

Surgical Possibilities in Haglund Syndrome and Achilles Insertional Tendinopathy

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The first part of the video shows an example of a patient with Haglund syndrome of the right foot. The right foot is characterized by a posterior calcaneal spur. A lateral radiograph of the affected foot demonstrates the typical Haglund deformity localized at the posterior apex of the calcaneus. The green line shows the planned surgical resection. Spinal anesthesia is performed, and a tourniquet is placed at the groin of the affected limb for the entire procedure. The patient is placed in the lateral decubitus position with a cushion under the medial malleolus. A 5-cm para-Achilleal incision is performed laterally to the insertion of the Achilles tendon. Surgeons must not cut the sural nerve that runs 1 cm posteriorly to the lateral malleolus. Blunt dissection of the subcutaneous tissues is performed to reach the bone. The Kager triangle is cut, and the subcutaneous bursa is removed. The Achilles tendon insertion is detached from the posterior tuberosity of the calcaneus without interrupting tendon continuity by using retractors. After the posterior calcaneal tuberosity is isolated, bone resection is performed with the use of a 2-cm oscillating saw. The resection is completed with the use of an osteotome, and the remaining adhesions are severed. Impingement between the tendon and the posterior tuberosity of the calcaneus is assessed. The bone edges are then regularized with the use of a saw and a rongeur to attain a smooth surface. Any débridement from the surgical site is washed out at the end of the procedure. Intraoperative clinical tests are performed to determine if any impingement remains. The success of the procedure is confirmed via intraoperative fluoroscopy. The deep layer is sutured with the use of absorbable 2.0 thread, and the skin is stitched with 3.0 nylon. After 3 weeks, the stitches are removed, and a negative Thompson sign shows continuity of the tendon.

The second part of the video shows a patient with painful calcified insertional Achilles tendinopathy. A lateral radiograph demonstrates a calcaneal spur. The green line shows the planned surgical resection. The patient is placed in the prone position on the surgical table, with the foot overhanging the edge of the table. Skin landmarks include the contour of the distal Achilles tendon and the calcaneal tuberosity. A 6-cm trans-Achilleal incision is performed, centered on the Achilles insertion. The Achilles tendon is split into two halves. Its insertion is carefully detached from the calcaneal tuberosity with the use of a blade, ensuring its integrity is not altered and protecting the surrounding structures with the use of retractors. A Haglund deformity and intra-tendinous calcification are appreciated. A 2-cm osteotome is used to resect a generous portion of bone to correctly decompress the distal aspect of the Achilles tendon. With the use of an oscillating saw, the bone edges of the calcaneus are then regularized to attain a smooth surface. Fluoroscopic images show appropriate débridement and the absence of impingement. A Thompson test is performed to assess the continuity of the tendon. The tendon is then sutured with the use of simple absorbable No. 2 thread. The wound is closed with the use of 3.0 nylon. At the end of the procedure, the wound is dressed, and a plaster boot cast with an open anterior side is applied. The patient is not allowed to bear weight for 3 weeks postoperatively.

The third part of the video shows a patient with insertional Achilles tendinopathy and severe intratendinous calcification. A lateral preoperative radiograph demonstrates impressive intratendinous calcification at the insertional site of the tendon. The patient is placed in the prone position. A 7- to 8-cm trans-Achilleal skin incision is performed, centered on the Achilles tendon insertion. The Achilles tendon is split in two halves, and then its insertion is carefully detached from the bone. The 4-cm intratendinous calcification is isolated. The calcification is carefully removed without damaging the surrounding tissues. A 2-cm osteotome is used to tangentially resect the posterior tuberosity relative to the plane of the tendon. A saw is used to regularize the calcaneal edges. Fluoroscopic images show appropriate resection of the calcaneus. Because of Achilles tendon tissue loss as a result of the intratendinous calcification, transfer of the flexor hallucis longus tendon to the posterior apex of calcaneal tuberosity is necessary. The flexor hallucis longus tendon is carefully isolated with the use of scissors from the posteromedial district of the ankle. The tendon is isolated and detached from the tarsal tunnel and the [tendon sheath](#) with the use of surgical scissors. The tendon is detached proximal to the Henry knot with the use of scissors, at the location at which the flexor hallucis longus tendon and the flexor digitorum longus tendon meet. The flexor hallucis longus tendon is basted with No. 1 absorbable thread. The posterior vascular-nervous bundle composed of tibial nerves and posterior tibial artery and veins can be appreciated. These important structures should not be damaged. Using a drill, a tunnel is created in the apex of the calcaneus tuberosity, and the flexor hallucis longus tendon is transferred through that tunnel. After correct tension is attained, the tendon is fixed to the calcaneus with the use of an interference absorbable screw. During the procedure, surgeons must plantarflex the foot to maintain appropriate tension. The flexor hallucis longus tendon will strengthen the function of the Achilles tendon. The tendon is sutured, and the wound is closed. Final fluoroscopic images show appropriate débridement of the foot and the site of the transferred flexor hallucis longus tendon fixed with the screw. The wound is dressed, and a plaster boot cast with an open anterior side is applied with the foot in gravitational equinus. Weight bearing is postponed for 4 weeks postoperatively.