



STUDY OF CLINICAL PROFILE OF PATIENTS WITH HIP FRACTURE

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ABSTRACT

Introduction: Hip fractures are the common cause of orthopedic admission sustained predominantly in patients over sixty years of age. They are three to four times more common in women than in men.

Materials and methods: The study was conducted from Jan 2017 to Aug 2017 where 110 patients with hip fractures were studied. A prospective study comprising of patients admitted for hip fracture admitted to our hospital.

Aims and Objectives: To study the clinical profile of patients with hip fractures.

Results: The majority of the patients were in the age group of 61-80 i.e. 54% followed by in the age group of 41-60 were 21%; in >80 were 16% and in 21-40 were 8%. The majority of the patients were females 62% followed by males 38%. The most common mode of injury was trivial fall 65% followed by RTA 24% and fall from height 11%. The majority of patient had intertrochanteric fracture 62% and neck of femur fracture was slightly less common 38%.

Conclusion: From our study we concluded that hip fractures are more common in old age and in females and this could be attributed to underlying osteoporosis prevalent in females.

KEYWORDS : hip fractures, trivial fall, clinical profile**INTRODUCTION:**

Hip fractures in older adults have significant implications for morbidity, mortality, hospital utilization and the cost of care in the community [1]. A report on India in 2004 estimated an annual incidence of 600,000 osteoporotic hip fractures [2], and this was expected to increase significantly by 2026, as the share of people over 60 years rises to 12.4% of 1.36 billion population [3-5]. The global burden of hip fractures is likely to increase significantly from an estimated 1.7 million in 1990 to 6.3 million in 2050 [6,7]. These increases are primarily the consequence of improved life expectancy, especially in emerging economies, and it is projected that by 2050 nearly half of all hip fractures will occur in Asia, particularly in India and China [6,8,9].

This rise in prevalence of hip fracture will have serious consequences on morbidity and mortality of geriatric population and society in general. To tackle the problem efficiently we need to understand it completely.

This study aims to know the clinical profile of patients with hip fractures. If similar studies are done in different regions across India, it will help us to provide healthcare in more systematic way. Collected data can be used as guide to streamline the resources accordingly.

Aims and Objectives

1. To study the clinical profile of patients with hip fractures

MATERIALS AND METHODS:

The study was conducted from Jan 2017 to August 2017. All the patients presenting with hip fractures admitted in hospital where included. After clinical examination all routine pre-op investigations (Complete blood count, LFT, KFT, HIV, HBsAG, ECG, Chest X ray, APX ray of pelvis with both hip joints and proximal half femur. Lateral view of the hip was done in patients if pain permits. The patients were then put on skin traction over a Bohler braun's frame.

Exclusion criteria: Inter trochanteric Fractures with shaft of femur fracture, Non-union, Mal union were excluded from the study.

Demographic detail of each patient was noted. Date of injury and date of presentation to hospital was noted. The mode of injury was classified under 3 heads, road traffic accident, trivial fall or a fall from height. How the patient was treated conservatively or by surgical method was noted. Reason for conservative treatment was also taken into account.

RESULTS**Table 1: Distribution of Patients as per Age**

Age of patient(yrs)	No. of patients	Percentage of patients
21-40	9	8%

41-60	23	21%
61-80	60	54%
>80	18	16%
Total no.	110	100

The majority of the patients were in the age group of 61-80 i.e. 54% followed by in the age group of 41-60 were 21%; in >80 were 16% and in 21-40 were 8%.

Table 2: Distribution of the Patients as per Sex

Sex of patient	No. of patient	Percentage
Male	42	38%
Female	68	62%
Total	110	100

The majority of the patients were Females 62% followed by Males 38%.

Table 3: Distribution of the patients as per Mode of injury

Mode of injury	No. of patient	Percentage
Road traffic accident	26	24%
Trivial fall	72	65%
Fall from height	12	11%
Total	110	100

The most common mode of injury was Trivial fall was 65% followed by RTA 24% and fall from height 11%.

Table 4: Distribution of the Patients as per the Type of fracture

Type of fracture	No. of patient	Percentage
Intertrochanteric fracture	68	62%
Neck of femur fracture	42	38%
Total	110	100

The majority of patient had intertrochanteric fracture 62% and neck of femur fracture was slightly less common 38%.

DISCUSSION

In elderly people, hip fractures are the commonest cause for orthopedic admissions [9] and the second leading cause of hospitalization and prolonged length of stay (LOS) [10, 11]. One of the important challenges in the management of hip fractures is to identify patients who are at high risk of poor outcome. Although hip fractures are dominantly regarded as homogenous, anatomical types--cervical and trochanteric--differ in bone composition and parameters of proximal femur geometry [12, 13] as well as in epidemiological, demographic and clinical characteristics [13-15]. It is possible that shared biological mechanisms underlie the site, accompanying co morbidities and risks of postoperative complications and outcomes for each type of hip fractures. Apparently osteoporotic hip fractures and their outcomes are attributable to complex interactions between multiple factors,

