

## A Rare Co-Existence of Os Accessorium Supracalcaneum and Os Trigonum

Melda Apaydin, Gülten Sezgin, Bilge Birlik

Department of Radiology, İzmir Atatürk Education and Training Hospital, İzmir, Turkey

Cite this article as: Apaydin M, Sezgin G, Birlik B. A Rare Co-Existence of Os Accessorium Supracalcaneum and Os Trigonum. *Cyprus J Med Sci* 2017; 2: 40-1

Dear Editor,

A 28-year-old man presented to the orthopedics clinic with the complaints of a severe pain and swelling over his left ankle. He stated that the swelling had appeared a long time ago. The swelling was noted to be located on both sides of the Achilles tendon of the left foot and was very firm on palpation. He had difficulty in inversion and plantar flexion of left foot. X-ray and CT of the left foot were obtained (Figure 1, shows lateral X-ray of the left ankle, two bony masses separately identified and located to the posterior of the left talus above the calcaneus. The details were seen more clearly in reconstructed CT image; Figure 2, a: sagittal and b: coronal views).



**FIGURE 1.** X-ray of the left ankle showing two distinct bony masses, separately identified and located posterior to the talus

Accessory ossicles in the foot are in variable appearance and prevalence. Vesal called the first accessory ossicle as "os peroneum" in 1555. Since then 23 true accessory bones were reported. The symptoms of accessory ossicles depend on their location and associated pathologies such as degeneration, trauma and others. Clinical findings usually cause minor symptoms but basic knowledge of incidental variants is necessary to avoid misinterpretations such as fractures. The most commonly seen accessory bones in the foot are os trigonum, os peroneum and os naviculare. Os vesalinum, os intermetatarsale, os supratarsale, os supranaviculare, os calcaneus secundarium and os talotibiale are rarely seen forms of accessory bones (1). Os accessorium supracalcaneum (OAS) is the rarest form of accessory bone in the foot. At the beginning, there was a conflict about the existence of os supracalcaneum apart from os trigonum. But it was accepted as an accessory ossicle radiologically and surgically. The OAS is seen behind the os trigonum. This bony structure has clear margins with adjacent to the tendon of Achilles. The shape and location was different from the os trigonum (2). Also, we report that the coexistence of two bones. Os trigonum which persists separately in 7-14% of the population, has cartilaginous synchondrosis between the ossicle. The differential diagnosis includes lateral tubercle's (Shepherd's fracture) non-union fracture. Cartilage synchondrosis disorder makes os trigonum syndrome with recurrent microtrauma in between talar tubercle and os trigonum (3). OAS may cause the same symptoms because of its location. In our case, we detected cartilaginous synchondrosis between OAS and calcaneus as like in between talus and os trigonum. In addition, os trigonum



**FIGURE 2.** On sagittal (a) and coronal (b) reformatted CT scan images showing two bony masses separately from the posterior portion of the talus, and appeared to articulate with the posterosuperior segment of the calcaneus. Bony bridges between these bony masses and the calcaneus are identified. The masses were separated from the tendon of Achilles

and OAS has cartilaginous synchondrosis (Figure 2). Verbal informed consent was obtained from patient who participated in this study.

The patient had pain with palpation in the talus area which was also investigated visual scale. He underwent physical therapy including ankle motion range and strengthening exercises as well as electrical nerve stimulation and cold therapy. The pa-

tient's pain was alleviated. Operation was planned in case of persistence of the pain and symptoms.

**Ethics Committee Approval:** N/A

**Informed Consent:** Verbal informed consent was obtained from patient who participated in this study.

**Peer-review:** Externally peer-reviewed.

**Author contributions:** Concept - M.A., G.S.; Design - M.A., B.B.; Supervision - M.A.; Resource - M.A.; Materials - M.A., G.S.; Data Collection and/or Processing - M.A.; Analysis and/or Interpretation - M.A.; Literature Search - B.B., G.S.; Writing - M.A.; Critical Reviews - M.A., G.S., B.B. A.

**Conflict of Interest:** No conflict of interest was declared by the authors.

**Financial Disclosure:** The authors declared that this study has received no financial support.

## REFERENCES

1. Nwawka OK, Hayashi D, Diaz LE, Goud AR, Arndt WF 3rd, Roemer FW, et al. Sesamoids and accessory ossicles of the foot: anatomical variability and related pathology. *Insights Imaging* 2013; 4: 581-93. [\[CrossRef\]](#)
2. Milgrom C, Kaplan M, Lax E. Case Report 341. *Skeletal Radiol* 1986; 15: 150-3. [\[CrossRef\]](#)
3. Cross S, Rastogi A, Jalan R. The Land of Os: Accessory Ossicles of the Foot. Available from: <http://internationalskeletalsociety.com/getattachment/7e24b886-bd33-4d09-9d23-69c75126c8f7/EE34.aspx>.