The 5.5-year results of MegaOATS--autologous transfer of the posterior femoral condyle: a case-series study.

INTRODUCTION: Large osteochondral defects of the weight-bearing zones of femoral condyles in young and active patients were treated by autologous transfer of the posterior femoral condyle (large osteochondral autogenous transplantation system (MegaOATS)). The technique presented is a sound and feasible salvage procedure to address large osteochondral defects in weight-bearing zones. Methods: Thirty-six patients between July 1996 and December 2000 were included. Thirty-three patients (10 females, 23 males) were evaluated by the Lysholm score and X-ray scans. A random sample of 16 individuals underwent magnetic resonance imaging analysis. The average age at the time of surgery was 34.3 (15 to 59) years, and the mean follow up was 66.4 (46 to 98) months. The mean defect size was 6.2 (2 to 10.5) cm², in 27 patients affecting the medial femoral condyle and in six patients affecting the lateral femoral condyle. Trauma or osteochondrosis dissecans were pathogenetic in 82%. Results: The Lysholm score in all 33 individuals showed a highly significant increase from a preoperative median 49.0 points to a median 86.0 points (P< or = 0.001). Twenty-seven patients returned to recreational sports. X-ray scans showed a rounding of the osteotomy edge in 24 patients, interpreted as a partial remodelling of the posterior femoral condyle. Preoperative osteoarthritis in 17
individuals was related to significant lower Lysholm scores (P = 0.014), but progression in 17 patients
did not significantly influence the score results (P = 0.143). All 16 magnetic resonance imaging
examinations showed vital and congruent grafts. CONCLUSION: Patients significantly improve in the
Lysholm score, in daily-life activity levels and in return to recreational sports. Thirty-one out of 33
patients were comfortable with the results and would undergo the procedure again. The MegaOATS
technique is therefore recommended as a salvage procedure for young individuals with large
osteochondral defects in the weight-bearing zone of the femoral condyle.