

## Haglund's Disease: A Case Report

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### Abstract

### Case Report

Haglund's disease is a relatively under-appreciated pathology, linked to calcaneo-achilles impingement. The etiology is not well known, and may be confused with other causes of talalgia. We report the case of a 55-year-old patient presenting with painful ankle oedema. The diagnosis was evoked on a standard weight-bearing X-ray of the left ankle and on ultrasound, and confirmed by an MRI of the ankle, showing a fissure with signal abnormality of the achilles tendon in relation to the oedema associated with preachilean bursitis. Treatment, initially medical, resulted in surgical resection of the posterosuperior angle of the calcaneus with good clinical outcome.

**Keywords:** Haglund's disease, achilles tendon, ankle, standard X-ray, ultrasound, MRI.

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## INTRODUCTION

Haglund's disease refers to pain of the hindfoot of mechanical origin related to a conflict between the different elements of the retro-calcaneal region [1]. It is in fact a foot-shoe conflict linked to a morphological anomaly of the posterior-superior tuberosity of the calcaneus, with inflammatory retro-calcaneal and pre-achilles bursitis and achilles tendinopathy.

It is a disabling condition, particularly in sportsmen and women [2], and represents a little-known etiology of posterior talalgia [1]. Its clinical diagnosis is often a source of confusion, since the clinical picture may mimic other causes of hindfoot pain [3]. We report the case of a 55-year-old patient, presenting through a literature review the radio-clinical features and therapeutic aspects of this pathology.

## OBSERVATION

We report the case of a 55-year-old patient presenting with a painful swelling (Figure 1) of the left hindfoot, with mechanical posterior talalgia, exaggerated with footwear and unimproved by symptomatic treatment. The patient underwent; Standard profile radiograph of the ankle (Figure 2), which revealed a prominence of the posterior superior angle of the calcaneus. Ultrasound scan of the ankle (Figure 3) revealed pre achilles bursitis with tendon fissuring of the achilles tendon. Magnetic resonance imaging (Figure 4) confirmed the diagnosis, showing a ruptured achilles tendon with signal abnormality of the

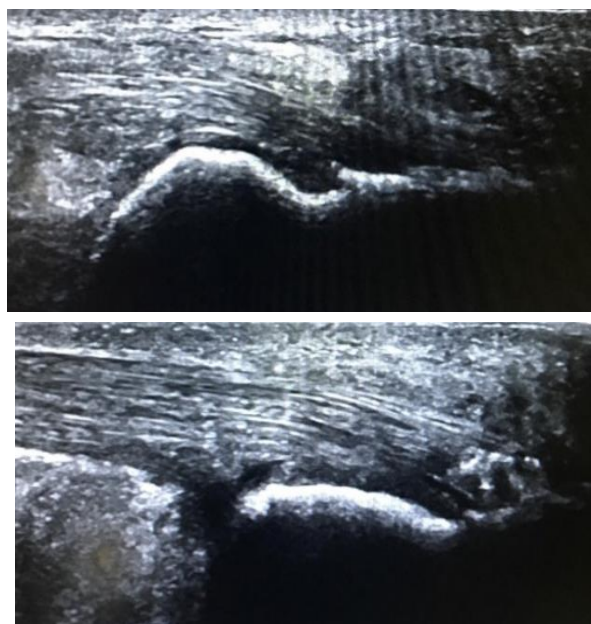
achilles tendon in relation to the edema associated with pre-achilles bursitis.



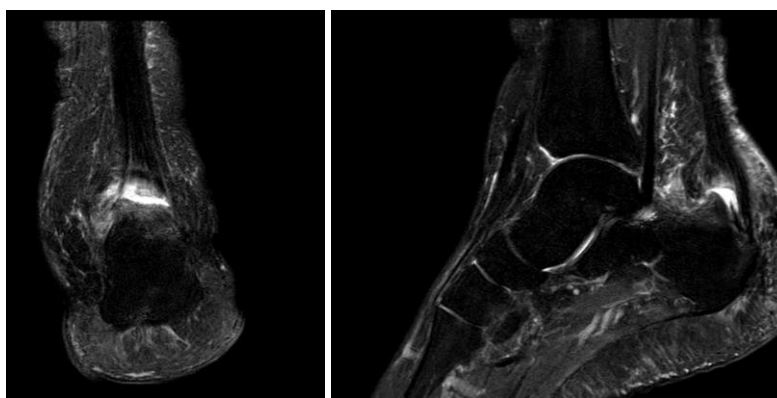
Figure 1: Swelling of the hindfoot corresponding to the posterior superior tuberosity of the calcaneus.



