonstrated the accessory bone (Figure 1), and the patient was diagnosed with an os trigonum.

An os trigonum is an accessory bone on the posterior ankle that occurs when a portion of the talus does not fuse completely with the rest of the bone during development

Figure 1: (A) X-ray of the patient's right ankle (oblique view). (B) X-ray of the patient's right ankle (lateral view).

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[1–6]. An os trigonum can occur in up to 49% of people and is usually unilateral [1, 3, 4, 6]. It is typically asymptomatic [2]. Os trigonum syndrome can develop when a previously asymptomatic os trigonum is acutely injured (for example, due to an ankle sprain, causing inflammation and pain) [1, 2]. It can also become symptomatic due to overuse and irritation injuries, which occur progressively in athletes like dancers or kickers who repetitively plantarflex the foot [1–3, 5, 6]. This frequent flexion can compress the os trigonum, leading to flexor hallucis

longus (FHL) tendinitis, and pain can also worsen when pressure is placed on the big toe or when the foot is plantar flexed [1–3, 5, 6]. In addition to pain of the posterior ankle, patients may also notice tenderness and swelling to the area [1–3]. Imaging typically begins with an X-ray, but CT and MRI can also be used to rule out other possible causes of a patient's pain [2, 3, 6]. Os trigonum syndrome treatment begins with conservative management including immobilization, rest, ice, anti-inflammatory medications, stretching, or OMT directed at the FHL, and possibly steroid injections [1–3, 6]. If several months of conservative management does not relieve the patient's symptoms, then surgical removal of the os trigonum can be considered [1–3, 5, 6].

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