Tarsometatarsal injuries

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The human foot is a highly complex structure. It has two major functions to support the body in standing and progression to lever it forwards in walking, running and jumping.Tarsometatarsal injuries are relatively uncommon injuries but with increasing motor vehicle use their incidence may be increasing. Lisfranc injuries are sometimes easily missed especially if they present in a subtle form. Missed injuries can lead to chronic pain, deformity and disability and this can be avoided by having a high index of suspicion for these injuries.A high index of suspicion is required clinically, but proper radiographic interpretation of the foot is the key to diagnosis. Knowledge of the normal anatomical relationships at the Lisfranc joint is vital to radiographic interpretation. The suspicion of anomalies in X-ray images should suggest further radiological investigation in the form of weight bearing x-rays, CT scan or MRI of the foot. The attempt to rule out Lisfranc injury should be made in cases of soft tissue edema persisting in the foot after 10 days of trauma.Treatment of Lisfranc injuries has changed since the past, when these injuries were routinely treated with amputation. Today, these injuries represent a broad spectrum of injuries, which can make treatment decisions difficult. Although classifications can be helpful, it is important for the surgeon to define the individual personality of each particular injury.Preoperatively, every attempt should be made to fully understand the clinical magnitude and location of instability, either through careful preoperative assessment, or stress testing for instability in the operating room. This information, combined with a careful assessment of the soft-tissue injury will allow the surgeon to treat each injury appropriately and this approach will help optimize outcomes for Lisfranc injuries.Not all patients who present with a Lisfranc injury require surgery. Relative contraindications for surgical intervention may include insensate feet (e.g., Charcot midfoot), inflammatory arthritis, nonambulatory status, and severe medical comorbidity. Even patients treated nonsurgically require appropriate immobilization, physical therapy, and orthotic support.When surgery is indicated, an attempt at closed reduction under fluo-roscopy with percutaneous screw fixation should be attempted. When the adequacy of the reduction is questionable, the surgeon should not hesitate to perform open reduction.Screw and k/w fixation remain the traditional fixation technique, although there is evidence to suggest that primary arthrodesis may be superior for the purely ligamentous midfoot injury.Further studies are required to evaluate the technique and principle of minimally invasive extra-articular fixation and using absorbable implants for fixation of tarsometatarsal injuries and to compare them to existing methods of fixation. Multicenter studies are needed due to the relatively low incidence of the

Lisfranc injury.A thorough discussion with the patient regarding the length of recovery, the magnitude of the injury and potential complications is essential. Patients can expect to have a well-aligned foot that is stable but potentially stiff, with a variable amount of residual pain. The patient likely will be able to perform most activities that he or she enjoys, but perhaps not