Figure 2: Standard radiograph of the left ankle: Swelling of the posterior superior tuberosity of the calcaneus



**Figure 3: Ankle ultrasound: Pre-achilles bursitis (blue arrow) with cracked achilles tendon (arrow)**



**Figure 4: MRI left ankle (sagittal and coronal), in STIR sequence: DP FS hyper-signal of distal Achilles tendon with discontinuity and pre-achilles bursitis (arrow)**

## DISCUSSION

Haglund's disease is a source of disabling posterior talalgia of mechanical origin involving inflammation of the retro-calcaneal bursa, supra-calcaneal bursa and Achilles tendon. Several etiopathogenic theories (dysplastic, rheumatic, traumatic and hollow foot) have been put forward [1,6]. From a pathophysiological point of view, Haglund's syndrome is linked to morphological changes in the retro-calcaneal region, incriminating above all a conflict between the deep surface of the Achilles tendon and the abnormally protruding and hypertrophied posterossuperior tuberosity of the calcaneus.

The clinical picture is dominated by a painful swelling of the heel, aggravated by walking, shoeing and dorsiflexion, sometimes associated with inflammatory signs. Standard radiography and ultrasonography are generally sufficient to make the diagnosis [1]. A standard weight-bearing profile X-ray of the ankle allows assessment of the hollow foot, if present, and confirms the prominence of the

posterossuperior angle of the calcaneus, often underestimated due to the presence of fibrocartilage not visible on X-ray. Radiographic angular measurements can be used to assess the verticality of the calcaneus and/or the extent of prominence (Fowler and Philip angle, Chauvaux and Liet angle) at the insertion of the Achilles tendon.

Ultrasound can reveal signs of soft-tissue irritation and compression, such as pre- or retro-Achilles bursitis, with a thick, hyper-vascularized wall on color Doppler. It can also be used to study the Achilles tendon, ranging from simple tendinopathy to rupture (cracking, intratendinous nodule, cystic degeneration and rupture) [1,7,8], and to monitor Achilles tendon lesions therapeutically. MRI, which is not obligatory but more effective than ultrasound, is used as a last resort to better analyse the state of the calcaneal tendon [1,7,8].

Before making the diagnosis of Haglund's disease, it is essential to rule out other pathologies

responsible for posterior ankle and heel pain. These include micro-traumatic or metabolic tendinopathies (hyperuricemia, dyslipidemia), inflammatory tendinopathies (ankylosing spondylitis, rheumatoid arthritis), calcaneal stress fracture or isolated retro-calcaneal bursitis [1, 6, 9].

Treatment of this condition primarily involves medical-physical means. Medical treatment, often initiated first, is based on non-steroidal anti-inflammatory drugs and peri-tendinous corticosteroid infiltrations, preferably under ultrasound control as in our patient. Local mesotherapy treatments are also available. Rehabilitation (physical treatment) focuses on transverse massage of the Achilles tendon and the use of ultrasound and cryotherapy [2].

Medical treatment often fails, even if it is maintained for several months. Surgical treatment is then indicated [7]. The latter allows removal of the bony protrusion, a source of conflict [1]. In addition to bone resection, depending on the case, excision of the calcaneal bursa or degenerative tendon lesions on the anterior surface of the tendon may be required. Our patient had undergone bone resection with excision of the bursa. Endoscopic calcaneoplasty is another treatment option in countries with a high level of medical care [7]. The postoperative course was unremarkable, although it is important to insist on a postoperative heel cup and, above all, to avoid any conflict with an aggressive shoe counter.

## CONCLUSION

Haglund's disease is a rare and often unrecognized cause of talalgia. It is linked to morphological changes in the retro-calcaneal region, causing conflict between the deep surface of the achilles tendon and the abnormally protruding posterior superior

tuberosity of the calcaneus. Diagnosis is based on imaging, with standard radiography and ultrasound usually sufficient to establish the diagnosis, and MRI to confirm it.

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