however, there may exist some common mechanisms determining specific conditions linked to the hip fracture type. These may be indicators that would enable clinicians to identify patients at risk and provide appropriate management. Various factors have been reported to affect hip fracture outcomes, but the role of anatomic location and the potential implications for clinical practice have been addressed in only few investigations with conflicting results. Studies comparing cervical and trochanteric hip fractures often evaluated only some clinical and/or laboratory parameters or selected outcomes. The prevailing view was that patients with trochanteric compared to cervical hip fracture have poorer outcomes [13]. However scientific reports on the association of hip fracture type with preexisting medical conditions, post-operative complications [16], LOS, functional outcomes [17]. In our study we have found that The majority of the patients were in the age group of 61-80 i.e. 54% followed by in the age group of 81-100 were 16%; in 21-40 were 8% and in 41-60 were 21% respectively this was similar. The majority of the patients were Females i.e. 62% followed by Males 38% this could be the fact that in old age groups females are more prone for the osteoporosis as compared to males these findings are similar to Bostrom et al [16]; Kesemenli C et al [19] in 2001 studied 27 patients with average age of 78 years. Amongst them 14 (51%) patients were females and 13 (49%) patients were males. Kayali C et al 8 in 2006 studied 42 patients with mean age of 73 years. Amongst them 30 (71.4%) patients were females and 12 (28.57%) patients were males. The most common mode of injury was Trivial fall was 65% followed by RTA were 24% and fall from height 11%.

CONCLUSION

The majority of the patients were in the age group of 61-80; the majority of the patients were females. The most common mode of injury was trivial fall, followed by RTA. So from our study it can be concluded that hip fractures were more common in old age and in females and this could be attributed to underlying osteoporosis. If trivial fall is addressed we can reduce a lot number of patients.

REFERENCES

- Rath S, Dey AB (2016) Management of hip fractures in China and India: a systems approach to bridge evidence practice gaps. In: Falaschi P, Marsh DR (eds) *Orthogeriatrics*. Springer, Switzerland, pp 185–200
- Kanis A, Johansson H, Oden A et al (2004) A family history of fracture and fracture risk: a meta-analysis. *Bone* 35(5):1029–1037
- Government of India (2015) *The Registrar General & Census Commissioner, India, New Delhi, Ministry of Home Affairs, Government of India 2015*
- Dhanwal DK et al (2013) Incidence of hip fracture in Rohtak district, North India. *Arch Osteoporos* 8(1–2):135
- Mithal A, Kaur P (2012) Osteoporosis in Asia: a call to action. *Osteoporos Rep* 10(4):245–247
- Cooper C, Campion G, Melton LJ III (1992) Hip fractures in the elderly: a worldwide projection. *Osteoporos Int* 2:285–289
- Gullberg B, Johnell O, Kanis JA (1997) World-wide projections for hip fracture. *Osteoporos Int* 7(5):407–413
- Dhanwal DK, Dennison EM, Harvey NC, Cooper C (2011) Epidemiology of hip fracture: worldwide geographic variation. *Indian J Orthop* 45(1):15–22. doi:10.4103/0019-5413.73656
- Johnell O, Kanis JA (2004) An estimate of the worldwide prevalence, mortality and disability associated with hip fracture. *Osteoporos Int* 15:897–902.
- Parker M, Johansen A. Hip fracture. *BMJ*. 2006; 333:27- 30. doi: 10.1136/bmj.333.7557.27.[PMC free article][PubMed][Cross Ref]
- Nigwekar SU, Rajda J, Navaneethan SD. Hospitalist care and length of stay in patients with hip fracture: a systematic review. *Arch Intern Med*. 2008; 168:1010- 1011. doi: 10.1001/archinte.168.9.1010.
- West J, Hippisley-Cox J, Coupland CA, Price GM, Groom LM, Kendrick D et al. Do rates of hospital admission for falls and hip fracture in elderly people vary by socioeconomic status? *Public Health*. 2004; 118:576-581. doi: 10.1016/j.puhe.2004.02.006.
- Bell KL, Loveridge N, Power J, Garrahan N, Stanton M, Lunt M et al. Structure of the femoral neck in hip fracture: cortical bone loss in the inferoanterior to superoposterior axis. *J Bone Miner Res*. 1999; 14:111-119. doi: 10.1359/jbmr.1999.14.1.111.
- Mautalen CA, Vega EM, Einhorn TA. Are the etiologies of cervical and trochanteric hip fractures different? *Bone*. 1996; 18:133S-137S. doi: 10.1016/8756-3282(95)00490-4.
- Caulley JA, Lui LY, Genant HK, Salamone L, Browner W, Fink HA et al. Risk factors for severity and type of the hip fracture. *J Bone Miner Res*. 2009; 24:943-955. doi: 10.1359/jbmr.081246.
- Tanner DA, Kloseck M, Crilly RG, Chesworth B, Gilliland J. Hip fracture types in men and women change differently with age. *BMC Geriatr*. 2010; 10:12. doi: 10.1186/1471-2318-10-12.
- Jiang HX, Majumdar SR, Dick DA, Moreau M, Raso J, Otto DD et al. Development and initial validation of a risk score for predicting in-hospital and 1-year mortality in patients with hip fractures. *J Bone Miner Res*. 2005; 20:494-500.
- Cornwall R, Gilbert MS, Koval KJ, Strauss E, Siu AL. Functional outcomes and mortality vary among different types of hip fractures: a function of patient characteristics. *Clin Orthop Relat Res*. 2004; 425:64-71.
- Bostrom MPG, Simie PM, Lyden JP, Cornell CM, Thorngren KG, Tolo ET. Epidemiology of hip fractures. *Bone* 1996; 18:57S-63S.
- Kesemenli C, Subasi M, Arslan H. Treatment of Intertrochanteric fracture in elderly patients with leinbach type endoprosthesis. *Ulus Trauma Derg* 2001; 7(4):254- 257