
OATS for the Foot & Ankle Scientific Support

Outcome of Osteochondral Autograft Transplantation for Type-V Cystic Osteochondral Lesions of the Talus
P. E. Scranton, Jr., M.D.; C. C. Frey, M.D.; and K.S. Feder, M.D.
Journal of Bone and Joint Surgery. British Volume, Vol 88-B (Issue 5) 2006;614-619.

"The treatment of osteochondral lesions of the talus has evolved with the development of improved imaging and arthroscopic techniques. However, the outcome of treatment for large cystic type-V lesions is poor, using conventional grafting, debridement or microfracture techniques. This retrospective study examined the outcomes of 50 patients with a cystic talar defect who were treated with arthroscopically harvested, cored osteochondral graft taken from the ipsilateral knee. Of the 50 patients, 45 (90%) had a mean good-to-excellent score of 80.3 (52 to 90) in the Karlsson-Peterson Ankle Score, at a mean follow-up of 36 months (24 to 83). A malleolar osteotomy for exposure was needed in 26 patients and there were no malleolar mal- or non-unions. One patient had symptoms at the donor site three months after surgery; these were resolved after arthroscopic release of scar tissue. This technique is demanding with or without a malleolar osteotomy, but if properly performed has a high likelihood of success."

Bone-Cartilage Transplantation from the Ipsilateral Knee for Chondral Lesions of the Talus
Axel W. A. Baltzer, M.D.; and Juergen P. Arnold, M.D.
Arthroscopy: The Journal of Arthroscopic and Related Surgery. Vol 21 (No 2) 2005;159-166.

"**Purpose:** We present a prospective analysis to review talus dome chondral and osteochondral lesions treated with autogenous bone-cartilage transplantation harvested from the ipsilateral knee since 1998. The clinical outcome of osteochondral defects is investigated by using a method for resurfacing that supplies hyaline cartilage. The outcome analysis also considers defect size and the number of transplanted osteochondral cylinders. **Methods:** Included in the study were 43 patients with ankle joint pain resulting from osteochondritis dissecans stage III-IV, post-traumatic cartilage defects, and focal osteoarthritis. The Osteochondral Autograft Transfer System (OATS; Arthrex, Naples, FL) was used for transplantation. **Results:** All grafts showed bony integration in the talus as seen in the radiographs and by magnetic resonance imaging. Second-look arthroscopy found integration of the osteocartilaginous graft with surrounding cartilage within the first year. A series of needle biopsies showed hyaline structure. **Conclusion:** Autogenous osteochondral transplantation of the talus using ipsilateral knee osteochondral grafts is a very promising surgical procedure to treat local cartilage lesions of the ankle joint."

Osteoarticular Transplantation of Lesser Metatarsal Articular Deficits: A Preliminary Study
Matthew S. Rockett, DPM, FACFAS; and Keith Jacobson, DPM, FACFAS
63rd Annual Scientific Seminar of American College of Foot and Ankle Surgeons. New Orleans, LA.

"Treatment of osteoarticular deficits of the lesser metatarsal heads can be challenging for the foot & ankle surgeon. A 'joint restorative' procedure using OATS was developed. A preliminary prospective study on a new technique for the repair of lesser metatarsal head deficits utilizing osteoarticular transplantation between 2/2003 and 2/2004. Average preoperative AOFAS score was 44 (range 14-77) for the seven patients. Postoperative AOFAS score was an average of 82 (range 49-100). Six of the seven patients healed their graft and had a decrease in pain and increase in activity. Average time to radiographic healing was 12 weeks (range 10-16 weeks). Six of the seven patients would have the procedure again and would recommend the procedure to a friend or family member. The surgeons rated the success of the procedure as five excellent, one good, and one poor. Early results of this procedure are very favorable and exciting."

Osteochondral Autograft Transfer of the First Metatarsal Head: A Case Report
Mark E. Zelent, DPM, and David J. Neese, DPM, FACFAS
The Journal of Foot & Ankle Surgery. Vol 44 (5) 2005;406-411.

"A case of an osteochondral autograft transfer performed at the head of the first metatarsal for an acute incidence of traumatic osteochondritis dissecans was presented. The donor site for the osteochondral graft was from the medial and plantar aspect of the talar head, which was found to be composed entirely of articular hyaline cartilage, yet was not part of the functional talonavicular articulation. Six months postoperatively, the graft was well seated at the head of the first metatarsal, as confirmed by magnetic resonance imaging, and the graft donor site was asymptomatic. At 12 months' follow-up, the patient had a functional metatarsophalangeal joint range of motion."