

CONTINUING MEDICAL EDUCATION ΣΥΝΕΧΙΖΟΜΕΝΗ ΙΑΤΡΙΚΗ ΕΚΠΑΙΔΕΥΣΗ

Pediatric Radiology Quiz – Case 1

A 12-year-old boy presented to our outpatient orthopaedic unit due to worsening right ankle pain after playing soccer. His ankle was not remarkably swollen. The patient underwent X-rays that revealed a bony structure among calcaneus, navicular and cuboid bones (fig. 1). The differential diagnosis involved incomplete/complete bone fracture, tarsal coalition or a normal variant. The child was referred for further investigation with focused low dose ankle CT (figures 2, 3).

Comment

Accessory ossicles are considered as normal anatomic variants. Generally, they are considered of no clinical significance; however, they can be symptomatic. Traumatic conditions mainly include fracture, pseudarthrosis, inflammatory and degenerative disorders, whereas neoplastic and arthritic conditions are also encountered.

The os calcaneus secundarius is an accessory ossicle of the anterior facet of the calcaneus. It can be mistaken for a fracture of



Figure 1. Internal oblique radiograph of right feet. A bone element (arrow) in close proximity with calcaneus, navicular and cuboid bones is observed.

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Figure 2. CT of right feet (sagittal view). An accessory ossicle (arrow) is seen anteriorly to the calcaneus and in proximity with navicular.



Figure 3. CT of both feet (oblique axial view). An accessory ossicle (arrows) is observed bilaterally, anteriorly to the calcaneus and posterolaterally to the navicular.

the calcaneus' anterior process. Radiographically, the os calcaneus secundarius is best seen on the medial oblique view. The ossicle may cause limitation of subtalar joint, which clinically may resemble calcaneonavicular coalition.

References

1. KALANTARI BN, SEEGER LL, MOTAMEDI K, CHOW K. Accessory ossicles and sesamoid bones: Spectrum of pathology and imaging evaluation. *Applied Radiology* 2007, 36:28–37

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Diagnosis: Os calcaneus secundarius (accessory ossicle located anterior to the calcaneus and posterolateral to the navicular).

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