Paper #49

Mid-Term Results of Patients Treated with Porous Tantalum Acetabular Components for Non-Primary Periacetabular Lesions

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Notes

Introduction: The acetabulum is a common location for non-primary tumors. When degeneration occurs, total hip arthroplasty (THA) is reasonable. We previously reported the short-term results of tantalum shells to reconstruct non-primary acetabular lesions. The purpose of this study was to investigate the mid-term follow-up in regards to overall implant survival, rates of complications, and patient function.

Method: Fifty-eight patients were treated with a tantalum acetabular component and THA to reconstruct non-primary lesions between 2001 and 2014. The mean age was 62 years with 55% being female. At the time of surgery, the most common diagnoses were metastatic disease (50%) and myeloma (34%). Prior to the surgical procedure, 43 (74%) patients received neoadjuvant radiotherapy. The reconstruction was performed with a tantalum shell alone (n=21; 36%), shell with augments (n=6; 10%), cup-cage (n=23; 40%), and cup-cage with augments (n=8; 14%). All reconstructions were fixed with multiple screws (mean=8). The mean follow-up for surviving patients was 6 years.

Results: At most recent follow-up, none of the acetabular components were revised. Two patients had failure of surgical hardware (pelvic reconstruction plate in one patient and acetabular screw another). Both these patients had a history of a pelvic discontinuity non-union in the setting of radiotherapy. In addition, one patient underwent conversion to a constrained acetabular liner due to recurrent dislocations. Radiographs revealed 13 patients with incomplete radiolucent lines apparent on their immediate postoperative radiographs. Five of these resolved, while two patients had progressive radiolucent lines consistent with disease progression. The mean Harris Hip Score improved from 37 to 72 (p=0.0001).

Conclusion: In patients with periacetabular metastatic and hematological diseases and the need for THA, acetabular reconstruction utilizing a highly porous shell provides patients with a durable means of reconstruction, with no cases of component failure and significant functional improvement at mid-term follow-up.