

Sidus Stem-Free Shoulder System for primary osteoarthritis: short-term results of a multicenter study

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BACKGROUND

The aim of this prospective multicenter study was to evaluate clinical and radiologic results of a new metaphyseal anchored system. This system features a different anchor geometry that potentially leads to better bony integration and less loosening.

METHODS

From November 2012 until December 2015, 148 patients (151 shoulders) were treated with the Sidus Stem-Free Shoulder System at 9 centers in Europe. The main indication was primary osteoarthritis (80.1%). This analysis only includes patients diagnosed with primary osteoarthritis ($n = 121$). A clinical evaluation was performed using the Constant-Murley score, Subjective Shoulder Value, American Shoulder and Elbow Surgeons Standardized Shoulder Assessment Form, and range of motion. Radiologic assessment was based on the occurrence of radiolucent lines and signs of implant migration, osteolysis, loosening, and heterotopic ossification.

RESULTS

We evaluated 105 patients after a follow-up period of 2 years. There were 53 women and 52 men. The average age was 64 years. Total shoulder arthroplasty was performed in 73 cases and hemiarthroplasty in 32. The Constant-Murley score improved from 26 points preoperatively to 70 points at 2 years' follow-up ($P < .001$). The Subjective Shoulder Value increased from 34% to 84% ($P < .001$), and the American Shoulder and Elbow Surgeons Standardized Shoulder Assessment Form increased from 34 points to 86 points ($P < .001$). Radiologically, neither migration nor loosening was found. However, radiolucent lines of 2 mm or greater could be detected around the glenoid in 2 cases, but none of them have had clinical relevance yet. The overall complication rate was 6.7%, and the revision rate was 0%.

CONCLUSION

Patients with the Sidus Stem-Free Shoulder System achieve good clinical and radiologic short-term results that are comparable with the results of other stem-free shoulder implants.

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