



Bipolar Hemi Arthroplasty for Unstable Osteoporotic Inter-Trochanteric Fractures of Femur

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Conflicts of Interest: Nil

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Abstract:

Introduction: As the life expectancy of people is increasing, old age population is also increasing and trochanteric fractures with osteoporosis are getting commoner and producing challenge of regaining people their pre operative activity status for which a cemented bipolar arthroplasty was performed as an alternative to osteosynthesis by Dynamic screws. Harris hip score was assessed at various intervals within a year.

Materials and Methods: This is a prospective study including 25 cases of unstable intertrochanteric fracture (classified according to Evans classification) with osteoporosis treated with cemented bipolar prosthesis assessed

Result: The mean Harris hip Score was 78.86 by the end of one year.

Discussion: The Harris hip score was at satisfactory level post op and improved over the first six weeks, later it stabilizes till one year

Conclusion: The authors believe cemented bipolar hemiarthroplasty is a useful in osteoporotic unstable intertrochanteric fractures.

Keywords: intertrochanteric fractures, bipolar prosthesis, osteoporosis

Introduction:

In the present world where population of old age people is growing, the incidence of trochanteric fractures is also increasing and fixation of these fractures with traditional compression screw has a high chance of screw cut through and loss of reduction and further more it increases the morbidity of the patient due to recumbency and delay in returning to its pre operative status, in these cases cemented bipolar arthroplasty presents promising results.

Materials and Methods

This prospective study included 25 fresh cases of unstable inter-trochanteric fracture of femur with between 60-90 years of age presenting to

us within a week of sustaining injury. The study was conducted after ethical committee clearance of the institution. Informed written consent was taken from all the patients. The fracture was classified unstable as per Evans classification type III, IV, V, Reverse oblique. Patients were excluded from the study if they were having a) polytrauma, e) comorbidity, f) patients with stable fractures. There were Evans type III (6 cases), type IV (10 cases), type V (9 cases) & Reverse oblique type (0 case) respectively. The degree of Osteoporosis was assessed through Singh Index for Osteoporosis. Time interval between injury and surgery was 2 days to 10 d (average 5 days) Cemented bipolar arthroplasty was performed

with standard posterior approach and patient was mobilized 1st post op day and allowed full weight bearing walking with support and assessed at 14 day post operative stitches were removed and further assessment of functional abilities done at 4 weeks , 6weeks , 3 months , 6 months , and 1 year.

Results

The present study included 25 cases with unstable intertrochanteric fractures (male 13, females 12; mean age 68.5 y). All cases were followed up till the end of one year. No case was lost to follow-up. In the post procedure mean HHS score was 38.34 which subsequently increased up to 78.86 by the end of one year.

Table 1:

Time Interval	Harris Hip Score
	Mean± SD
Postoperative	38.34±6.55
6 week Follow up	54.60±8.18
3 month Follow up	73.97±11.46
6 month Follow up	78.33±8.70
1 year Follow up	78.86±8.13

Discussion

We have 78.8 Harris hip score obtained for our study group which is comparable to Kumar et al(1), who also got similar results , however Huang et al(2) found no difference between osteosynthesis and bipolar arthroplasty in his study. Sahni et al(3) had superior results than us but they have longer follow up to 2 years .Elmorsy et al (4) had similar results but they have higher rates of complications and revision surgery this might be due to their longer followup study upto 2 years. Sinno et al had similar results comparable to ours

Conclusion

The authors believe that cemented bipolar hemiarthroplasty for unstable intertrochanteric fractures with osteoporosis of femur in elderly ,does provide early ambulation, good functional outcome, pain free joint with minimal complications without the need for revision surgery. However limitation of the study is number of cases and duration of follow up.

References

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