

Femoral Perforation after Hemiarthroplasty – Life goes on for 7 years!

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Abstract

Introduction: Femoral perforation after hemiarthroplasty is a known complication. In cases with cemented hemiarthroplasty the recommendation is to leave the implant till it requires revision while for uncemented hemiarthroplasty early revision is recommended.

Case Report: We present a case of perforation of lateral femoral cortex after Austin Moore hemiarthroplasty. The patient reported a swelling at lateral aspect of thigh immediately after hemiarthroplasty surgery done for failed osteosynthesis 7 years back. However he was able to continue his activities of daily living for 7 years. He visited us with complains of some pain around the swelling since last 3 months. Radiograph revealed a malpositioned Austin Moore prosthesis with lateral perforation of the femur. An implant removal and revision total hip arthroplasty is advised but patient declined it and went along with his 'functioning' Hip.

Conclusion: This is a case of lateral perforation of Austin Moore prosthesis where the patient was able to carry out his daily activities for seven years. Although revision is advised, patient is reluctant and is quite comfortable with his situation.

Keywords: Lateral perforation of femur, Austin Moore, hemiarthroplasty

Introduction

Perforation of femoral cortex is a known complication of hip arthroplasty. It can be an intraoperative complication or one that develops slowly due to malposition of the implant. The frequency of intraoperative fractures ranges from 28% to 3% and is affected by the surgeons learning curve [1,2]. Most such cases are reported to occur early in careers of the arthroplasty surgeon and many (>60%) are not detected intraoperatively [3,4]. The further recommended management of such perforations depend on the type of arthroplasty. For cemented arthroplasties, retention of the implant is recommended while an immediate revision is recommended in cases with uncemented arthroplasty [3,4,5]. Again alignment of the implant also play a role with more malaligned implants requiring more urgent revision [3]. We present a case image of a patient who was normally functioning and going on with his life with a grossly malaligned

uncemented hemiarthroplasty for seven years.

Case Report

53 year male patient came to the hospital with difficulty in walking and a painful swelling on the left thigh. There are two scar marks healed by primary intention on the lateral aspect of the thigh and a hard swelling on the lateral aspect of the thigh immediately below where the two scars end. The swelling was firm and immobile and had been there since the last hip surgery on the patient 7 years back and had gradually increased in its firmness and has been mildly painful till about 2 months back.

On inquiry patient reported that he had a fracture of the hip area 8 years back which was treated surgically with screws. He continued to have pain and was unable to walk even after 7 -8 months. He consulted another surgeon who re-operated on him and an only detail available was that a 'ball' replacement surgery was done. Since the second surgery he noticed a firm swelling about the lateral aspect of the thigh and it was tender to begin but pain subsided with time. He was able to walk in 5-6 months and returned to his job which was mostly a sitting clerical job in a private firm. The intermediate period was uneventful until few months back when he started having increased pain over the thigh swelling. On examination the patient is healthy with no comorbidities and has no addictive habits. He has a firm to

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Fig. 1a: Protruding mass along the lateral aspect of the thigh of the patient with V shaped scar marks of previous surgery. Fig. 1b,c: Malpositioned Austin Moore prosthesis with perforation of the lateral femoral cortex. Note the growth of new bone extending along the femoral stem.

hard swelling, with mild tenderness on deep pressure (Fig. 1a). There was no warmth in that local area or sinus and patient was afebrile. He had a shortening of 3 cms which was supra-trochanteric and there was mild pain in the greater trochanteric area. Hip flexion was 90° with abduction of only a jog of movement; adduction was 15° with extension of 10°. There was a fixed external rotation of 15° with further external rotation of 10°. Patient had a Trendelenburg gait and was able to walk with not much discomfort. X rays were ordered and showed a grossly malpositioned Austin Moore prosthesis which has perforated the lateral femoral cortex (Fig 1b,c). At the point of exit of the implant a bony outgrowth was found to extend along the prosthesis stem (which possibly added to the stability). Considering his age he has been advised THR as and when he would want it. Patient was otherwise carrying out his functions fairly well according to his expectations and so he left with his functioning implant!

Discussion

Previous surgery on the hip is reported to increase incidence of femoral perforations during hip arthroplasty [4,6] and in our case too there was an attempt of failed osteosynthesis. Again age, osteoporosis, prior osteotomy and inexperience surgeons are other predisposing factors [3,4]. A malpositioned uncemented hemiarthroplasty prosthesis perforating the lateral femoral cortex is rarely reported and in series by Pellicci et al [4] one such case was reported but with only 4 months follow up. Longer follow up of the case was unavailable. In our case the patient had grossly malpositioned implant which was protruding as a swelling on the lateral aspect of the thigh, however functionally he felt no 'dis-ease'. There

was some pain at the external protruding stem, except which he was doing pretty fine. The acetabulum also did not look compromised on recent radiograph. A bony extension was seen growing along the stem which might have added to the stability along with a varus collapse of the implant. Patient had limited range of motion and was walking with trendelenberg gait, however even these limitations did not affect his life to an extent for which he would like to undergo a repeat surgery. Possibly this is one of the first case with such long follow up of perforated uncemented stem and with a surprising retention of functional ability.

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