

Incidence of Fractures of Neck of Femur (Intracapsular)

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ABSTRACT

Objective: To determine the incidence of fractures of neck of femur (intracapsular).

Study Design: Observational Study

Place and Duration of Study: This study was conducted at the Surgery, Idris Teaching Hospital Sialkot Medical College Sialkot from Jan 2017 to Jan 2018.

Materials and Methods: This Study was conducted on 83 patients of fracture of neck of femur (intracapsular) The age, gender and bone involved was noted down. The informed consent was taken from each patient of fracture of neck of femur. The findings were noted on the design Performa. The permission of ethical committee was also considered before start of the study and publishing in research journal.

Results: At the age of 31-40 years there were 02 male and 00 female patients. At the age of 41-50 years there were 01 male and 01 female patients. At the age of 51-60 years there were 06 male and 04 female patients. At the age of 61-70 years there were 14 male and 11 female patients. At age above there were 27 male and 17 female patients.

Conclusion: It was concluded from the study that there was fracture of neck of femur intracapsular and extracapsular take place during violence or trauma.

Key Words: Incidence, Fractures, Neck, Femur (Intracapsular)

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INTRODUCTION

Femoral Neck fractures treatment is done by surgical method, during surgery there is high chances of mortality and disease formation.¹ It is necessary to use treatment methods that are suitable and more reliable to use considering the aspects like health of patient, age of patient, nature of fracture and late complication². The ascending cervical arteries of extra capsular ring are greatly damaged by femoral neck fracture as a result the femoral head is deprived of blood supply³.

Femur neck fractures are caused by greater force trauma in young age group. Studies shows that some complications occurs after the treatment of fracture.⁴ The complications include necrosis due to lack of blood supply to femoral head and bone non union⁵ and reduces the quality of life and make person dependable on other persons for assistance and recovery⁶.

A lot of recorded cases such as blood vessel damage, tamponade effect, fracture displacement, surgical

treatment delay and surgical techniques have been reported during the treatment of fractures.⁷ Increasing incidences of femur fractures put extra expense on government setup hospitals and companies to meet the cost for the treatment of patients. The main goal of treatment is to reduce the anatomic reduction and stabilized fixation⁸. The treatment is considered successful if anatomic reduction is obtained, stability of fixation, type of fracture and bone quality is maintained.⁹

The study is designed to find the effects of age, timing of the surgery and presence of fracture displacement, complications and functional outcomes in patients with femur neck fracture (FNF).¹⁰

MATERIALS AND METHODS

We selected 83 patients of intracapsular fracture of neck of femur. This study was conducted at idris teaching hospital Sialkot Medical college, Sialkot during January 2017 to January 2018 the demographic data, aetiology, treatment option, complications and output/outcome was noted on design performa. Written inform consent was taken from every patient before start of the study. The permission of ethical committee was considered before collection of data and get publishing in the medical journal.

RESULTS

At the age of 31-40 years there were 02 male and 00 female patients. At the age of 41-50 years there were 01 male and 01 female patients. At the age of 51-60 years

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there were 06 male and 04 female patients. At the age of 61-70 years there were 14 male and 11 female patients. At age above there were 27 male and 17 female patients (Table 1).

Table No.1: Age and Gender distribution of the patients of intracapsular fracture of neck of femur.

Sr. No.	Age (years)	Male	Female
1	31 - 40	02	00
2	41-50	01	01
3	51-60	06	04
4	61-70	14	11
5	Above 70	27	17
Total		50	33

The history of fracture from fall/slip ground has 42 male patients and 30 female patients. With fracture from RTA there are 08 cases of male and 03 female patients reported.

Table No.2: Aetiology in patients of intracapsular fracture of neck of femur.

Sr. No.	Causes	Male	Female
1	History of Fall / Slip on ground	42	30
2	RTA	08	03
Total		50	33

Table No.3: Treatment options in intracapsular fracture of neck of femur.

Sr. No.	Treatment	Male	Female
1	Conservative (skeltol skin traction)	02	01
2	Operative		
	*Half threaded caucellous strewus	09	05
	*Austin Moors Prosthesis	21	18
	*Cemented Biopolar Hemiarthoplasty	18	09
Total		50	33

Treatment options with conservative approach include 02 male and 01 female. With operative approach there were 48 male patients and 32 female patients

Table No.4: Complications in intracapsular fracture of neck of femur.

Sr. No.	Complications	Male	Female
1	Pneumonia	01	01
2	Pulmonary Embolism	00	00
3	Infaction	03	02
4	Dislocation	00	02
5	Bed Sores	00	00
6	Mortality in 1 st post operative year	01	02
Total		05	07

Complications of patient with pneumonia includes 01 male and 01 female. Complications with infections includes 03 male and 02 female patients

Table No.5: Output/ outcome in Intracapsular fracture of neck of femur.

Sr.No.	Outcome	Male	Female
1	AVN	01	00
2	Removal of Prothesis	03	02
3	Union	08	05
4	Non-Union	01	00
5	Girdle Stone procedure	02	01
Total		15	08

With Avn there was 01 male and 00 female patients. With Removal of prosthesis there is 03 male and 02 female patients. With union of male there is 08 male and 05 female patients. With non union there is 01 male and 00 female patients. With girdle stone procedure there is 021 male and 01 female patients

DISCUSSION

The goal is to determine the factors like age , timing of surgery , presence of displacement and complications during and after the treatment of femoral neck fractures. Successful treatment includes the healing of fracture, bone union, improved blood supply to bone thus promoting faster recovery of health of patient. There is high chances of disease formation and bone non union during the treatment of fracture at any age group but old people are more susceptible to disease formation .Much attention is required to prevent disease formation like necrosis due to lack of blood supply and overcome consequences. There are some important factors that contribute during recovery and quality of treatment that includes hospital services, age, sex, health, obesity, area like urban or rural , socio economic values, culture, race, diet etc.¹¹

Schweitzer et al. reported that femoral head necrosis rates in patients range from 50 to 65 years old are more when compared to younger patients, and this is not related to timing of the surgery. So age can be important contributing factor in necrosis^{11,12}.

When ever a person feels any signs of fracture , early diagnosis is needed and earlier start of the treatment also plays a vital role in complete recovery without complications or less complications. Study shows that when an early action is needed which includes methods like full anatomic reduction and stable fixation is to be maintained and whether capsulotomy or joint aspiration to reduce pressure in the capsule,they have not achieved a consensus^{13,14}.There is conflict of studies about timing of surgery , some says early inertvention within 6-24 hrs is necessary to prevent necrosis and some do not consider the early approach. "Braun et al state that fixation applied during the first 6 hours improves both functions and avascular necrosis rates , yet in some

other researches it is reported that there is no relation between nonunion or avascular necrosis development risk and timing of the surgery”

Femur neck fractures are caused by greater force trauma with multiple injuries to the body. Studies shows that there is great link of necrosis with displacement of fracture, the incidence of necrosis is high in displaced fractured. The rate of complications is also higher in displaced fractured as compared to non displaced^{15,16}.

CONCLUSION

It was concluded from the study that there was fracture of neck of femur intracapsular and extracapsular take place during violence or trauma.

Author's Contribution:

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