

Complex primary THR in excessive proximal migration greater trochanteric hip : A case report

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Introduction

Proximal migration of GT in hip arthroplasty a technically challenging for surgeon intraoperatively. Multiple factor should be considerate by surgeon : hip reduction, establishing leg length, soft tissue tension, avoiding sciatic nerve injury, post operative stability and achieving functional hip. Literature describe few technique to overcome difficulty intraoperatively; soft tissue release and bony procedures such as greater trochanteric osteotomy or osteoplasty. In this case, we performed global soft tissue release around the hip joint together with partial mid-substance abductor release without major osteotomy and its potential complication.

Case report

47 years old, referred case from other centre for complex primary hip arthroplasty. He was presented in year 2017 with spontaneous haematogenous left hip septic arthritis. initial arthrotomy and debridement was performed but unable to contain the infection. He underwent 2nd debridement with removal head of femur and cement spacer. He was first attended to our clinic after 7 months of his 2nd operation. On examination , he demonstrated left trendelenburg gait with a cane. Left limb measured 6.5cm shorter than right lower limb. However, limb length discrepancy corrected around 3cm after applied axial traction to affected limb. Left hip motion was painless with deficit flexion by 20 degree and adduction by 15 degree comparing to right hip. Other motion, comparable with contralateral hip. All septic parameters were normal prior planning for surgery

Figure A shows the preoperative pelvic radiograph. Proximal migration of left greater trochanter around 7cm with cement spacer in the acetabulum.

Patient underwent surgery through posterior approach as his previous surgery with posterior approach. we expected to get an expansile surgical field with this surgical approach. The previous posterior hip scar was incised and extended as needed for exposure. Surgical field looks healthy with no sign of infection. Previous cement spacer in acetabulum was removed completely. Uncemented prosthesis was used with ceramic head on polyethylene. We did global soft tissue release around the hip joint after implantation and prior to reduction. Soft tissue release by mean, anterior capsule, posterior capsule and supra-acetabular soft tissue. Partial (pie-crusting) mid-substance abductor muscle release using tenotomy knife was performed to release abductor muscle tension. Hip stability was tested with acceptable range of motion. Short rotator muscles reattached back to posterior part of proximal femur with absorbable suture.

Figure B shows post operative pelvic radiograph. Level of greater trochanteric almost equal to contralateral side.

He was allowed partial weight bearing on 2nd day of operation aided by walking frame Limb length discrepancy restored. No neurological deficit left lower limb. he able to do active abduction until 20 degree. Hip motion equal to preoperation except has fix abduction less than 5 degree. He was very happy with operative result. His postoperative Harris hip score was 87.



Figure A



Figure B

Conclusion

Chronic and excessive migration of greater trochanteric is a challenging condition to arthroplasty surgeon performing total hip replacement. The goal of surgery is prosthesis implantation without any possible complication. The affected hip, functioning well and able to get acceptable limb length postoperatively. This patient underwent soft tissue release without any bony procedure but still able to archive the operation goal as described. There are no immediate and short term complication arise from this procedure. We would like to do follow up this patient to look any possible mid-term and long term complication.

Reference

1. Greater Trochanteric Osteoplasty in Revision Hip Arthroplasty: Two Case Reports American journal of orthopedic 40(1) : E1-4 (2011)