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To determine peri-operative morbidity in Fracture Neck of Femur in elderly patients [60 years and above] presenting to the Department of Orthopedics at Dr RPGMC Tanda.

[1]Devinder Kumar, Resident, Deptt of Orthopaedics, Dr. Rajendra Prasad Government Medical College, Kangra, Tanda, Himachal Pradesh, India.

[2]Bhanu Awasthi, Principal & Professor, Deptt of Orthopaedics, Dr. Rajendra Prasad Government Medical College, Kangra, Tanda, Himachal Pradesh, India.

[1]Sunny Dua, Resident, Deptt of Orthopaedics, Dr. Rajendra Prasad Government Medical College, Kangra, Tanda, Himachal Pradesh, India.

[1]Sarvesh Kumar Singh, Resident, Deptt of Orthopaedics, Dr. Rajendra Prasad Government Medical College, Kangra, Tanda, Himachal Pradesh, India.

[3]Sunil Raina, Professor & Head, Deptt of Preventive & Social Medicine, Dr. Rajendra Prasad Government Medical College, Kangra, Tanda, Himachal Pradesh, India

Corresponding Author: Sarvesh Kumar Singh, Resident, Deptt of Orthopaedics, Dr. Rajendra Prasad Government Medical College, Kangra, Tanda, Himachal Pradesh, India.

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Abstract

Background: Fractures of the femoral neck are a devastating injury that extends far beyond the musculoskeletal trauma, with significant long-term consequences for the quality of life of both patients and carers.

Methods: The present study was conducted in patients with fractures neck of femur (age 60 years and above) presenting to the Department of Orthopaedics, Dr RPGMC Kangra at Tanda. All cases presenting to the department and fulfilling the criteria were studied for a period of one year starting from the date of start of the study.

Results: We observed that general condition was fair for 98% (n=86/88) patients on day-15, 99% (n=85/86) patients on day-30, 98% (n=83/85) patients on day-45, and 96.5% (n=82/85) patients on day-90.

Conclusion: We concluded that perioperative morbidity was influenced by presence of co-morbid conditions.

Keywords: Morbidity, Hip, Fracture.

Introduction

Elderly patients with fracture neck of femur are more likely to be malnourished on admission when compared to the age-matched general population. Poor nutritional status is known to be both a common causative factor of trochanteric fracture and predictor of excess

mortality following surgical intervention.[1] Many methods including anthropometry, the mini nutritional assessment, nutrition-related blood parameters and dietary analysis are used for nutritional status assessment in clinics. Serum albumin and total lymphocyte count are two of the most important blood parameters for nutritional status and have been recognized as prognostic factors of fracture neck of femur.[2]

Fractures of the femoral neck are a devastating injury that extends far beyond the musculoskeletal trauma, with significant long-term consequences for the quality of life of both patients and carers. The fractures are common in the elderly. Patient care is complex, requiring multidisciplinary teams and integrated care pathways. Patients above the age of 90 represent a challenging subgroup as they have a number of concurrent medical comorbidities, and are susceptible to postoperative complications and poorer outcomes.[3,4]

Basal energy requirement of a traumatized patient increases from 30% to 50% of normal. Hip fractures in the elderly lead to functional decline and a diminished quality of life. Furthermore, these fractures are associated with an in-hospital mortality rate of 7–14%, reaching 14–36% within 1 year of surgery. Hip fractures are also complicated by a 0–49% need for revision surgery, which is influenced heavily by fracture characteristics and surgical interventions.[5]

Patients suffering from a hip fracture have a significantly higher early- and long-term mortality rate after the initial injury compared with healthy individuals of the same age with no fracture. Currently, no consensus has been reached with regard to the factors responsible for this difference in the mortality rate. This lack of consensus exists also in the established protocols for optimization of patient care, the definition of early and late surgery, the implementation of rehabilitation protocols, the length of hospital stay, thus making it extremely difficult to compare data from registries with different diagnostic and treatment pathways.[6]

Material and Method

The present study was conducted in patients with fractures neck of femur (age 60 years and above) presenting to the Department of Orthopaedics, Dr RPGMC Kangra at Tanda.

