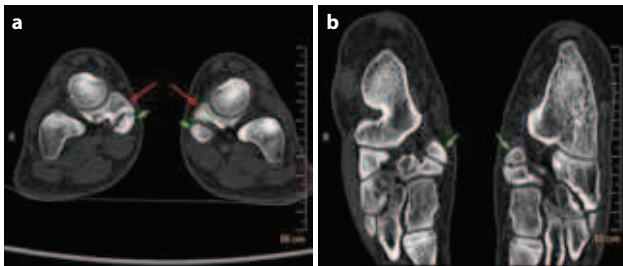


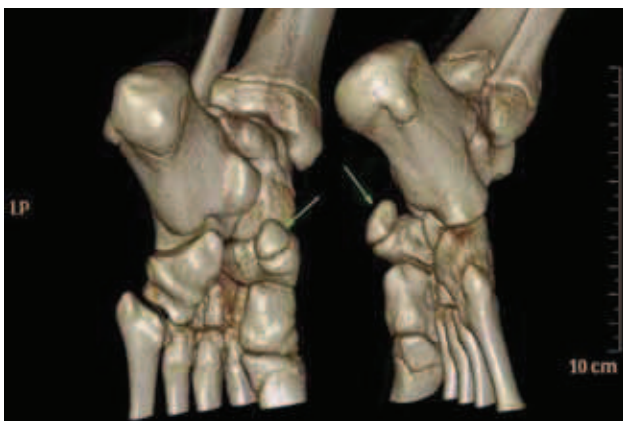
## CONTINUING MEDICAL EDUCATION ΣΥΝΕΧΙΖΟΜΕΝΗ ΙΑΤΡΙΚΗ ΕΚΠΑΙΔΕΥΣΗ

### Pediatric Radiology Quiz – Case 13

A 12-year-old girl, of average size regarding his age, presented to emergencies of our hospital complaining for medial side right foot pain. She did not mention any history of trauma; however, her symptoms were aggravated by weight bearing activities. Clinical examination revealed local tenderness to compression and no swelling. X-rays (AP and lateral) were not conclusive, so orthopedics referred the girl for a focused low dose computed tomography (CT) of ankles. Non contrast enhanced CT (NECT) revealed the presence of an accessory ossicle adjacent to the medial side of the navicular bone, bilaterally. The accessory ossicle was connected to the adjacent posteromedial tuberosity of the tarsal navicular bone by a 2 mm thick fibrocartilaginous layer (figures 1a, 1b, and 2).



**Figure 1a, 1b.** Non contrast enhanced computed tomography (NECT) of tarsal bones: Accessory ossicles (green arrows) adjacent to the medial side of the navicular bone (red arrows), bilaterally (a: axial view; b: coronal view).



**Figure 2.** Volume rendered 3D images of tarsal bones: Accessory ossicles adjacent to the navicular tuberosity, bilaterally (green arrows).

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#### Comment

The accessory navicular is considered as a normal anatomic variant. Three distinct types have been described: (a) A small (2–3 mm), round separate bone, without cartilaginous connection to the adjacent navicular bone, imbedded within the posterior tibial tendon (sesamoid, type 1, approximately 30%), (b) a triangular ossification center, adjacent to the navicular tuberosity and connected by cartilaginous layer (pseudarthrosis, type 2, approximately 60%), and (c) an enlarged medial horn of navicular itself (cornuate navicular, type 3, approximately 10%). Types 2 and 3 navicular variants have been associated with pathologic conditions, such as painful navicular syndrome and posterior tibial tendon tear.

#### References

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**Diagnosis:** Accessory navicular ossicle (or os naviculare or os tibiale externum)