

# Misdiagnosed Os Vesalianum as Fifth Metatarsal Avulsion Fracture: A Case Report

MFM Miswan<sup>1</sup>, AR Hussin<sup>2</sup>, S Thangaraju<sup>3</sup>

<sup>1</sup>Faculty of Medicine, University of Technology MARA, Sg Buloh, Selangor, Malaysia

<sup>2,3</sup>Department of Orthopaedic & Traumatology, Hospital Sg Buloh, Selangor, Malaysia

**Abstract:** *The os vesalianum is a rare accessory bone which located at proximal extent of fifth metatarsal bone. It is usually asymptomatic but always mimicking as an avulsion fracture of proximal fifth metatarsal bone. Surgical excision on symptomatic foot is an option after failed non-operative treatment. The functional outcome was excellent and patient returned to normal activity 3 weeks after surgery.*

**Keywords:** Os vesalianum, avulsion fracture

## 1. Introduction

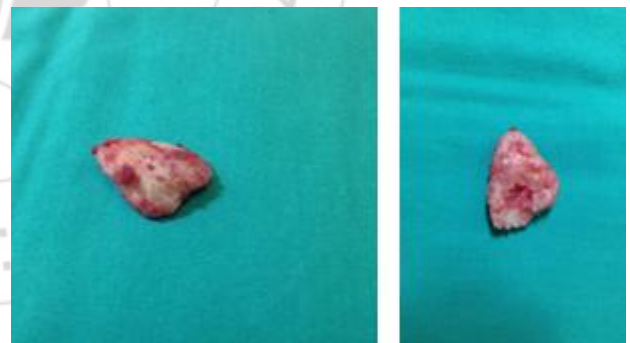
The os vesalianum is an infrequent condition whereby it is an accessory bone located at proximal of fifth metatarsal bone. It is named after Andreas Vesalius, anatomist and physician, who first described it in “de humani corporis fabrica” in 1543. According to radiographic studies,<sup>2,6</sup> the incidence ranges between 0.1% to 5.9. It is usually asymptomatic and only 5 cases of symptomatic os vesalianum have been reported so far.<sup>1,3,4,5,7</sup>

## 2. Case Report

34 years old man presented with right foot pain since 6 months ago. He claimed that he was still able to ambulate with tolerated pain especially during going up stairs. Unfortunately, he had a fall 2 days prior to visit where his right ankle was twisted with ‘crack sound’ heard. He lost his balance and he fall on his right foot. Since then he developed constant pain and was unable to bear weight full on the right foot. Examination revealed swollen right foot and tenderness over proximal part of 5th metatarsal bone. Radiographic roentrogram showed displaced avulsion fracture of proximal 5th MTB (**Figure 1**). Patient was planned for open reduction and screw fixation. However, intraoperative findings found there was no fracture but it was a accessory bony hard material at proximal of 5th MTB (**Figure 2**). It was 1 x 2 cm of bony hard and surrounded by fibrous tissue, beneath the peroneus brevis tendon. The patient was discharge well without any ankle support but on partial weight bearing crutches for a week. On follow up, he can walk asymptotically during follow up at 3 weeks post surgery. The material was send for histopathological examination and confirmed that it was a bony structure and it is likely an accessory bone.



**Figure 1:** Radiographs of AP and lateral view



**Figure 2:** Os vesalianum excised

## 3. Discussion

The os vesalianum is an uncommon cause of lateral foot pain. This condition is always misdiagnosed as avulsion fracture of fifth metatarsal when patient present with a history of trauma. The worst condition when it was treated with cast immobilisation unnecessarily.<sup>2,3</sup> The differential diagnosis included non-union tuberosity fracture or an ossifying apophysis of fifth metatarsal base.

However, os vesalianum has characteristic typical of an accessory bone such as rounded shape and smooth edges with well developed fifth metatarsal tuberosity. Most cases are symptomatic and detected incidentally on radiographs.

Only 5 cases of symptomatic os vesalianum have previously been reported,<sup>1,3,4,5,7</sup> in which 2 cases were bilateral. Excision of accessory bone is the options of treatment on symptomatic foot. Surgical treatment of symptomatic os vesalianum in high demand patient leads to favorable outcome and rapid return to previous activity. Despite its low incidence, this diagnosis should be considered with the presence of atraumatic lateral foot pain and characteristic of radiographic findings.

## Referrences

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