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Retrocalcaneal Exostosis - Conservative or Surgical?

[1]Midun Kumar V*,[2]Vivek Kandasamy, [3]Hari Sivanandan M, [4]Vijayakumar C S,

[1]Post graduate resident, Department of Orthopaedics, Vinayaka mission's kirupananda variyar medical college and hospitals, MRFDU, Salem.

[2]Assistant professor, Department of Orthopaedics, Vinayaka mission's kirupananda variyar medical college and hospitals, VMRFDU, Salem.

[3]HOD & Professor, Department of Orthopaedics, Vinayaka mission's kirupananda variyar medical college and hospitals, VMRFDU, Salem.

[4]Post graduate resident, Department of Orthopaedics, Vinayaka mission's kirupananda variyar medical college and hospitals, VMRFDU, Salem.

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KEYWORDS

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ABSTRACT:

In 1927, Patrick Haglund made the first description of retrocalcaneal exostosis. It is also known as "pump bump", and Mulholland deformity. Even though it's a very common clinical disease, not much is understood about it. Haglund's deformity is a deformation of the soft tissues and bone of the foot. The Achilles tendon is implanted in the heel's bony region, and this condition is caused by an extension of that area. When the large, bony protrusion rubs against rigid shoes, it may irritate the soft tissue in the rear of the heel. Although the precise etiology of the ailment is unknown, a number of plausible possibilities, such as hereditary, a high foot arch, and a taut Achilles tendon, have been put up. Middle age is the most common age for affection, with females affected more often than males and bilateral occurrences occurring most often. One of the clinical features of the illness is ankle soreness that gets worse at rest. For the most part, Haglund's condition can be diagnosed via lateral ankle radiographs and clinical evaluation. Conservative approaches to treating Haglund's illness sometimes include orthoses, physical therapy, anti-inflammatory drugs, and shoe heel height adjustments. Surgical exostoses of the calcaneum are only required in cases of resistance.

INTRODUCTION AND BACKGROUND

Patrick Haglund originally described Haglund's malformation in 1927 [1]. Other names for it include "pump bump," Mulholland deformity, and retrocalcaneal exostosis. Despite being a highly prevalent clinical illness, little is still known about it. The exact cause of the condition is unknown, however a number of likely explanations, including a tight Achilles tendon, a high foot arch, and inheritance, have been suggested. It typically strikes middle-aged adults, more often affecting women than men, and is bilateral. It is typified by heel pain in the back, especially after rest. For the most part, lateral ankle radiographs and clinical assessment are sufficient to diagnose Haglund's syndrome. Retrocalcaneal bursitis and related Achilles tendonitis may be the cause of the discomfort [2].This disorder can mimic other conditions such as plantar fasciitis, isolated retrocalcaneal bursitis, and seronegative spondyloarthropathies that produce discomfort in the rear foot [3].

Conservative measures for treating Haglund's condition frequently include orthoses, physiotherapy, anti-inflammatory medications, local steroid injections, and changing the heel height of shoes. Only in cases of resistance is surgical removal of the calcaneum's bony exostoses necessary.

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REVIEW

Haglund's deformity is an irregularity of the posterosuperior region of the calcaneus, where the Achilles tendon attachment is located. This bony bump can cause irritation to the surrounding soft tissues when it brushes against stiff shoes. It frequently results in thickening and inflammation of the calcaneal tendon, retrocalcaneal bursitis, and calcaneal tendon bursitis. Haglund's syndrome is the name given to this mix of pathologies. An isolated condition may result from inflammation of the various soft tissue components in the region; however, these disorders should be distinguished from one another due to the differences in available treatments.

CAUSE

Although the problem is primarily idiopathic, a number of contributing variables, such as excessive running practice, shoes that are too tight or too loose, or changes in the biomechanics of the foot joints due to the misaligned subtalar joint, may be involved [4].

HISTORY

The presenting feature is posterior heel pain. It might be connected to edoema and limping. When the sufferer gets up from a rest, the discomfort is immediately apparent. This requirement could be bilateral or unilateral. It is important to take into account any history of rheumatologic diseases such as seronegative spondyloarthropathies, gout, or rheumatoid arthritis. [5]

PHYSICAL EXAMINATION

A bump is seen on the posterior heel

There could be swelling, warmth, redness, and soreness over the back of the heel as indicators of inflammation. It could be able to distinguish between inflammation that is prior or posterior to the Achilles tendon with a thorough physical examination.

RADIOGRAPHIC EVALUATION

These individuals exhibit calcaneal bursal swelling, increased density in pre-Achilles bursae, and a bony prominence (Haglund's lesion) at the posterosuperior region of the calcaneal tuberosity in a lateral radiograph [6]. These results might be linked to the development of a calcaneal spur and heterotopic bone production within and at the Achilles tendon's insertion. Haglund's syndrome is frequently diagnosed using the patient's medical history and clinical observations; radiographic alterations may also provide further information. Particularly in the early stages, there are no precise radiological criteria for identifying Haglund's lesion. On simple radiographs, however, certain angles have been described [7-8].

