**Introduction**

Following osteochondral autograft transfer (OATS) to repair weight-bearing femoral cartilage defects of the medial or lateral femoral condyle, patients are commonly kept non-weight-bearing for 4-6 weeks post-operatively. Yet, no reports (to our knowledge) have been published to-date on long-term cartilage repair outcomes of patients without post-operative weight-bearing restrictions following OATS.

**Objectives**

- Investigate whether post-operative weight-bearing restrictions affect post-operative complication rates and mid-term OATS outcomes when used to repair small weight-bearing femoral cartilage defects
- Three homogeneous groups of consecutive patients were identified (Groups A, B, and C) and 533 OATS cases (94.2%) total were included in this study.

**Methods and Patients**

- Study design was a retrospective comparative analyses.
- Between September 1998 and February 2012, 666 consecutive arthroscopic OATS procedures were performed in 530 patients for cartilage defects in the weight-bearing portion of the medial and/or lateral femoral condyles.
- Three homogeneous groups of consecutive patients were identified (Groups A, B, and C) and 533 OATS cases (94.2%) total were included in this study.

**Secondary Look Arthroscopy**

- 62 patients were examined with second-look arthroscopy.
- Common indications for second-look arthroscopy included ACL reconstruction, meniscal surgery for tear/rear, traumatic knee injury, and recurrent knee pain.
- Non-weight-bearing second-look arthroscopy patients from groups A (n=11) and B (n=9) were pooled together (Table II).

**Results**

Mean temporal (time from index procedure to second-look arthroscopy) was 39.4 and 32.7 months for non- and WB-as tolerated subgroups, respectively. Only one patient (non-weight-bearing) underwent reoperation secondary to graft malunion.

**Discussion**

- Mean ICRS cartilage repair scores were >11.0 points for both treatment groups or “nearly normal cartilage” according to ICRS assessment.
- In the present study, all multi-graft defects were linear; grafts were never staggering or arranged in a mosaic pattern unless repeat OATS was performed. Also, linear arrangement for all multi-graft defects was either anterior-posterior or obliquely anterior-posterior as in Figure 5.
- For all 62 patients who underwent second-look arthroscopy, no more than 2 grafts were used to repair any one defect in the same procedure and adjacent articular cartilage bordered each implanted graft both medially and laterally (See Figures 4 & 5).
- Kordas et al demonstrated that greater graft stability was achieved with shorter grafts lengths of 15 mm versus 20 mm in an in vivo animal study [5]. Likewise, all grafts used in the present study were 15.0 mm in length.

**Conclusions**

Post-operative weight-bearing restrictions do not affect midterm cartilage repair outcomes when OATS is used to repair small weight-bearing femoral cartilage defects.

**References**