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# Haglund Syndrome: A Case Report

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**Abstract** **Case Report**

Haglund's syndrome is a poorly understood mechanical condition resulting from a conflict between a prominent posterosuperior tuberosity of the calcaneus and the shoe responsible for inflammation of the retrocalcaneal bursa, supracalcaneal bursa, and Achilles' tendon. Clinical evaluation and lateral radiographs of the ankle are usually sufficient to establish the diagnosis. In this article a case of haglund's syndrome has been reported in 52 year-old female patient with illustration and review of literature.

**Keywords:** Haglund's syndrome, retrocalcaneal bursa, prominent posterosuperior tuberosity, diagnosis.



## INTRODUCTION

Haglund syndrome also known as retrocalcaneal exostosis, Mulholland deformity, and 'pump bump'. is a common cause of posterior heel pain, characterized clinically by a painful soft-tissue swelling at the level of the achilles tendon insertion [1].

The diagnosis is often made clinically, with imaging confirmation made by noting the prominence of the calcaneal bursal projection as well as increased density in the deep and superficial pre-Achilles bursae on a standing lateral radiograph [3]

## CASE REPORT

We report the case of a 52 year-old female with a 4-month history of soreness and pain located in the Achilles area of the left foot, which increased with activity and shoe wear. On physical examination, there was a visible lump and tender swelling at the insertion of the Achilles tendon of the right heel with pain on palpation, ankle stability and foot joints were preserved, and the Thompson test was negative.

A lateral ankle radiograph showed small soft tissue swelling, ossifications in the thickened Achilles tendon suggesting tendinosis and a prominent posterosuperior osseous calcaneal tuberosity.

Sonographic evaluation of the left Achilles tendon was performed using a high-frequency with the patient prone. Sonographic evaluation demonstrated fusiform enlargement and inhomogeneity of the distal Achilles tendon with marked inhomogeneity of the tendon along its deep surface close to the enthesis, consistent with insertional tendinosis. The deep retrocalcaneal bursa contained complex hypoechoic fluid and a nodular echogenic soft tissue component consistent with retrocalcaneal bursitis.

Left ankle CT scan was performed showing prominent posterosuperior osseous calcaneal tuberosity and calcification of Achilles tendon.

A conservative treatment prescribed consisting of anti-inflammatory and analgesic agents.

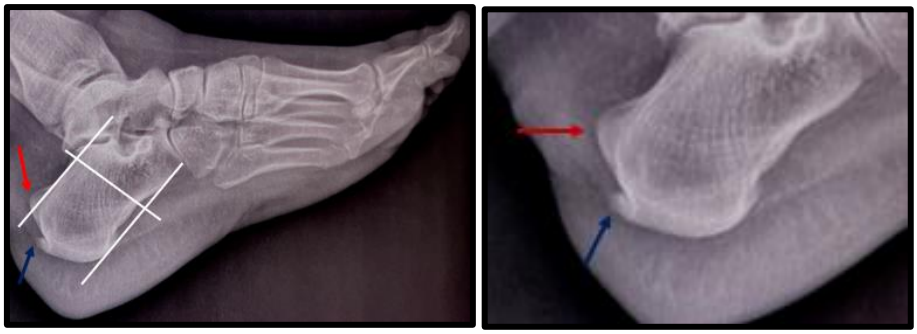

**Figure 1: Lateral radiograph of the left foot showing a prominent posterosuperior osseous calcaneal protuberance (blue arrow), and ossification in the thickened Achilles tendon (red arrow)**

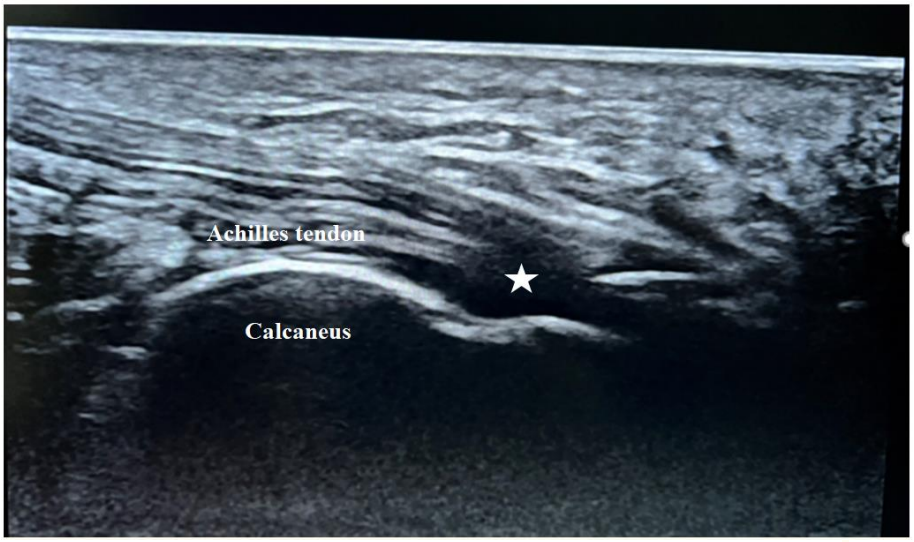


**Figure 2: Longitudinal extended field of view sonographic image shows hypoechoic distention of the retrocalcaneal bursa (*)**

