Modular Proximal Body Exchange for Rerevision Total Hip Arthroplasty: Rarely Utilized and Moderately Successful

Matthew Lee Hadley, Joshua Ronald Harmer, Robert T Trousdale

INTRODUCTION: Modular fluted tapered stems (MFTSs) are commonly used in revision total hip arthroplasty (THA) and provide the option of exchanging the proximal modular portion to address future surgical problems without requiring complete femoral revision. We are unaware of any data documenting the frequency, indications, and outcomes of modular proximal body exchange in rerevision total hip arthroplasty.

METHODS: Between 1997–2019, we performed 1,375 MFTS revision THAs at our institution. Among those patients, we identified 47 rerevisions with modular proximal body exchange of a MFTS. During the same time period, 10 additional modular proximal body exchanges with MFTSs previously implanted elsewhere were identified. Indications and outcomes were documented at a mean follow up of 3.4 years.

RESULTS: Modular proximal body exchanges were performed on 47/1375 (3%) MFTSs at final follow up. The indications for all 57 modular proximal body exchanges performed during the study period were dislocation in 30 (53%), partial resection for periprosthetic joint infection (PJI) in 13 (23%), modular junction failure in 8 (14%), surgical exposure in 4 (7%), and concurrently with trochanteric osteotomy nonunion fixation in 2 (4%). Concomitant acetabular revision was performed in 10/57 (18%) and isolated modular component exchange in the remainder. Among modular proximal body exchanges indicated for dislocation, 10/30 (33%) were rerevised at final follow up. Among those indicated for PJI, 5/13 (39%) were rerevised at final follow up. One modular junction subsequently fractured after modular proximal body exchange.

DISCUSSION AND CONCLUSION:

Modular proximal body exchange of a MFTS is an uncommon procedure most often performed for treatment of hip dislocation or PJI. It is moderately successful with approximately 1/3rd of cases requiring subsequent rerevision. This procedure is often performed with modular component exchange alone but can also be helpful to facilitate exposure during complex acetabular revision. These data provide useful information to surgeons considering performing this operation.