

More Good News From the Operating Room

The ankle is a very complex joint and a bad break affecting the joint itself can lead to considerable pain and disability. Older age and certain health factors can add misery to an already difficult situation. That's been the case with intraarticular (inside the joint) calcaneal fractures.

The calcaneal bone is your heel bone. It sits right under the tibia (lower leg bone) and right above the talus and forms part of the ankle joint. In the past, surgery to fix a fracture affecting this area in an older patient had a dismal record for recovery. That's why many surgeons recommended conservative (nonoperative) care for a fracture of this type in anyone over age 65.

But that's changing now thanks to improved implants used to hold the bones together. And the use of real-time X-rays called fluoroscopy during the procedure has also helped improve results.

In this study, the use of internal fixation (metal plates, screws, wires, and/or pins) to hold the broken bones together until they heal was investigated. The surgeons were particularly interested in knowing how long-term results looked in patients based on age.

They searched their medical records for all patients who had internal fixation for an intra-articular calcaneal fracture. Everyone who was treated between 1992 and 2007 was included. Data collected from the records included fracture pattern, how the injury occurred, and postoperative pain and function.

Each patient was contacted by mail and asked to complete a survey asking questions about current symptoms, activities, and foot function. They were also asked if any further surgeries were done on that ankle or foot.

Patients ranged in age from 18 to 84 and were broken into two groups for comparison (under age 50 and age 50 or older). Analysis of the data collected showed that most of the injuries (70 per cent) in the older group were caused by a fall. Car accidents accounted for 44 per cent of the injuries in the younger group with 55 per cent linked with falls in the same age group.

The final results showed a significant difference between the two groups based on age. Younger adults did NOT have better outcomes as predicted. Instead, it was the older adults who had less pain and better function.

The rate of complications between the two groups was about the same. Although the older patients were at greater risk for problems with anesthesia, there weren't really any more complications in this group compared with the younger group.

The authors note that being older doesn't always mean surgery is out of the question for this particular injury. Careful patient selection may be the key. Patients with a health history of tobacco use, diabetes, poor circulation, or decreased immune function should be screened carefully. Any of these factors may suggest conservative care instead of surgical fixation for intra-articular calcaneal fracture fixation.

With the aging of America and the fact that our seniors are remaining more active later in life, surgeons may expect to see an increase in the overall number of ankle fractures. Older age may no longer be the deciding factor in treatment options.

How did they account for the better results among the older patients? Decreased physical demands in adults

in the older age group may actually be a benefit to healing. The only other possible (apparent) factor was the larger number of Worker's Compensation patients in the younger group.

The authors conclude that surgery with internal fixation for intra-articular calcaneal fractures is a "reasonable option" for older adults. Those who are in good health, with good bone strength, and minimal risk factors may be very good candidates for this type of treatment.

This study did not include a group of patients who had nonoperative care for comparison. The authors suggest a future study to include this additional group (also based on age differences) should be done before making final recommendations.

Reference: Trevor Gaskill, MD, et al. Comparison of Surgical Outcomes of Intra-Articular Calcaneal Fractures by Age. In *The Journal of Bone and Joint Surgery*. December 15, 2010. Vol. 92-A. No.18. Pp. 2884-2889.