

# A MODIFICATION FOR OPEN HEEL SPUR SURGERY

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While heel spur surgery has had its share of popularity over the years, it has not been performed with such eagerness in the more recent past. The number of heel spur surgeries seemed to decline through the 1980s, until the introduction of endoscopic plantar fasciotomy (EPF) techniques sparked a new interest in the field. The decline in utilization of traditional heel surgery techniques is usually attributed to an increased recognition of complications and a less than predictable degree of success.

While such bizarre complications as iatrogenic fracture of the calcaneus have been described, the most undesired complication of heel spur surgery has been arguably produced by incisional entrapment of the medial calcaneal nerve. The resultant neuralgia, chronic pain, and possibility of Reflex Sympathetic Dystrophy have been significant enough complications to dampen many surgeons' interest in heel spur surgery.

The standard medial approach for heel spur surgery consistently transects major fibers of the medial calcaneal nerve. This approach, combined with a relatively "blind" identification of the calcaneal spur and release of fascial attachments, have often left the surgeon feeling relatively unrewarded after completion of the relatively "crude" surgical technique, let alone truly surprised the find the spur still projecting from the plantar surface of the calcaneus following a valiant effort to remove the offending structure with multiple "guided" strokes of a coarse-toothed rasp.

Hence, the continued search for a "new and better way to do things". The technique to be described has been discussed and performed by several of the Podiatry Institute faculty members and offers several advantages and refinements in surgical technique.

## SURGICAL TECHNIQUE

The skin incision is placed lower than the traditional technique, and runs obliquely across the plantar-medial condyle with the distal extent of the incision crossing the plantar fascia approximately 3-4 centimeters distal to the primary plantar fascial attachment. At this specific location, the distinct band of the plantar fascia is readily palpated and is covered by a relatively thin layer of subcutaneous tissue, just distal to the more dense plantar heel pad. Blunt dissection at this point readily identifies the main band of the plantar fascia, which can be easily followed proximally to the plantar surface of the calcaneal attachment. The plantar heel pad is literally flapped away from the inferior surface of the calcaneus.

Dissection through the subcutaneous layer at the proximal end of the incision definitely crosses fibers of the medial calcaneal nerve. While anesthesia inferior to the incision line is a consistent finding, no significantly painful entrapment has been encountered to date. This clinical finding is attributed to sectioning of the nerve fibers at a more distal point, with disruption of finer more distal fibers, rather than specific nerve bundles or branches.

Once the medial edge of the plantar fascia is identified, it is followed proximally to its insertion in the calcaneus. The fascia is detached from the inferior aspect of the calcaneus under direct visualization and the plantar spur is grossly visualized. The spur can be directly resected with a rongeur and smoothed with a rasp. Repair of the fascia can be performed at the discretion of the surgeon, and the use of a suction drain device with closure is also optional (Figs. 1-6).

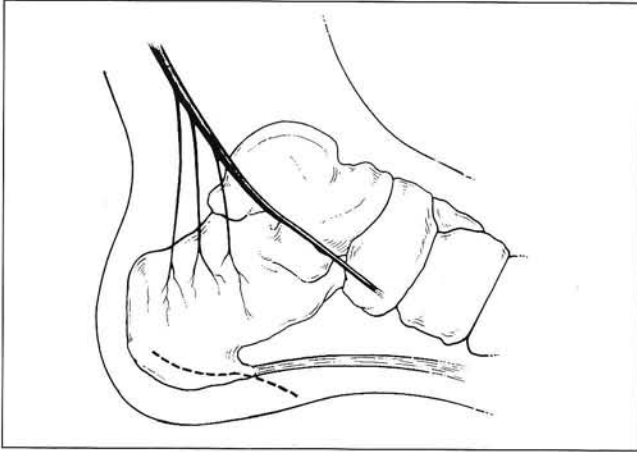


Figure 1. A planned oblique plantar-medial incision crosses the terminal fibers of the medial calcaneal nerve. Direct access to the plantar spur is accomplished by following the plantar fascia proximally, and flapping the plantar heel pad inferiorly. The fascia can be detached under direct visualization, and the calcaneal spur is also resected under direct view.

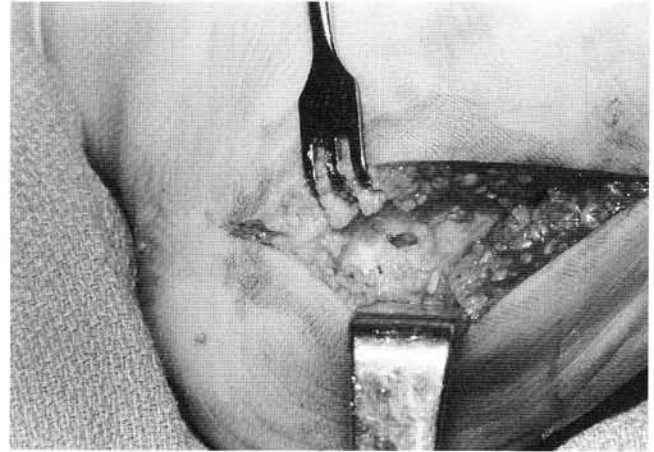


Figure 2. Access to the plantar heel spur is gained through an oblique plantar medial incision. Reflection of the subcutaneous layer reveals the superior medial edge of the plantar fascia. An initial incision has been made to begin reflection of the fascia from the inferior surface of the calcaneus, under direct visualization.

