

Fracture neck of femur treated with Austin Moore prosthesis - 10 year follow up

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Abstract

Background: Unipolar hemiarthroplasty still better than bipolar hemiarthroplasty in terms of range of motion, daily activities in Indian rural population. Minimum age of the patient is 60 years. AMP also has some advantages in prosthesis designs. **Method:** Patients with Fracture Neck of Femur above age group 60 years were treated by hemiarthroplasty with Austin Moore's Prosthesis (AMP). Patients operated were prospectively recruited and follow-up for 10yrs was taken which included Clinical examination and Radiological findings on X-rays. All patients operated with posterior approach (Moore's approach). **Conclusion:** AMP is simple, economical operation. Better results in rural population in India considering their daily activities. Surgically, it is a simple operation.

Key Word: Austin Moore Prosthesis, Unipolar Prosthesis, Hemiarthroplasty,

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MATERIALS AND METHODS

Total 12 patients of neck of femur fracture coming to our hospital and treated with Austin Moores hemiarthroplasty and they were followed up. Total 12 patients were included in our study out of which 8 were males and 4 were female. 6 out of 8 males were in age group 61 to 70 years and 2 were of 71 to 80 years. 2 out of 4 females were in age group of 61 to 70 years and 2 were of 71 to 80 years. All the patients were treated within 2 weeks following injury. Posterior approach e.g. All patients operated with Moore's Approach. Also the one size less prosthesis was used. Bone grafts were placed at the inferomedial aspect of the prosthesis as well as in the holes of the prosthesis. Normal Anteversion was given while hammering the stem of the prosthesis in the femoral canal. From postoperative day two, physiotherapy was initiated with terms of bending knee actively at the edge of the bed. Standing with partial weight bearing initiated at one week postoperatively. And walking with partial weight bearing with the help of walker at two weeks and full weight bearing at six weeks were allowed. Follow-up after every three months was done for first yr and then yearly for next ten years in terms of clinical examination including gait, range of motion and radiological examination with x-rays. Eight out of twelve patients not had any complications two patient had superficial infection. Two patients had subtrochanteric fracture after

INTRODUCTION

The best treatment for fracture of femoral neck is still to be determined (Masson *et al* 2004). In 1940, the self-locking metal hip prosthesis e.g. Austin-Moore prosthesis, was introduced as the first vitallium prosthesis to replace the upper portion of the femoral head (Moore 1957). Since then, the Austin-Moore prosthesis has undergone much development and has been the commonly used mode of Uncemented Hemiarthroplasty (HA).

OBJECTIVE

To give the economical substitute to rural Indian population with daily routine activities

ten years. Eligibility Criteria: Patients above 60 years of age and below 80 years of age were included having fracture neck of femur Information sources: Patients admitted in the wards of department of Orthopaedics in A.C.P.M. Medical college Risk of bias in individual studies- No risk.

RESULTS

All patient had squatting and seating square with good gait. Radiologically, Everything is alright. 8 out of 12 patients not had any complications 2 patient had superficial infection. 2 patient had subtrochanteric fracture after 10 yrs. They were treated by 2 or 3 circlagewire. Patient were working in the farm after 4 months. Our results were better than in the literature.



Legend

Figure 1: Cas1 Preop and Post op; **Figure 2:** Case 2 Preop and Post op; **Figure 3:** Case 3; **Figure 4:** Case 4; **Figure 5:** Case 5 Preop and Post op; **Figure 6:** Case 6 Preop and Post op; **Figure 7:** Complication and Treated; **Figure 8:** Complication and Treated

DISCUSSION

Fracture around hip joint in the elderly patient group result in implications in recovery, mental condition of patient and health of patient. Conservative treatment resulted in complications of prolonged immobilisation e.g. chest infections, deep vein thrombosis, formation of bed sores, osteoporosis and wasting of muscles. Conservative management may be preferable for non-ambulatory, hospitalised patients with marked dementia who experience minimal discomfort within the first few days after the injury¹. Patients with such complications return to pre injury level of function without surgical treatment. To avoid such complications early mobilisation is essential. The very less number of patients falling in this category¹. Patients treated surgically preferred various types of arthroplasty. The most common cause for the re-surgery were failed fixation and non-union. Osteonecrosis is not common

cause of re-surgery but it is known complication. Poor results and higher cost of fixation indicate that it is not cost-effective compared with either hemiarthroplasty or total hip replacement, unless there is an increase in revision rates across the procedures. Patients age less than 50-60 years preservation of the head of femur is paramount². In elderly patients life expectancy of the patients are less than that of the Arthroplasty and the functional demands on the hip are less so the treatment of choice in such patients is Arthroplasty. In elderly patients occurrence of non union is increased while osteonecrosis is less common^{3,4}. Our study showed that Austin Moores Arthroplasty is a good surgery for neck of femur fracture with high satisfactory results in rural patients in long term follow up. Many authors said that bipolar hemiarthroplasty may be a good option to Austin -Moore hemiarthroplasty specially when the patient is live longer after the surgery⁵. Life expectancy

in Indian rural population is less. Some authors said that there was no difference in results of both modalities of treatment^{6,7}. In our study, there were no complications like sciatic nerve injury, dislocation of hip joint and no evidence of deep vein thrombosis or pulmonary embolism.

CONCLUSION

This study of Austin-Moore Hemiarthroplasty was done in 12 patients for neck of femur fracture for comparison and evaluation of the functional outcome. Retrospectively studied cases, Austin-Moore hemiarthroplasty showed better results. However patients need to modify their daily routine activities and preferably avoid squatting and sitting cross-legged on the floor for more than ten years of AMP prosthetic life. Our results were good than given in the literature for first ten years of AMP prosthesis.

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