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DEPARTMENT OF IMAGING SCIENCES

## Imaging Sciences Interesting Cases

### CASE 42

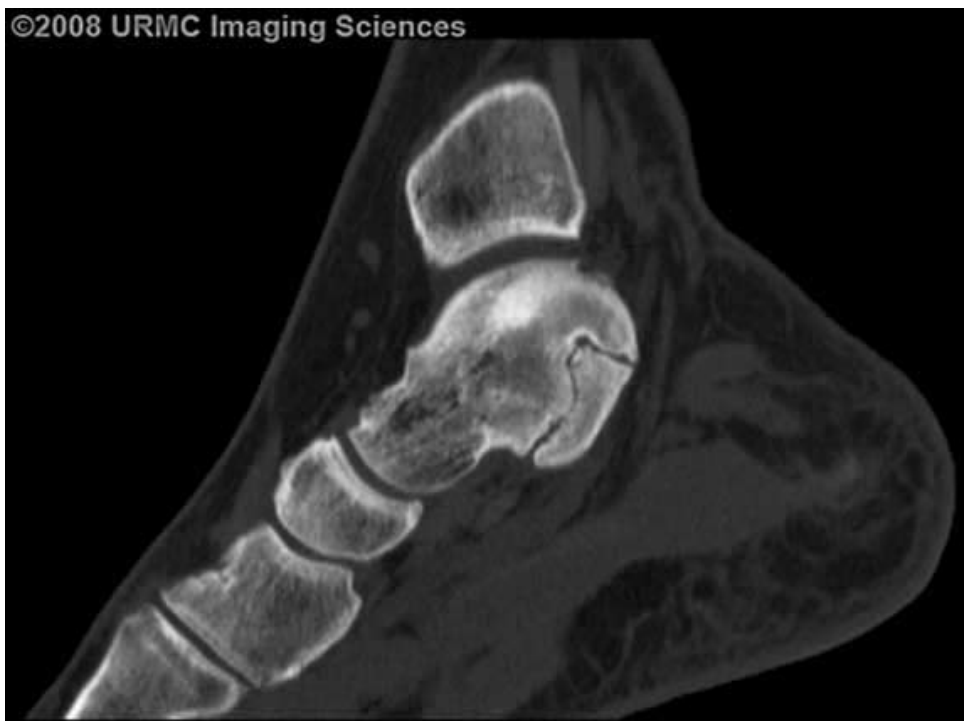
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**CLINICAL PRESENTATION:** A 28-year-old male presents with approximately one year of right ankle pain and swelling. He has decreased range of motion. He denies any recent trauma.

**IMAGING FINDINGS:** CT scan of the right ankle demonstrates significant narrowing of the anterior and middle subtalar facet joint with a thin band of fibrocartilaginous tissue separating the talus and calcaneus.



**Figures 1 and 2.** Axial CT images on bone window, demonstrates significant narrowing of the anterior and middle subtalar joint consistent with non-osseous tarsal coalition.



**Figures 3 and 4.** Sagittal CT images on bone window, demonstrates significant narrowing of the anterior and middle subtalar joint, the posterior portion of the joint is spared.

**DIAGNOSIS: Congenital Talocalcaneal Coalition**

**DISCUSSION:** Congenital tarsal coalition is an abnormal fusion between two or more tarsal bones and typically presents in the second decade of life with symptoms of pain and decreased range of motion. Patients may also be asymptomatic, and the discovery may be incidental. The true incidence is not entirely known but ranges from <1% to approximately 1-2% and males are slightly more affected than females.

The most common types of coalition are talocalcaneal and calcaneonavicular, accounting for 90% of cases. The remaining 10% of coalitions are made up of talonavicular, calcaneocuboid, and cubonavicular types. Additionally, there is further classification based on the type of bridging that occurs between bones, either

fibrous, cartilaginous or osseous.

Imaging analysis typically involves x-ray, CT or MRI, with CT and MRI useful to determine osseous from non-osseous subtypes and pre-surgical planning. Treatment consists of both operative arthodesis and non-operative management.

**REFERENCES:**

1. Newman JS, Newberg AH. Congenital tarsal coalition: multimodality evaluation with emphasis on CT and MR imaging. *Radiographics*. 2000 Mar-Apr;20(2):321-32; quiz 526-7, 532. [PubMed]