

To study the demographic profile of patients undergoing total hip arthroplasty using an open cohort study

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Abstract

Background: The hip joint may get damaged due to diseases like rheumatoid arthritis, osteoarthritis, fractures, and dislocations and sometimes due to accidents too. This may cause the fracture of hip and will give the permanent handicapping to the person. There are several types of hip fractures, like femoral neck fractures, and intertrochanteric fractures.

Methods: This was an open cohort, prospective study conducted on patients presenting to the Department of Orthopaedics and undergoing surgical intervention i.e., total hip arthroplasty. (All the procedures were performed by a specific senior surgeon

Result: Mean age of the patients was 46.1±13.6 ranging from 21.0 years to 87 years. All the patients in our study belonged to rural area. Male to female ratio was 3:1(75% of the patients were males). 55% cases belonged to lower

middle class and 27.5 belonged to upper middle-class family. 37.5% of the patients had higher secondary level of education followed by matriculation (25%), and graduation or above (17.5%).

Conclusion- In our study, most of patients belong to middle class.

Keywords: Complication, THA, Orthopaedics

Introduction

Hip is one of the largest weight-bearing joints in our body. It consists of two parts namely, a ball (femoral head) at the top of our thighbone (femur) and it fits into a rounded socket (acetabulum) in our pelvis. A band of tissues called ligaments connect the ball to the socket and provide stability to the joint. The hip joint may get damaged due to diseases like rheumatoid arthritis, osteoarthritis, fractures, and dislocations and sometimes due to accidents too. This may cause the fracture of hip

and will give the permanent handicapping to the person. There are several types of hip fractures, like femoral neck fractures, and intertrochanteric fractures.¹

Since its introduction in the 1960s, total hip arthroplasty (THA) total hip replacement (THR) has proved to be an excellent and reliable treatment procedure for the end stages of hip pathology, with satisfactory clinical outcomes at 15- to 20-year follow-up. Following the initial problems which pioneer surgeons noted in the 1960s and 1970s, such as surgical technique, structural implant failures and infection, orthopaedic surgeons in the 1980s faced problems regarding choice of appropriate acetabular and femoral implants and component fixation selection.² However, since then it has become obvious that the long-term survival of a THA is a multifactorial issue. Factors other than the implant, such as diagnosis, patient, surgeon and surgical technique, are also important in survival. Despite successful outcomes, THA revision rates have grown steadily in recent years.³

Material and method

Study area

Department of orthopedics, Dr. R.P.G.M.C. Kangra at Tanda, Himachal Pradesh

Study design

This was an open cohort, prospective study.

Study population

Patients presenting to the Department of Orthopaedics and undergoing surgical intervention i.e., total hip arthroplasty. (All the procedures were performed by a specific senior surgeon)

Study duration

The patients were recruited for a period of one year. The first case was included in the month of February 2019 and last case on February 2020. The last patient was recruited 1 year from the day of start of study.

All the patients fulfilling the inclusion criteria were recruited and followed-up for maximum 18 months and minimum of 6 months.

Sample size

Forty cases

Inclusion criteria

- Patients undergoing Total hip arthroplasty
- Those gave consent for inclusion in the study

Exclusion criteria

1. Those patients in whom subjective assessment was difficult after surgery like one having compromised neurological functions e.g., in case of Alzheimer's disease, Parkinsonism, cerebral palsy and patients with mental retardation.
2. Those who did not give consent for participation in the study

The study was initiated following approval from Institutional Ethics Committee, Dr. RPGMC Kangra at Tanda. The patients had the rights to withdraw from participation in the study.

Results

Table 1: Distribution on the basis of age

	Age(years)
Mean	46.1
SD	13.6
Minimum	21.0
Maximum	87.0

Mean age of the cases was 46.1 ± 13.6 ranging from 21.0 years to 87 years.

Table 2: Distribution on the basis of Sex

Sex	Frequency	Percent
Male	30	75.0
Female	10	25.0
Total	40	100.0

Male to female ratio was found to be 3:1. Seventy-five percent of the cases were males.

Table 3: Distribution on the basis of Socio-Economic status

Socio economic status	Frequency	Percent
Lower middle	22	55.0
Upper lower	7	17.5
Upper middle	11	27.5
Total	40	100.0

55% cases belonged to lower middle class and 27.5 belonged to upper middle-class family

Table 4: Distribution on the basis of Education broken table.

Education	Frequency	Percent
Primary	4	10
Middle	4	10
Matriculation	10	25
Higher secondary	15	37.5
Graduate or above	7	17.5
Total	40	100

37.5% had done higher secondary, 25% are matriculate, 17.5% are graduate and above, 10% each had done primary and middle education.

Discussion

In our study, cases ranged from 21-87 years of age, 46.1 years being the mean. Study by Capone et al 107 described the clinical results in 32 patients of age younger than 60 years with average age of 51.5 years.⁴⁹ Study by Kim et al average age of surgery was 52.7 years using proximally coated cement less femoral component.⁵⁰ The mean age in our study was lower as we used this stem in young patients having good bone stock for adequate fixation and we wanted to preserve bone stock for anticipated subsequent revisions. In our study, male to female ratio was 3:1. Seventy-five percent of the

patients were males. In our set up predominantly active outdoor life of males who are more actively involved in arranging finances for their families may account for this, alcohol abuse is another major cause of morbidity in males. This is similar to study by Kim, where males outnumbered females (297 males and 174 females).⁴

Conclusion

In our study, most of patients belong to middle class.

References

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