All cases presenting to the department and fulfilling the criteria were studied for a period of one year starting from the date of start of the study. The study was initiated following approval from Institutional Ethics Committee. The patients were given the right to abstain from participation in the study or to withdraw at any time of the study without reprisal.

Inclusion criteria

All patients of fractures neck of femur 60 years and above.

Exclusion criteria

1. concomitant trauma involving other system
2. associated fracture of the pelvis
3. bilateral hip fracture
4. pathological fracture
5. did not give consent to participate in the study

After a detailed history, patients were clinically evaluated at the time of admission. Demographic data of the patients such as age, sex, pre-existing co-morbidities, type of fracture, degree of osteoporosis and type of surgical procedure were recorded. For classification of co-morbidities in the study population, the American Society of Anesthesiologist (ASA) score was used which is as follows:

[1]. Patient is a completely healthy fit patient.

[2]. Patient has mild systemic disease.

[3]. Patient has severe systemic disease that is not incapacitating.

[4]. Patient has incapacitating disease that is a constant threat to life.

Statistical analysis

The data were presented as frequency, percentages or mean±SD whereas applicable. Student t-test was used to compare continuous variables between 2 groups. Chi-square test was used to compare categorical variables. P value <0.05 was considered significant. Statistical analysis was performed using SPSS v21.

Results

The present study was aimed to determine peri-operative mortality in fractures of neck of femur in the elderly patients presenting to the Department of Orthopaedics at Dr RPGMC Tanda over the period of one year. A total of 90 patients were included in the study. Results of the study have been described below:

Mean duration of hospital stay was 17.21±7.01 days. Minimum hospital stay was 5 days while the maximum hospital stay was 17 days.

Table 1: Hospital Stay Distribution of Study Participants (N=90)

	Hospital Stay (Days)
Mean	17.21
SD	7.01
Minimum	5
Maximum	17

Our study observed that mean hospital stay in group A, group B, and group C was 15.80±3.11 days, 20.50±8.37 days, and 17.05±7.08 days. The mean duration of hospital stay was found to be statistically non-significant between the groups (P=0.463).

Table 2 given below summarize the general condition. We observed that general condition was fair for 98% (n=86/88) patients on day-15, 99% (n=85/86) patients on day-30, 98% (n=83/85) patients on day-45, and 96.5% (n=82/85) patients on day-90.

Table 2: General Condition at Different Time Points (N=90)

	Fair	Agitated
Day-15	86	2
Day-30	85	1
Day-45	83	2
Day-90	82	3

Table 3 given below summarizes the wound status. We observed that wound status was healthy for 98% (n=86/88) patients on day-15

Table 3: Wound Status (Day-15) (N=90)

Wound Status	n	%
Healthy	86	98
Discharge Present	2	2

Discussion

The present study was aimed to determine peri-operative morbidity in fractures of neck of femur in the patients (age 60 years and above) presenting to the Department of Orthopaedics, Dr RPGMC Kangra at Tanda.

All cases presenting to the department and fulfilling the criteria were studied for a period of one year starting from the date of start of the study. The study was initiated following approval from Institutional Ethics Committee. Patients fulfilling inclusion criteria were evaluated in detail at time of admission. Demographic data of the patients such as age, sex, pre-existing co-morbidities, type of fracture, degree of osteoporosis and type of surgical procedure were recorded.

All data concerning the type of surgery, hospital stay and perioperative mortality was collected. After surgery patients were discharged on the fourth day if the clinical conditions permitted. The telephone number of the investigator was marked on discharge card. The

patients were followed up in OPD on the 15th postoperative day for sutures removal and further on 45th and 90th postoperative day for assessment of functional ability.

The queries enquired by the investigator were to investigate the attributable factors for mortality such as death, major cardiac or pulmonary complications, deep vein thrombosis, urinary tract complications, blood loss, surgical wound complications etc.

Hip fractures in elderly patients are serious injuries that can lead to immobility and permanent dependence, negatively impacting patients' quality of life and resulting in a financial burden for health systems and societies. Hip fractures can also lead to death. [7]

Conclusion

We concluded that perioperative morbidity was influenced by presence of co-morbid conditions.

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