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EXPERIENCE WITH PARTIAL HUMERAL HEAD RESURFACING ARTHROPLASTY IN PATIENTS DIAGNOSED WITH AVASCULAR NECROSIS

PURPOSE: To evaluate the postoperative outcomes of partial humeral head resurfacing arthroplasty for avascular necrosis. **DESCRIPTION OF METHODS:** This is a prospective series of eight patients diagnosed with avascular necrosis who underwent partial humeral head resurfacing arthroplasty. Their mean age was 58.8 years. Preoperative and postoperative standardized evaluations included history, physical examination, radiographs, and clinical scoring systems. Clinical scoring systems included the Western Ontario Osteoarthritis of the Shoulder index (WOOS), Constant and Visual Analog Pain (VAS) scores. Preoperatively, patients presented with pain which they characterized as severe and debilitating, reporting significant limitations of ADLs, particularly those requiring overhead use of the affected extremity. All patients had failed conservative treatment and were experiencing worsening pain and progressive loss of motion prior to surgery. Postoperatively, all subjects underwent a standard physical therapy program. Postoperative assessments were conducted at 4 - 7 days, 6 weeks, 3, 6, 12, 18 and 24 months. Statistical analysis of the data was performed in order to determine significant differences between preoperative and postoperative scores. **SUMMARY OF METHODS:** No significant complications were experienced. Postoperatively, all patients reported significant pain relief. VAS scores improved from 93 preoperatively to 10 postoperatively. Physical examination revealed significant improvements in functional outcomes as well. Forward flexion improved from a mean of 87 degrees preoperatively to 170 degrees postoperatively. Abduction improved from a mean of 77 degrees preoperatively to 167 degrees postoperatively. Good to excellent results were also observed in the WOOS and Constant scoring systems. **CONCLUSION:** Those patients disabled by pain and whom have failed conservative treatment may benefit from partial humeral head resurfacing arthroplasty. Partial humeral head resurfacing arthroplasty in patients diagnosed with avascular necrosis yields a successful outcome, with patients experiencing excellent pain relief and improved range of motion. Furthermore, satisfactory results may be obtained without the use of excessively large humeral heads; rather, preservation of bone stock is maintained.