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### Sinus Tarsi Syndrome

Clinical disorder characterized by specific symptoms and signs localized to the sinus tarsi (known as the “eye of the foot”), which refers to an opening on the outside of the foot between the ankle and heel bone.

#### **History:**

First described by Denis O'Connor in 1957. He also described a surgical procedure to address this problem (called the O'Connor procedure) that involves removal of all or a portion of the contents of the sinus tarsi.

#### **Etiology:**

Cause can be due to an inversion (rolling out) ankle sprain (70-80% of the time) or can be due to a “pinching” or impingement of the soft tissues in the sinus tarsi due to a very pronated (rolling in) foot (20-30% of the time).

#### **Clinical Presentation:**

Patients present with localized pain to the sinus tarsi region with a feeling of instability and aggravation by weight bearing activity. These patients do poorly on uneven surfaces, i.e., grass and gravel. Physical examination reveals pain to palpation of the sinus tarsi with aggravation on foot inversion (turning in) or eversion (turning out). Looseness and instability of the ankle and foot joints may be present as well.

#### **Diagnostic Testing:**

May include x-rays, bone scan, CT scan and MRI evaluation. Injection with local anesthetic is diagnostic for localizing this problem to the sinus tarsi. Many times this is a diagnosis made by excluding other common problems in the foot as definitive diagnostic findings are rarely present. MRI is probably the one best test to show changes in the tissues of the sinus tarsi involving either inflammation or scar tissue from previous injury. Ankle arthroscopy may also be beneficial to directly evaluate the sinus for damaged tissue.

#### **Treatment:**

After a diagnosis is established conservative treatment can be initiated which is generally very effective in eliminating the problem. Treatment may include anti-inflammatories, stable shoes, period of immobilization, ankle sleeve and over-the-counter orthoses. Resistant cases may require a course of oral steroids, series of steroid injections, physical therapy or custom orthoses. Rarely is surgery indicated and if needed open surgery (through an incision) or closed surgery (via arthroscopy) can be considered. Excellent results should be expected but surgery is not a panacea and should be considered as a last resort.

#### **Summary:**

STS is a problem that can occur commonly after an ankle sprain or in someone who has a severely pronated foot. Diagnosis is critical as this will dictate appropriate treatment which can differ significantly from other common problems seen in the foot and ankle. Conservative treatment is usually effective and surgery is rarely needed and should be considered after an adequate and thorough trial of conservative treatment.