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Talus Fracture

The talus is the bone immediately below the leg bone called the tibia, and is very important for the function of the ankle. There are no tendinous attachments to the talus that makes the blood flow the bone more delicate. The delicate blood flow gets disrupted following a fracture of the talus and can lead to what is called avascular necrosis - where the bone no longer gets blood flow, causing continued pain with arthritis despite having the bones put back together. The bone is very hard and is more commonly injured from higher energy accidents such as car accidents and falls from height. Fractures to this bone are not isolated to higher energy injuries, as even simple twists and injuries from snow-boarding can result in fractures to portions of the bone that may require a period of time of no weightbearing or even surgery may be required. This type of injury is a life altering injury as many patients cannot return to the same level of function they had before the injury.

Patients who have higher energy injures have significant swelling and pain and the diagnosis is typically made in the emergency room. In these cases, a physical exam is focused on identifying other areas of pain that may have been injured in addition to the talus bone that is fractured. The skin is assessed for swelling and any wounds as this will determine when surgery can be performed safely. Xrays are evaluated

and in most cases a CT scan is required to determine the severity of the fracture in addition to surgical planning. In almost all cases of higher energy talus fractures surgery is required. A period of a few days to a couple weeks is required to allow for the swelling to improve to minimize the risk of wound complications.

Surgery is complex and can take a few hours to complete given the difficulty of this case. We take a lot of care to ensure that the fracture is put back together accurately. We have the experience of treating other patients who have had fractures that were not reduced or not treated appropriately and are fully aware of the negative impact this can have on the patient. Sedation anesthesia with a regional block is typically used for this fracture. In most cases two incisions are required to expose the fracture and multiple screws and or plates are used to put the fracture back together. In some fractures that involved the wider portion of the talus (the talar body), the bone of the ankle - called the medial malleolus may require what is called an osteotomy (a cut is made in the bone) to allow for exposure to the fracture in order to view and put the pieces back together. The goal of treatment is to realign the shape of the foot the best that is possible, minimize the risk of arthritis, and to minimize the risk of infection. Despite all treatment efforts, the risk of arthritis is still high with surgery, but if the foot is realigned, the risk is lower and surgery to fuse the joint to treat the arthritis is better for the patient if the anatomy of foot is restored. There is a risk of what is called avascular necrosis despite treatment of this fracture appropriately. The blood supply to the bone is limited and there are no tendons that attach to this bone to supplement the blood flow. In more severe cases, approximately 50% of patients will have this problem where the blood flow to the bone does not return. This can result in fragmentation, collapse or more rapid arthritis. Reconstructive options are available if this does occur.