

**Original article:**

## **Study of Incidence of femoral neck fractures: senile osteoporosis in Indian Population**

**<sup>1</sup>Dr. Rajesh Kumar Kanoji , <sup>2</sup>Dr Gaffar Khan\* , <sup>3</sup> Dr Abdul Rahim , <sup>4</sup>Dr. Saurabh Chauhan , <sup>5</sup>Prof. (Dr.) Vinay Kumar Singh, <sup>6</sup> Dr Abdul Rashid**

<sup>1</sup>Associate Professor, Department of Trauma and Orthopedics, NIMS Superspeciality Hospital

<sup>2</sup>Assistant Professor, Department of Trauma and Orthopedics, NIMS Superspeciality Hospital, Jaipur-303121

<sup>3</sup>Assistant Professor, Department of Trauma and Orthopedics, NIMS Superspeciality Hospital, NIMS University , Jaipur-303121

<sup>4</sup>Specialist Registrar, Department of Trauma and Orthopedics, NIMS Superspeciality Hospital , Jaipur-303121

<sup>5</sup>Professor and Director, Department of Trauma and Orthopedics, NIMS Superspeciality Hospital, Jaipur-303121

<sup>6</sup> Senior Resident , Department of Trauma and Orthopedics, NIMS Superspeciality Hospital, Jaipur-303121

Corresponding author\*

### **Abstract:**

**Introduction:** Several risk factors associated to the hip fractures have been identified. Among these factors, the age is the most important one. A recent systematic review concluded that hip fractures are more likely to be found in older individuals.

**Methodology:** The present study was conducted in our Department during last six months. All the patients admitted with femoral neck fractures were included in present study. The detail history record of patients was collected by taking history and from their case record book. The multiple injury patients were excluded from present study. The pediatric cases were also excluded from our study. The study was carried out and filled our data sheet. Followed by statistical analysis was carried out. This was observational study. The sample size was approved by expert from statistics. 60 patients were included in present study.

**Results:** In our present , we found incidence of femur neck fracture was found more in females with higher age groups . It was also noted high in rural population as compared to urban . It was seen more in lower socioeconomically patients.

**Conclusion:** From this study , we may conclude that these kind of fractures are more commonly observed in elderly patients and quite related to lifestyle and diet.

**Keywords:** Femur neck fracture , Hip fracture

### **Introduction:**

Several risk factors associated to the hip fractures have been identified. Among these factors, the age is the most important one. A recent systematic review concluded that hip fractures are more likely to be found in older individuals [1]. Some geographic variation in the incidence of hip fractures among different regions has been documented in the last few decades. To the best of our knowledge, the rate of hip fractures might be lower in Asian but it is increasing [2]. This variation in the distribution of hip fractures in different regions of the world shows that etiological and environmental factors such as a north-south gradient seen in European studies play a role in hip fractures [3]. It is important to explore the population-based data about hip fractures and to identify related risk factors in Asia and worldwide. Patients with hip fractures may need various clinical interventions and multi-

disciplinary rehabilitation for up to two years to enhance their physical function. Shyu et al. (2016) collected systematic review papers and reported that health outcomes could be significantly improved after hip fractures by interdisciplinary care [4]. Prognostic factors for the outcome after hip fractures are important, but can be obtained only by analyzing data from hospital stays. Nowadays Hip fractures are one of major problem observing in elder population, but subsequent morbidity is unclear about environmental factors and socioeconomic conditions. Our aim was to investigate the incidence of hip fractures treated by the surgery.

**Methodology:**

The present study was conducted in our Department during last six months. All the patients admitted with femoral neck fractures were included in present study. The detail history record of patients was collected by taking history and from their case record book. The multiple injury patients were excluded from present study. The pediatric cases were also excluded from our study.

The study was carried out and filled our data sheet. Followed by statistical analysis was carried out.

This was observational study. The sample size was approved by expert from statistics. 60 patients were included in present study.

**Results:**

S.NO.	Variable	Number of patients ( N=60)
1	Age group ( In years )	
	30 – 44	02
	45-60	08
	61-75	22
	>75 years	30
2	Urban	22
	Rural	38
3	Socioeconomically	
	Lower	35
	Middle	21
	Higher	4
4	Gender	
	Male	25
	Female	35

In our present, we found incidence of femur neck fracrure was found more in females with higher age groups . It was also noted high in rural population as compared to urban .

It was seen more in lower socioeconomically patients.

### **Discussion:**

The ageing of the population has raised issues in Asia. Hip fractures are a serious geriatric issue in Taiwan [5], and lead to more medical demands and expenditure. There are few studies about hip fractures in Asia, except from Japan. Therefore, there is an urgent need to initiate epidemiological studies in Asia to assess potential changes in risk factors for hip fractures in order to allow health administrators to plan policies for future care [2]. The majority of previous studies have focused only on the short-term consequences [6]. There is still little knowledge about long-term health outcomes and the secondary prevention after hip fractures, particularly among the total population of hip fractures in Asian countries [7].

Hip fractures are a major cause of disability and the most costly type of fracture for the health care services [2], especially for an aging society. The deterioration controls and magnitude of risk management to prevent long-term adverse effects after hip fracture surgery are urgently public concerns. Based on nationwide data, our study documented the year trends of incidence of hip fractures and subsequent morbidity in Taiwan between 2000 and 2010. This national database was established by evidence-based records and doctor-recognized diagnoses which are more reliable and accurate than self-reported diseases in a primary survey. This longitudinal study has several strengths. Large data analysis has shown great potential in underlying valuable insights. Few previous studies were conducted using this method with such a large amount of medical data and providing clear information to their long-term impact to guide clinical practitioners [8]. A complete understanding of prognostic information related to outcomes is required and incorporated in order to reduce the burden of hip fractures and to plan strategies for care.

### **Conclusion:**

From this study, we may conclude that these kind of fractures are more commonly observed in elderly patients and quite related to lifestyle and diet.

### **References:**

1. Nazrun AS, Tzar MN, Mokhtar SA, Mohamed IN. A systematic review of the outcomes of osteoporotic fracture patients after hospital discharge: morbidity, subsequent fractures, and mortality. *Therapeutics & Clinical Risk Management* 2014;10: 937–948.
2. Dhanwal DK, Cooper C, Dennison EM. Geographic variation in osteoporotic hip fracture incidence: the growing importance of asian influences in coming decades. *Journal of osteoporosis*. 2010;2010: 757102
3. Dhanwal DK, Dennison EM, Harvey NC, Cooper C. Epidemiology of hip fracture: Worldwide geographic variation. *Indian journal of orthopaedics*. 2011;45(1):15–22.
4. Shyu YI, Liang J, Tseng MY, Li HJ, Wu CC, Cheng HS, et al. Enhanced interdisciplinary care improves self-care ability and decreases emergency department visits for older Taiwanese patients over 2 years after hip-fracture surgery: A randomised controlled
5. Liou MJ, Tsai JS, Lin JD. Hip fractures: an increasing geriatric problem in Taiwan. *Age and ageing*. 2002;31: 483–485

6. Diamantopoulos AP, Rohde G, Johnsrud I, Skoie IM, Johnsen V, Hochberg M, et al. Incidence rates of fragility hip fracture in middle-aged and elderly men and women in southern Norway. *Age and ageing*. 2012;41(1):86–92.
7. Committee for Osteoporosis Treatment of The Japanese Orthopaedic Association. Nationwide survey of hip fractures in Japan. *Journal of Orthopaedic Science* 2004; 9: 1–5
8. Dettori JR. Loss to follow-up. *Evidence-Based Spine-Care Journal* 2011;2: 7–10.