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Titel des Beitrags: Osteochondral transplantation to treat osteochondral lesions in the elbow.

Abstract: BACKGROUND: Effective treatment of osteochondral lesions in the elbow remains challenging. Arthroscopic débride ment and microfracture or retrograde drilling techniques are often insufficient and provide only temporary symptomatic relief. The purpose of this study was to evaluate the treatment of these lesions with osteochondral autografts. METHODS: From 1999 to 2002, seven patients with osteochondral lesions of the capitellum humeri (five patients), trochlea (one patient), or radial head (one patient) were treated with cylindrical osteochondral grafts, which were harvested from the non-weight-bearing area of the proximal aspect of the lateral femoral condyle. The patients (three female and four male patients with an average age of seventeen years) were evaluated preoperatively and postoperatively, with an average follow-up of fifty-nine months. The Broberg and Morrey score was chosen for functional evaluation of the elbow (with regard to motion, pain, strength, activities of daily living, and stability), and the American Shoulder and Elbow Surgeons score was used for the analysis of pain. All patients had imaging studies done preoperatively to evaluate the defect and postoperatively to assess the ingrowth and viability of the graft. The ipsilateral knee was examined for donor-site morbidity. RESULTS: The Broberg and Morrey score improved from a mean (and standard deviation) of 76.3 +/- 13.2 preoperatively to 97.6 +/- 2.7 postoperatively, and pain scores were
significantly reduced (p< 0.05). The mean elbow extension lag of 4.7 degrees +/- 5.8 degrees was reduced to 0 degrees postoperatively. Compared with the contralateral side, there was a mean preoperative flexion lag of 12.9 degrees +/- 13.8 degrees. At the time of the final follow-up, flexion was free and was equal bilaterally in all patients. None of the plain radiographs made at the time of follow-up showed any degenerative changes or signs of osteoarthritis. The postoperative magnetic resonance imaging scans showed graft viability and a congruent chondral surface in all seven patients. No donor-site morbidity was noted at one year postoperatively. CONCLUSIONS: The osteochondral autograft procedure described in the present study provides the opportunity to retain viable hyaline cartilage for the repair of osteochondral lesions in the elbow while restoring joint congruity and function and perhaps reducing the risk of osteoarthritis. These medium-term results suggest that the risks of a two-joint procedure are modest and justifiable. In addition, the described technique provides an option for revision surgery after the failure of other surgical procedures. LEVEL OF EVIDENCE: Therapeutic Level IV. See Instructions to Authors for a complete description of levels of evidence.