

## **Bipolar Arthroplasty for Painful Conditions Involving the Shoulder**

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**Purpose :** To evaluate the use of a Bipolar shoulder prosthesis for replacement of the proximal humerus.

**Methods :** 173 BiPolar shoulder replacements were performed over a five year period in 166 patients(7 bilateral cases). The average age was 73 years(45~93 years) and 70% were women. This report is on the first 90 shoulders followed for a minimum of 24 months (24~60 months). Forty-seven shoulders were performed for osteoarthritis, 25 for rotator cuff arthropathy, 11 for old and recent fractures, 2 for AVN, 3 for revision, and 2 for rheumatoid arthritis.

**Results :** Pre-operatively, all patients but one had a poor rating with an average score of 12 out of possible 30 with the Swanson scoring system. Locking at the 45 patients with osteoarthritis the preoperative Swanson score was 13.3 out of 30 and the preoperative UCLA score was 10.3 out of 35. Post-operatively, the Swanson score was 28 and the UCLA score was 30.8. Overall, the UCLA scores went from 9.9 prior to surgery to 29.1. Range of motion increased from an average of 64.6 degrees of forward flexion before surgery to over 122.2 degrees following surgery, external rotation increased from an average of 9.8 degree pre-operatively to 43.9 degrees post-operatively. The BiPolar shoulder system is user-friendly and obviates any glenoid concerns including difficulty of insertion, loosening or polyethylene disease. Seven of the 173 patients underwent reoperation. One patient sustained a fracture at the tip of the stem at 4 years requiring revision to a long-stem prosthesis, one patient required rotator cuff repair, one patient underwent surgery for instability, three patients underwent surgery for loose humeral stems and one patient underwent revision elsewhere for an undefined reason without success. This represents a reoperation rate of 4%.

**Conclusion :** BiPolar shoulder arthroplasty is shown to be a successful choice for proximal humeral replacement for cases of osteoarthritis, rotator cuff arthropathy, rheumatoid arthritis and fracture cases.