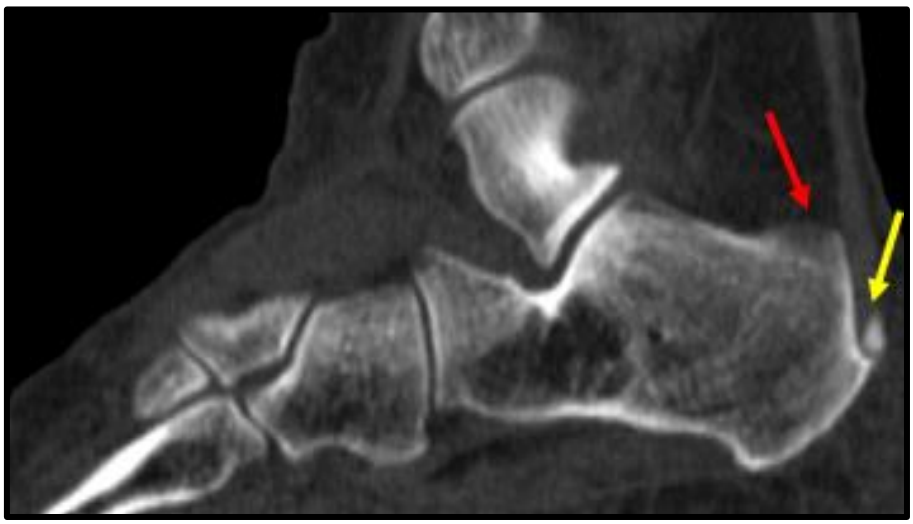

**Figure 3: Left ankle CT scan in sagittal view showing prominent posterosuperior osseous calcaneal tuberosity (red arrow) and calcification of Achilles tendon (yellow arrow)**

## DISCUSSION

Haglund's syndrome was first described in 1928 as retrocalcaneal bursitis in the setting of an abnormal protuberance of the posterosuperior border of the calcaneus, identified in the association with golf shoes, which have a hard posterior shoe contour [2].

Its pathogenesis is currently not well understood; some hypotheses emphasize the continuous contraction of the sural triceps, which results in the Achilles tendon and the retrocalcaneal bursa being pinched against the posterior- superior calcaneal exostosis [3]. Others suggest that the process starts with an external compression of the heel, which exerts pressure on the retrocalcaneal bursa, which in turn puts

pressure on the lateral part of the calcaneus, consequently, the calcaneal tuberosity increases in size in response to this persistent chronic irritation and the tuberosity in turn compresses the bursa and Achilles' tendon, causing a vicious cycle.

Clinically, a prominent calcaneal posterosuperior protuberance is observed, usually on the lateral side, often with swelling and regional inflammatory changes [4]. A rigid, plantarflexed first toe may predispose one to Haglund's deformity and retrocalcaneal bursitis by resulting in hindfoot varus [4]. In addition, prominent plantar osseous projections can also alter the bone–soft tissue interface of the hindfoot [5-7]. It may be difficult to distinguish Haglund's syndrome from other causes of hindfoot pain by physical examination alone, such as Reiter's disease, rheumatoid arthritis, or isolated local conditions such as superficial tendo Achilles bursitis secondary to poor shoe fit. Distinguishing the specific etiology of focal from systemic causes of posterior hindfoot pain is essential to initiating appropriate treatment [8-10].

Radiographic features includes a measurement method, (parallel pitch line) to confirm the presence of a prominent bursal projection and the Haglund's complex [2, 5]. When the posterior calcaneal border is prominent but subtle, objective measurement on the radiographic evaluation is important, to distinguish Haglund's syndrome from isolated retrocalcaneal bursitis, superficial tendo Achilles bursitis, or Achilles tendinosis. With more systemic conditions such as Reiter's syndrome or rheumatoid arthritis, retrocalcaneal bursitis is usually an isolated finding and more diffuse; additionally, associated erosive changes of the calcaneal bursal projection may be present [10-12].

Initial treatment consists of conservative measures including avoiding tight or high-heeled shoes, oral anti- inflammatory drugs, local corticosteroid injections and physiotherapy, If not effective, surgery is indicated by performing a retrocalcaneal bursectomy with osteotomy of the Haglund deformity[10].

## CONCLUSION

Haglund's syndrome is one of many etiologies of pain in the hindfoot, it is a diagnosis that is suspected clinically and confirmed by radiological findings, imaging is essential in confirming the diagnosis, eliminating differential diagnoses and orienting the surgical management.

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