

Chronic progressive ankle pain

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Diagnosis

Accessory anterolateral talar facet

Discussion

In this case, MRI demonstrates the presence of an accessory facet of the talus, with overlying hyaline cartilage anterior to the lateral talar process. This facet is directly opposed to the surface of the calcaneal neck, which also has overlying hyaline cartilage, forming an articulation (Fig. 1). The cartilage along this accessory facet is in continuity with that of the posterior talar facet of the subtalar joint. There are small spurs at the margins of this accessory facet (Fig. 1a, b and d) with mild marrow edema on both sides of this articulation (Fig. 1c and d), indicative of an element of degeneration.

The clinical subtalar joint has three sets of articular facets between the talus and calcaneus, anterior, middle and posterior facets that can be separate or have different degrees of continuity between each other [1]. The posterior facet is the articulation between the posteroinferior aspect of the talar body and the posterosuperior aspect of the calcaneus. It lies immediately posterior to the sinus tarsi [2]. In 1904, Sewell first described accessory anterolateral talar facet (AALTF) as

facies externa accessoria corporis tali in a study describing the osteology of the talus [3]. The term facet has been used in the literature to describe one side of an articulation covered by a layer of hyaline cartilage in joints such as the subtalar and zygapophyseal joints. The AALTF spreads contiguously from the posterior facet of the talus anterior to the lateral talar process with a layer of articular cartilage observed on the surface of the accessory facet [4, 5]. AALTF was identified in 25–34% of the specimens in cadaveric studies [5–7]. An anterior calcaneal extension facet along the calcaneal neck opposing the AALTF was prevalent in 4% of the sample in a cadaveric study [5]. This study has also demonstrated that a large AALTF is found in 2.5% of the specimens [5]. A recent MRI study has found that AALTF is present in 32.7% of patients who have ankle symptoms and in 26% of asymptomatic volunteers [8]. AALTF can be symptomatic and has become increasingly recognized as a source of talocalcaneal impingement [5, 9, 10]. It is also associated with rigid flat foot deformity [4, 10]. The latter entity is diagnosed clinically by demonstrating restricted subtalar motion, which may be painful. Peroneal spasm or contracture may also be noted with passive inversion [9]. MRI and CT were used to identify the accessory anterolateral talar facet in several clinical studies [6–8]. Bone marrow edema at the talar or calcaneal side as well as sinus tarsi fat edema is significantly more prevalent in symptomatic patients with AALTF [8]. It has been shown that, intraoperatively, the accessory facet has an overlying hyaline cartilage layer, often with cartilaginous thinning, fibrillation or defects [4, 10]. Symptomatic patients not responding to conservative treatment can be treated surgically. AALTF resection with or without subtalar joint-sparing reconstructive procedures and soft-tissue reconstruction have been shown to provide good outcome with improvement in symptoms and function and improvement in the radiographic parameters associated with adult acquired flat foot deformity [4, 9, 10].

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Histologically, the resected facets demonstrated areas of normal hyaline cartilage with intermittent areas of chondral thinning and fissuring, early fibrocartilaginous changes and thickened subchondral bone with cyst formation [9]. The patient in the presented case has been seen by the ankle and foot specialist in our institution, and the clinician plan is to offer him a trial of local corticosteroid injection versus surgery (AALTF resection).

Compliance with ethical standards

Conflict of interest The authors declare that they have no conflict of interest.

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