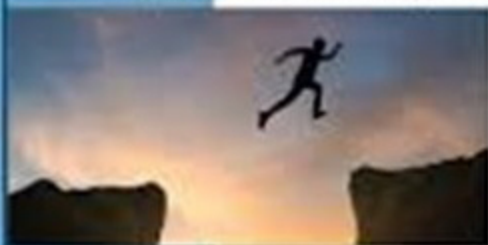


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Treating Haglund's Deformity with percutaneous Achilles tendon decompression: a case series

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Summary

Introduction: Haglund's syndrome is a deformity of the posterior-superior and lateral heel-shaped profile commonly associated with inflammation of the retro-calcaneal bursa and characterized by pain and swelling. Aim of the study was to evaluate the reliability and effectiveness of minimally-invasive percutaneous surgical procedure for Achilles tendon decompression.
Methods: From January 2014 to April 2016, a total of 21 consecutive patients with Haglund's deformity (15 men, 6 women, mean age of 48 years) were enrolled. The regularization of calcaneus profile and bursectomy were performed in all cases. The results were evaluated both clinically with American Orthopaedic Foot and Ankle Society hindfoot score (AOFAS hindfoot), Visual Analog Scale (VAS) before surgery and at 6 months' follow-up. Radiographic results were also collected using

Fowler-Philip before the surgery and six-month follow-up.

Results: The average AOFAS hindfoot score increased from 50.57 to 87.42 ($p<0.0001$), VAS score decreased from 6.85 to 0.19 ($p<0.0001$) and the mean Fowler-Philip angle decreased from 75.57° to 53.75° ($p<0.0001$). In our series, no complications were observed and all patients were satisfied at last follow-up.

Conclusions: Our results suggest that Achilles decompression by percutaneous approach for painful Haglund's deformity is a reliable and effective surgical procedure.
Level of evidence: IV.

KEY WORDS: Achilles tendon decompression, Haglund's deformity, minimally-invasive, percutaneous surgery.

Introduction

In 1906 Haglund described a condition of heel deformity, called "bump heel", clinically characterized by deformity and painful swelling at the level of posterior and lateral portion of the calcaneus, where Achilles tendon takes its bony insertion^{1,2}. The position of osseous deformity is involved in inflammation of retro-calcaneal tendon bursa and subsequent Achilles tendinopathy^{3,4}. This condition commonly affects women and athletes, in particular runners⁵. Haglund's deformity may be a difficult and persistent problem and conservative treatments is often inadequate. The surgical approach is commonly indicated when conservative care fails⁶.

A lot of surgical techniques were reported such as open, percutaneous or arthroscopic approach. These surgical procedures are usually aimed to remove distal part of the calcaneus up to the insertion of the Achilles tendon and the inflamed retro-calcaneal bursa⁷. The right amount of bony decompression is correlated with clinical outcome. On one side, an inadequate or incomplete osteotomy often requires revision surgery, on the other side an excessive osteotomy may be cause of gastrocnemius and soleus muscular complex weakening⁸.

In our research, we adopted a percutaneous surgical approach to treat painful Haglund's deformity. Using a minimal skin incision, percutaneous techniques grant less soft tissue damage and less risk of wound and septic complications^{9,10}.