In doubtful circumstances, a magnetic resonance imaging (MRI) scan is performed. Achilles tendon impingement and posterosuperior calcaneal spurs are visible. Together with thickening and high signal in the Achilles tendon's insertional fibres and edoema in the adjacent retro-Achilles fat pad, there may be related synovial thickening and collection in the retrocalcaneal bursa. These results are all in line with retrocalcaneal and retro-Achilles bursitis caused by Achilles tendinosis [9].

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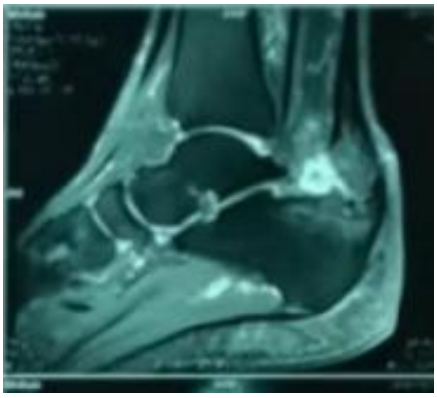


DIFFERENTIAL DIAGNOSIS

It may be possible to distinguish this illness from conditions that mirror it, such as isolated calcaneal bursitis, insertional Achilles tendinosis, plantar fasciitis, and avulsion of the calcaneal tendon, by detecting localised soreness around the heel.

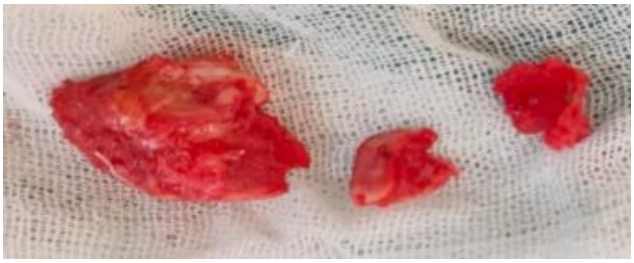
TREATMENT

Conservative methods include reevaluating the patient's shoe and, in the event of high arched feet, using heel lifts or padding [10]. An ice bag may be required to treat swelling, and casting may be required to reduce pain. Physiotherapy, stretching exercises, and oral or topical anti-inflammatory medications can all help release tension in the calcaneal tendon. In cases of resistant patients, local perilesional steroid injections are also utilised [11].

Surgical procedures such as retrocalcaneal decompression, calcaneal ostectomy, or osteotomy are utilised if conservative therapy fails [12]. The symptoms may return if insufficient bone excision is performed [13].

The following is the surgical method. A longitudinal lateral incision is made 1 cm lateral to the Achilles tendon and extends distally from 3–4 cm proximal to the superior tuberosity of the calcaneus to 2-3 cm distal to it following the administration of general or regional anaesthesia. The Achilles tendon is located by sharp and blunt dissection after the ankle joint is plantarly flexed. Between the Achilles tendon and the superior and posterior borders of the calcaneal tuberosity is a right-angled retractor. Without elevating any of the Achilles tendon off the calcaneus, the superior border of the calcaneal tuberosity and the retrocalcaneal bursa are both visible.

To properly resect the bone, it might be essential to raise a 1-2 cm-long segment of the Achilles tendon due to its substantial insertion into the posterior and plantar portions of the calcaneal tuberosity. Using an osteotome, the superior side of the tuberosity is excised after the retrocalcaneal bursa has been removed (Figure (Figure5).5). This resection is made easier by the multiple drill holes that have been placed along the planned osteotomy site. If there is intratendineal calcification, it needs to be taken out. After applying a well-padded, short leg, non-weight-bearing cast, the ankle is placed in a plantar flexion position of about 20 degrees.



The non-weight-bearing cast is left on for three weeks after the cast and sutures are taken out at two weeks. Following the application of a weight-bearing cast boot that can be removed, active exercises for dorsiflexion and plantar flexion are started. Preoperative counselling should include an explanation to a young woman with a pump bump that she may not be able to wear fashionable shoes for three to six months, and there is no guarantee that she will be able to do so comfortably [14].

Achilles tendon avulsion, chronic posterior heel discomfort, wound breakdown, nerve damage (medial calcaneal sensory nerve and sural nerve), ankle stiffness,

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and incisional neuroma are among the surgical consequences that have been documented [15].

CONCLUSION

Adults frequently have pain in their hind feet due to Haglund's syndrome, a clinical disorder that is still not well understood. Surgery is only necessary in cases that do not respond well to conservative therapy.

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