Osteochondral autografts in the treatment of osteochondritis dissecans of the knee.

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Abstract:

An open osteochondral autograft transplantation was performed in 12 patients affected by osteochondritis dissecans of the knee. Age ranged between 17 and 24 years. Osteochondral lesion was localized on the medial femoral condyle in 11 cases and on the lateral femoral condyle in one case. A single osteochondral graft has been harvested from the not weight-bearing area of the lateral femoral condyle, positioned into the defect and fixed with fibrin glue. Long-term follow-up ranged between 2 and 10 years (average: 6.2 years). Clinical results have been evaluated using the Lysholm II score and compared with preoperative values. Radiographical evaluation and magnetic resonance of the knee at follow-up was performed in all cases. Moreover, in 3 cases we performed a second-look arthroscopy at 24-31 months after surgery. At follow-up the activity level was unchanged in 8 patients and decreased in 3 cases respect to that prior injury. One patient did not return to sports activity. Range of motion evaluation showed a loss of flexion of 10 degrees with respect to the contralateral knee in one case. Lysholm II score at follow-up had a mean value of 97.1 compared to 54.8 mean score observed at the preoperative evaluation. Results were excellent in 8 cases, good in 3 cases and fair in one case. Patellar crepitus was observed in 5 cases but neither anterior knee pain or tenderness at the harvest site were observed in any case. Radiographical and MR evaluation showed a good healing of the graft into the defect. We did not observe degenerative changes either at the graft site or the patello-femoral joint. Second-look arthroscopy showed a preservation of the articular cartilage of the graft. Osteochondral autograft seems to be an efficient technique to treat a massive osteochondral defect of the knee as it permits

to fill the area of the defect with a viable tissue which has the same biological and mechanical properties of the native tissue. In our experience, single massive osteochondral autograft was successful in 91.6% of the cases.