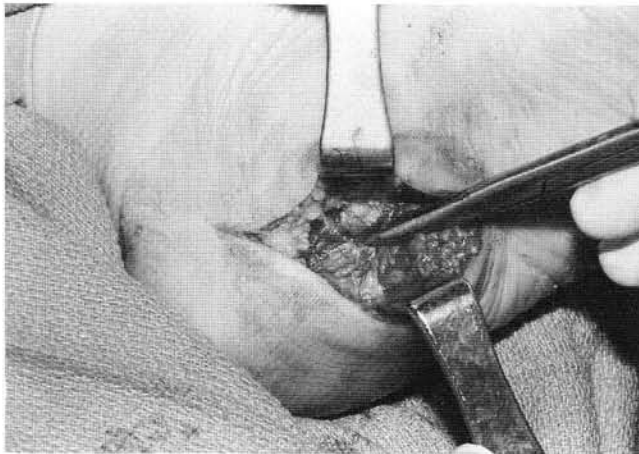


Figure 3. The plantar fascia has been reflected, revealing the projection of the plantar calcaneal spur. The tip of the scissor lies above the superior surface of the spur, between the notch created by the spur and the plantar surface of the calcaneus.

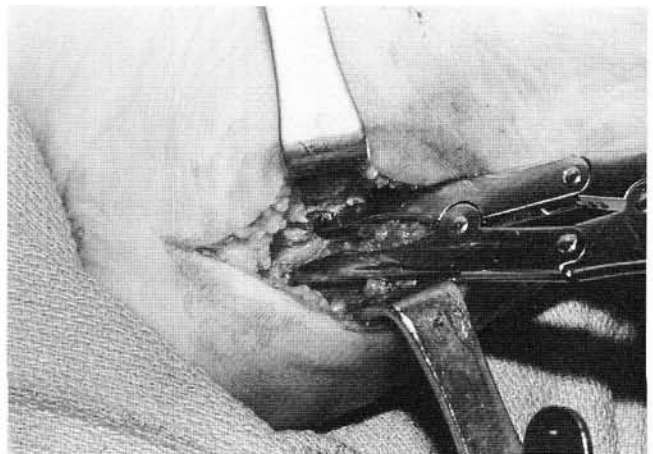


Figure 4. The jaws of the rongeur close down on the obvious calcaneal spur. Again, the spur is clearly visualized and resected under direct observation, avoiding inadvertent fracture into the plantar surface of the body of the calcaneus.

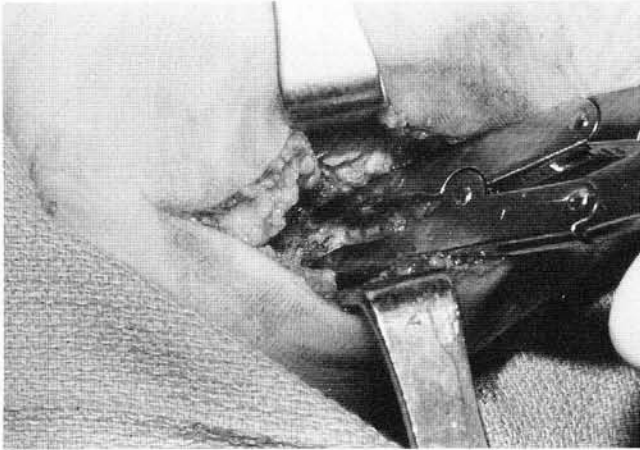


Figure 5. Continued resection across the inferior aspect of the calcaneus.

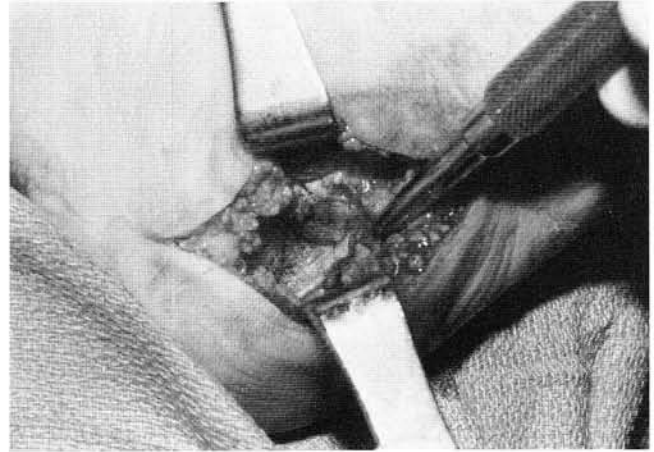


Figure 6. Smoothing of the inferior surface of the calcaneus with a rasp.