Peroneal tendon pathology offers many challenges. Often patients have vague histories and a constellation of symptoms that may not clearly point to the source of pathology. Combine that with imaging studies that may be puzzling to interpret and we have a set up for less than stellar outcomes.

In the talk today we will assume that the amalgam of clinical and radiographic tests point to a diagnosis of peroneal tendon tears. We will also assume the decision to move forward with surgery if based on that information. The extent of the damage and prior surgical history will be vital in your decision making process. Patients with prior multiple procedures will need to be consulted on the possibility of additional procedures or the need to possibly stage procedures.

The concept that simple injuries would require simple intervention applies to the majority of peroneal tendon pathology. Simple tears of the tendons or inflammation should be treated with tenosynovectomy and debridement with repair. The authors preferred method of repair to the peroneal tendons is core stitches of 3-0 absorbable sutures with an over sew of 3-0 absorbable monofilament suture. Of course if the tendon is irreparable, a simple debridement may be considered if more then 50% of the healthy tendon’s maintained.

As injury patterns become more complex, or multiple prior procedures have been done, then more involved reconstructions may become necessary. We feel that prior surgical history may be one of the most important pieces of information to discuss with the patient. Often prior procedures may have created extensive scarring or complete loss of one of the peroneal tendons. If possible, surgical dictation from the prior procedures should be obtained.

When both peroneal tendons are torn, it is essential to gather as much information as possible about the extent of tearing. In addition to plain radiographs, MRI and ultrasound modalities are often useful in determining the extent of damage to the tendons. We routinely get MRI examinations of all patients with peroneal tendon pathology, and often incorporate dynamic ultrasound of those with prior surgical history to determine if there is any excursion of the tendons to assist with pre-operative planning.

In the event of simple longitudinal tears of both tendons, repair is often possible. If either tendon is more significantly damaged it may still be possible to repair the lesser injured tendon and tenodesis the more severely injured tendon. In the event that neither tendon is usable then alternative procedures must be considered. The simple repair of a non-functioning muscle-tendon unit will offer little benefit to the patient.

If significant tearing of both tendons is discovered, but there is excursion and minimal scarring in the tissue bed, then allograft tendon repair is the authors’ choice of treatment. Using a peroneal or semitendinosus allograft to reconstruct the damaged tendon is completed of the most salvageable tendon that allows for attachment of the tendon allograft. Usually tenodesis of the more severely damaged tendon is completed to the proximal portion of the repaired tendon.

Tendon transfers can also be considered in the situation of both tendons being torn. Especially if there is no noted excursion, and the proximal musculature is non-functional. Usually the flexor hallucis tendon is harvested at the distal medial foot and transferred via the posterior ankle to the lateral aspect of the foot for reconstruction of the damaged tendons.
THURSDAY, July 18, 2013

In the event of severe scaring of the tissues, there are several options to consider. If proximal muscle excursion still exists then staged reconstruction with silicone rods can be employed. This will involve 2 separate procedures. The first will be to extensively debride the tendon bed, then implant a silicone rod to the free end of the tendon and allowing it to stay in place for 12-14 weeks. The second surgery will involve harvesting the silicone rod, while maintaining the newly created sheath, and either completing an allograft tendon reconstruction or an FHL tendon transfer.

If both tendons have been torn and dysfunctional for a significant period of time then proximal muscle function may be non-existent. With no potential for proximal muscle function then tendon transfer should be the recommended course of action. This can take place as a single procedure if the tendon bed is relatively intact or as a staged procedure if there is severe scarring and loss of the tendon sheath.

Postoperatively the patients are placed in a bulky Jones dressing for 10 days. Sutures are removed at 10 days and the patient is placed into either a short leg cast or a CAM boot based on the severity of the injury. Most simple peroneal repairs go into a boot and are allowed to do protected weight bearing and early self-directed simple range of motion activities. After 3 weeks in the boot they are given a simple ankle support brace and directed to formal physical therapy and transition to the brace.

For the more involved reconstruction and tendon transfers, the patients have a similar initial post-op course. But at 10 days when the sutures are removed they are placed into a short leg cast and directed to be non-weight bearing. After 3 weeks the cast is removed and the patient is given a CAM boot and simple range of motion exercises. They are instructed to progress weight-bearing as tolerated in the boot. After 3 weeks in the boot the patient is given and ankle support brace and directed physical therapy for 4-6 weeks.