

Modified Extended Trochanteric Osteotomy for the Treatment of Vancouver B2/B3 Periprosthetic Fractures of the Femur

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BACKGROUND

Femoral component revision is the treatment of choice for Vancouver type B2/B3 periprosthetic femur fractures (PFFs). The purpose of this study was to report the clinical outcome of revision total hip arthroplasty with the use of a modified extended trochanteric osteotomy (ETO) in PFF treatment.

METHODS

A total of 43 cases between 2000 and 2014 were analyzed. Clinical and radiographic evaluation was performed with a mean follow-up of 40 months. Patient survival after revision surgery, complications, radiographic outcomes, and quality of life and hip function were assessed.

RESULTS

Merle d'Aubigné and Postel score averaged 15, and mean postoperative Harris hip score was 70. Radiographic evaluation revealed that the ETO and fractures healed in all but 1 patient within 9 months. Component stability and apparent osseointegration were not coincident with healing of the osteotomy and fracture sites proximal to the inserted stem. Six patients (15%) developed postoperative complications, which included the following: 1 nonunion with progressive subsidence, 2 hip dislocations, 2 deep infections, and 1 breakage of the modular junction of the revision stem.

CONCLUSION

The modified ETO with a lateral approach to the hip for the treatment of PFF is compatible with fracture healing, a low dislocation rate, and good clinical results. However, component stability and apparent osseointegration are coincident with fracture healing only in the distal aspect of the inserted stem. Absence of proximal osseointegration might lead to poor osseous support resulting in inadequate fatigue strength at the junction of the dual modular revision stem.

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