QUESTIONS | ANSWERS:

What would you do if you ruptured your achilles?
This is an excellent question. The answer is that if diagnosed immediately and treated in an equinus boot, I feel the outcome is similar to operative treatment, as the literature shows. I therefore would likely treat myself non-operatively as long as it was a midsubstance tear and NOT a distal avulsion. I am 50 years old, but I am an avid tennis player so I need my explosive push-off strength!!

Current thoughts on cortisone into achilles tendon around insertion into calcaneum for effusion.
Studies report achilles ruptures with cortisone injections around the tendon. In rare cases with retrocalcaneal bursitis, the bursa can be injected, but I would only consider doing this once and I would not repeat the injection.

Treatment details: What about getting access to the wound for dressing changes, risks of removing the boot etc.
When accessing the wound, the patient is placed prone on the table and the boot removed keeping the ankle in equinus. I advise not to remove the boot for six weeks, only to change the liner, and only after I show them how to do it in my consulting rooms.

When treating an achilles non-operatively, how long is the boot left on? To sleep in it? Can Hydrotherapy be done with boot on or off?
When treating the achilles non-operatively the protocol is the same for operative and non-operative. So the boot is on for six weeks in equinus, then brought to neutral over two weeks. Hydrotherapy is fine in the boot (the one I use is waterproof) when weight bearing is allowed. The boot remains on.

What degree of equinus does the ankle require for acute achilles tendon rupture if you don't have a specialised boot that you can "dial up"?
Is there any difference in achilles outcomes when prescribed $250 ROM boot or $70 boot.
The choice of boot used for non-operative or operative treatment should not affect outcomes as long as the device is used properly and serves its purpose. The boot should allow for adequate equinus. This may involve a "dial up" boot to change the angle or using heel lifts that raise the heel within the boot. There is no specific angle of plantarflexion. The position I put the ankle into is about 30 degrees plantarflexion. The boot can be removed for changing liners or to check wounds but only when the patient is lying down the ankle is kept in plantarflexion as to not interrupt the healing tendon.
When treating a patient non-operatively, it is very important that the boot stays on AT ALL TIMES, sleeping as well, to keep the two ends of the achilles tendon tear apposed. I allow weight bearing at two weeks and patients are allowed to walk in the pool with the boot on at two weeks. The boot should remain on for the first six weeks to keep the ankle in the equinus position.

Does the site of TA injury influence the decision for surgery?
When a TA rupture is midsubstance, treatment and decision making is not influenced by whether it is proximally, midsubstance or distal. A high suspicion of an avulsion from the calcaneus should exist when the tear is distal or when there is a bony fragment on x-ray and should warrant either further investigation with an MRI or leaning toward operative treatment to explore the tear. In the event that the tear is a distal avulsion rupture, repair may be requiring anchors in the bone.

Does treatment for partial tears differ?
How would you vary treatment for partial achilles tendon tears (if you would vary at all)?
An achilles rupture is defined as partial by clinical examination and not by investigations. When a patient can single heel raise fully and there is tenderness over the midsubstance achilles and no defect, I would consider this a partial tear. Treatment is non-operative and would involve immediate weight bearing in a camwalker boot in equinus for four weeks followed by adjusting the boot sequentially to neutral and then discontinuing. Further physiotherapy is done to return to normal function.

Heel rise work test. How many repetitions should be done in the test?
The patient raises on one foot up on the heel to full height then drops down to the floor every two seconds. The number of raises are counted and the counting stops when the patient is unable to keep up the frequency or unable to perform a full heel raise.

Was poorer rehab a factor in re-ruptures in non-operative treatment?
With traditional non-operative treatment of non-weight bearing in plaster for six to eight weeks, older studies revealed a higher re-rupture rate compared to surgical treatment of 12.6% compared to 3.5%. With the more recent use of functional rehabilitation with non-operative treatment the re-rupture rates in the non-operative group have decreased and are similar to the rate in surgical treatment. The main factor for the improvement is thought to be the incorporation of movement and its positive effects on tendon healing.

Poor outcomes after non-operative treatment or missed ruptures?
What can you do if someone is treated non-operatively and remains weak?
When someone returns with weakness, the question is whether they have not rehabilitated enough or if the tendon is long. This is very hard to tell, since at three to six months, ALL patients are weak until they strengthen the achilles. If adequate physio and time has passed i.e. three to six months without progress, then surgery to shorten the achilles tendon and supplement with a flexor hallucis longus transfer to the achilles is indicated. Adding an extra muscle of the calcaneus with increase strength of push off.

When is it too late to treat an achilles non-operatively?
My cut-off period is three days. If patients are not immobilised in equinus within three days I think they need an operation.

Can an achilles tendon be repaired if it is missed?
An achilles can be repaired primarily up to six weeks after rupture. So yes, it can be repaired if missed. If it presents longer than six weeks, it still can be repaired, but may require a formal release of the muscle. We call this a VY advancement. A flexor hallucis longus transfer to the calcaneus also may be needed to add strength of push-off.

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