POSTER 56

Staged Conversion of the Tripod Technique to Cemented Total Hip Arthroplasty: Early Experience. A Retrospective Study.

Waleed Al-Hardan MD, Nicket Dedhia MD, Kathryn R. Segal BA, Jichuan Wang MD, Bang Hoang MD, David Geller MD, and Rui Yang MD

Background

Severe bone loss in the periacetabular area, either secondary to metastatic bone disease or due to fragility fracture in elderly osteoporotic patients, represents a major surgical challenge. Reconstruction using either a Harrington procedure or a cage device often incurs substantial morbidity owing to extensive soft tissue dissection, prolonged surgical time and other intraoperative complications. We previously developed the Tripod technique for the treatment of periacetabular metastatic disease and have reported encouraging results in most of the patients. In a few cases, patients were managed in a staged fashion, undergoing first the percutaneous screw fixation, and subsequently conversion to a cemented total hip arthroplasty (THA). The purpose of this study was to assess the feasibility and benefits of coupling the Tripod procedure and THA in patients with acetabular compromise from metastatic disease.

Methods

A retrospective review was conducted of all patients who initially underwent the Tripod technique of acetabular reconstruction followed by conversion to cemented THA. Preoperative disease burden and pain scores, operative details, and postoperative outcomes were reviewed.

Results

Eight patients were identified who underwent both procedures over a four-year period. Seven of the eight patients underwent the conversion procedure in a staged fashion. Among these seven, the average time between stages was 82.6 days (range: 4-327 days). Seven patients had metastatic bone disease involving the periacetabulum at presentation and one patient had an insufficiency fracture with femoral head collapse and was included in the study group. The most common reason for conversion in the metastatic group was disease progression in five patients and persistent hip pain in two. No cage device was used in any of the cases. All eight patients reported improved pain scores, five patients improved their ambulatory status, and there were no cases of implant loosening or instability events. One patient experienced a postoperative deep wound infection that required an open surgical debridement and femoral head exchange.

Conclusion

The Tripod procedure can be safely converted to a cemented total hip arthroplasty without using a cage device. There was significant improvement in pain and ambulatory status with no hardware loosening or failures observed at final follow-up or time of death. This technique can serve as one of the solutions to address severe periacetabular bone loss in the setting of metastatic bone disease or in elderly fragility fractures.