

Comparative Study of the Outcome of Hardinge's vs Moore's Approach of Hemiarthroplasty of Hip

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Abstract: Fracture neck of femur is a leading cause of hospital admissions in early age group. The number of admissions raised because of increased longevity, osteoporosis, and sedentary habits. Conservative management is not acceptable because it results in non-union with unstable hip and limitation of hip movements as well as prolonged immobilization like deep vein thrombosis, bed sores. Current study designed to compare and analyze the outcome of Hardinge's vs Moore's approach of hemiarthroplasty of hip. To compare advantages and disadvantages of Hardinge's vs Moore's approaches. It is comparative study of outcome of Hardinge's vs Moore's approach in hemiarthroplasty of hip done on 20 cases who presented with neck of femur fractures. The selection of patients was randomized by selecting every alternate case by Moore's or Hardinge's approach. Functional outcome was evaluated using Harris Hip Score. In a series of 20 cases the mean age group and duration of hospital stay in Hardinge's was 43.48 years and 20 days respectively and Moore's group was 44.24 years and 22 days respectively. Harris hip score post operative: poor-1 case under hardinge's and 2 cases under Moore's. Fair-2 cases under hardinge's and 2 cases under Moore's. Good-3 cases under hardinge's and 3 cases under Moore's. Excellent-4 cases under hardinge's and 3 cases under Moore's. In our study the right side was commonly involved with fall as most common etiology. Outcome was excellent in 15 cases, good in 4 cases and poor in 1 case. In Moore's approach prosthesis head dislocation, sciatic nerve injury, infection, reduced range of movements was seen whereas in hardinge's abductor lurch gait was seen. In conclusion, Hardinge's approach is recommended as better than Moore's due to number of complications is lower in hardinge's approach. Patient's compliance is better post operatively; surgical wound healing is better, no sciatic nerve involvement and no head dislocation chances.

Keywords: Neck of femur fractures, Hardinge's approach, Moore's approach

1.Introduction

Neck of femur fractures is most common in old age group due to trivial fall because of osteoporotic bone in old age people and less common in young people. The treatment of fracture neck of femur has shifted from reduction and internal fixation to hemiarthroplasty of hip or hip arthroplasty as most common option used. The two main approaches used in hemiarthroplasty of hip is direct lateral (hardinge's) approach or posterior (Moore's) approach. Conservative management was not recommended because it may lead into nonunion, unstable hip, limitation of hip movements, gait disturbances and prolong bed ridden.

2.Aims and Objectives

To compare the effectiveness, results, advantages, and disadvantages of hardinge's vs Moore's approach in hemiarthroplasty of hip.

3.Materials and Methods

It is comparative study of outcome of Hardinge's vs Moore's approach in hemiarthroplasty of hip done on 20 cases who presented with primary diagnosis of neck of femur fractures. The selection of patients was randomized by selecting every alternate case of fracture neck of femur by Moore's approach or Hardinge's approach. Study recruit injury, infection group after the preoperative parameters like age, sex, side, mechanism of injury, and type of fracture.

Functional outcome was evaluated by using Harris hip score.

Harris hip score was developed for assessment of results of hip surgery and is intended to evaluate various hip disabilities and methods of treatment in adult population. The score is to measure dysfunction of the hip so the higher the score, the better outcome of the individual. The maximum score possible is 100. <70=poor result, 70-80=fair result, 80-90=good result, 90-100=excellent result.

4.Results

In our series of 20 cases, assessed by Harris hip score. The mean age group and duration of hospital stay in Hardinge's approach was 43.48 years and 20 days respectively, and whereas in Moore's approach was 44.24 years and 22 days respectively. Harris hip score post operative: poor-1 case under Hardinge's approach and 2 cases under Moore's approach. Fair-2 cases under Hardinge's approach and 2 cases under Moore's. Good-3 cases under Hardinge's and 3 cases under Moore's. Excellent-4 cases under Hardinge's and 3 cases under Moore's.

Harris Hip Score		
	Hardinge's	Moore's
Excellent	4	3
Good	3	3
Fair	2	2
Poor	1	2

5.Hardinge's Procedure:

Pre-Operative X-Ray



Post Operative X-Ray



Intra Operative Procedure



Intra Operative Procedure



6.Discussion

In our study the right side was commonly involved with fall as the most common etiology garden grade 3 were 16.7 % and grade 4 were 83.3%. Outcome was excellent in 15

patients, good in 4 cases and poor in 1 case. The mean duration of healing was 14 weeks. In Moore's approach prosthetic head dislocation, sciatic nerve injury, infection, reduced range of movements of hip was seen whereas in Hardinge's approach abductor lurch gait was seen.

7. Conclusion

Complications	Hardinge's	Moore's
Prosthetic head dislocation	---	++
Sciatic Nerve Injury	---	+
Infection	+	++
Reduced range of movements	---	++
Abductor lurch gait	+	--

It is concluded that Hardinge's approach is better than Moore's approach due to the number of complications is lower in Hardinge's approach. Patients' compliance and outcome is better with Hardinge's approach. Post operative condition of patient, surgical wound healing is better, no sciatic nerve involvement, no prosthetic head dislocation chances and infection rate was very minimal.

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