The os vesalianum pedis is an accessory bone located proximally to the base of the fifth metatarsal, within the peroneus brevis tendon (Figure 1). It is named after Andreas Vesalius, anatomist and physician, who first described it in “de humani corporis fabrica” in 1543. According to radiographic studies, the incidence ranges between 0.1% and 5.9%. It is usually asymptomatic, and only 5 cases of symptomatic os vesalianum have been reported so far.

**CASE REPORT**

A 41-year-old male golf player complained of right foot pain localized over the lateral side of the foot and aggravated by the follow-through phase of his golf swing. There was no history of trauma, and the symptoms had gradually increased over the previous 7 months. Previous treatment had included nonsteroidal anti-inflammatory drugs and intense physical therapy (ultrasound, stretching exercises) without symptom relief. Palpation of the base of the fifth metatarsal elicited pain, as did resisted inversion and plantar flexion. Strength testing revealed weakness of eversion.

Radiographs showed a radiolucent line at the base of the fifth metatarsal, with smooth edges (Figure 2a). In the absence of trauma, a diagnosis of previous fracture seemed unlikely. A radiograph of the other foot revealed an identical abnormality; bilateral os vesalianum pedis were present (Figure 2b). Because of persistent discomfort, the patient elected an excision of the os vesalianum with repair of the peroneus brevis.

A 5-cm longitudinal incision was made over the base of the fifth metatarsal allowing the lateral cutaneous nerve to be identified and protected and the peroneus brevis tendon exposed (Figure 3). The tendon was incised in line with its fibers, and the superior two thirds detached from the fifth metatarsal tuberosity (Figure 4). The os vesalianum was removed and the peroneus brevis tendon reattached using a double-loaded suture anchor (Figures 5-8). The patient was placed in a walking boot for 6 weeks, allowed full weightbearing, and began range of motion exercises outside the boot. Six weeks postoperatively, the walking boot was discontinued, with the patient returning to golf 8 weeks after surgery.

At 3 months the patient was pain free, with full range of motion and normal strength compared with the contralateral side.
DISCUSSION

The os vesalianum pedis is an infrequent cause of lateral foot pain. When patients present with a history of trauma, this condition is usually misdiagnosed as a fifth metatarsal avulsion fracture and treated with unnecessary immobilization.\(^5,7\) The differential diagnosis also includes nonunion of a tuberosity fracture, an ununited apophysis, or an ossifying apophysis of the fifth metatarsal base. In the pediatric population, Iselin disease (apophysitis of the fifth metatarsal base) should be taken into account as a differential diagnosis.\(^2\) However, os vesalianum has characteristics typical of an accessory bone, such as its rounded shape and smooth edges in the presence of a well-developed fifth metatarsal tuberosity.

The incidence of os vesalianum ranges between 0.1% and 5.9%.\(^3,4,8\) Most cases are asymptomatic and detected incidentally on radiographs. In this case, repetitive inversion of the ankle during the follow-through phase of the golf swing led to the development of symptoms. Only 5 cases of symptomatic os vesalianum have previously been reported,\(^1,5,6,7,9\) in which 2 cases were bilateral. Treatment options involve excision of the accessory bone from the symptomatic foot,\(^9\) as well as osteosynthesis and bone grafting\(^6\); both treatments have been reported with good functional outcome. In this case, the authors opted for...
an excision of the accessory bone and repair of the peroneus brevis using a suture anchor; the suture anchors enable strong fixation, early rehabilitation, and rapid return to sport while avoiding the possible risk of nonunion associated with attempted osteosynthesis.

Surgical treatment of symptomatic os vesalianum in a high-demand patient leads to favorable results and rapid return to sport. Despite its low incidence, this diagnosis should be considered with the presence of atraumatic lateral foot pain and the characteristic radiographic findings. In such situations, a bilateral radiograph is essential for diagnosis.

REFERENCES

1. Boya H, Ozcan O, Tandogan R, et al. Os vesalianum pedis. J Am Podiatr Med Assoc. 2005;95:583-585.
2. Canale ST, Williams KD. Iselin’s disease. J Pediatr Orthop. 1992;12(1):90-93.
3. Cilli F, Akcaoglu M. The incidence of accessory bones of the foot and their clinical significance. Acta Orthop Traumatol Turc. 2005;39:233-246.
4. Coskun N, Yuksel M, Cevener M, et al. Incidence of accessory ossicles and sesamoid bones in the feet: a radiographic study of the Turkish subjects. Surg Radiol Anat. 2009;31:19-24.
5. Dorrestijn O, Brouwer RW. Bilateral symptomatic os vesalianum pedis: a case report. J Foot Ankle Surg. 2011;50:673-675.
6. Inoue T, Yoshimura I, Ogata K, et al. Os vesalianum as a cause of lateral foot pain: a familiar case and its treatment. J Pediatr Orthop B. 1999;8:56-58.
7. Kose O. Os vesalianum pedis misdiagnosed as fifth metatarsal avulsion fracture. Emerg Med Australas. 2009;21:426.
8. Tsuruta T, Shiokawa Y, Kato A, et al. Radiological study of the accessory skeletal elements in the foot and ankle. Nihon Shokakaigaku Kaishi. 1983;55:357-370.
9. Wilson TC, Wilson KG, Ouzounov KG. The symptomatic os vesalianum as an uncommon cause of lateral foot pain: a case report. J Am Podiatr Med Assoc. 2011;101:356-359.

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