Insertional Achilles Tendinitis

What is it?
This is a degeneration of the fibers of the Achilles tendon directly at its insertion into the heel bone. It may be associated with inflammation of a (retrocalcaneal) bursa or tendon sheath in the same area.

Symptoms and Clinical Presentation
Most patients report the gradual onset of pain and swelling at the Achilles tendon insertion into the back of the heel bone without specific injury. At first, the pain is noted after activity alone, but becomes more constant over time. The pain is made worse by jumping or running and especially with sports requiring short bursts of these activities. There is tenderness directly over the back of the heel bone and often there is a bone prominence at this area. Positioning the ankle above a 90 degree position is limited by pain.

Cause (including risk factors)
The cause is primarily a degeneration of the tendon. The average patient is in their 40’s. Conditions associated with increased risk include psoriasis and Reiter’s syndrome, spondyloarthropathy, gout, familial hyperlipidemia, sarcoidosis and diffuse idiopathic skeletal hyperostosis as well as the use of medications such as steroids and fluoroquinolone antibiotics.

Anatomy
The Achilles Tendon is the largest tendon in the body. It is formed by the merging together of the upper calf muscles and functions to bend the knee, point the toes down, as well as to slightly roll the heel to the big toe side of the foot. It inserts into the back of the heel bone. There may be a shelf extending off the back of the heel bone at the insertion site as well as a prominence of the heel bone in this area referred to as a Haglund's deformity which can cause mechanical irritation of the Achilles tendon. Just as nose sizes and shapes vary, so there can be variations in the size and shape of these bone variations.

Diagnosis
This remains primarily a clinical diagnosis. X-rays may show calcification deposits within the tendon at its insertion into the heel approximately 60% of the time and their presence is associated with a more guarded success rate for nonsurgical treatment and a much longer recovery time if surgery is performed. X-rays may also demonstrate the Haglund's deformity.

Magnetic resonance imaging (MRI) remains the imaging modality of choice, because it can determine the extent of tendon degeneration as well as other factors such as bursitis which may contribute to posterior heel pain.

Treatment Options

Non-Surgical Treatment Options
Conservative non-surgical treatment remains effective in the majority of patients with liberal use of nonsteroidal anti-inflammatory drugs, heel lifts, stretching and shoes, which do not provide pressure over this area. If symptoms persist, then night splints, arch supports and physical therapy may be of benefit. If this fails, then application of a cast or brace with gradual return to activity is indicated. Nitroglycerin patches may also be of benefit in an attempt to increase the blood supply to this area.

Surgical Treatment Options
Surgical treatment is indicated if there is failure of several months of nonsurgical treatment. Surgery removes the degenerative portions of the tendon, any bone which is irritating the tendon as well as any inflamed bursa tissue. If the tendon is short, then lengthening may also be necessary. The tendon attachment to the heel bone may need to be strengthened with sutures which attach directly into the bone.

Several different approaches and techniques including endoscopy are used to achieve these goals without a clear consensus regarding which is best in terms of both success as well as complications. In older patients or those in whom more than 50% of the tendon is removed, then one of the other tendons at the back of the ankle is usually transferred to the heel bone to assist the Achilles Tendon, with strength as well as provide a better blood supply to this area.
**Recovery**

After surgery, a splint is worn for 2 weeks in a toe down position to allow wound healing. Once the wound begins to heal, weight-bearing in a cast or brace in a toe down position as well as range of motion exercises are started. Actual physical therapy is started at 4-6 weeks. Return to athletic activities usually occurs between 8 to 12 weeks, depending on the amount of detachment of the tendon at the time of surgery. If another tendon is transferred, then recovery may take longer. Some patients may require 1-2 years to recover following both surgical and non-surgical treatment.

**Outcome**

Good to excellent results after surgery are about 75%.

**Complications**

Because of the poor blood supply to the skin and tendon in this area, the greatest risk following surgery is that of wound complications, infection and tendon detachment.

**Frequently Asked Questions**

**Wouldn't a cortisone injection help?**

Cortisone injections are not recommended for the treatment of these types of problems of the Achilles tendon because it can lead to death of the tendon and make it much easier to rupture.

**Additional Resources**

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