

**FACTORS AFFECTING POSTOPERATIVE MORTALITY OF PATIENTS WITH
DISPLACED FEMORAL NECK FRACTURE****Dr. Mohammad Ali Hossain*¹ and Dr. S. K. Kamal Uddin²**¹Senior Consultant, Department of Orthopedic, 250 Bedded District Sadar Hospital, Cox's Bazar, Bangladesh.²MO, Department of Orthopedic, 250 Bedded District Sadar Hospital, Cox's Bazar, Bangladesh.***Corresponding Author: Dr. Mohammad Ali Hossain**

Senior Consultant, Department of Orthopedic, 250 Bedded District Sadar Hospital, Cox's Bazar, Bangladesh.

Article Received on 21/12/2020

Article Revised on 11/01/2021

Article Accepted on 01/02/2021

ABSTRACT

Objective: In this study our main goal is to evaluate the factors which is affecting postoperative mortality of patients with displaced femoral neck fracture. **Method:** This prospective cross-sectional study was carried out at Tertiary medical College Hospital, Bangladesh. Where data were collected from July 2019 to June 2020. A total of 50 patients who hospitalized for intracapsular, displaced fracture of the femoral neck considered for the study population. Sample were collected through purposive sampling as per inclusion criteria. **Results:** During the study, most of the patients belong to >40 years age group, 53.30%. Transfusion with more than two SAGMs 9%, deep infection 4%, cardiac arrhythmia 3%, cardiac arrest and wound infection 2.5% were common complication which was directly related to surgery. 18.1% had pneumonia followed by 13% had UTI, 01.6% had confusion, 9.2% had heart failure, 6% had stress ulcer, 5.1% had cardiac arrhythmia. **Conclusion:** The present study confirms that fractures are a part of the aging process, because of heart problems and dementia disorders which are typically linked with a general ageing process and are two major reasons that adverse impacts on survival. Further analysis is needed in order to ascertain the exact relative contribution of the hip fracture case to the underlying co-morbidity.

KEYWORDS: Displaced femoral neck fracture, dementia disorders.**INTRODUCTION**

Hip fractures, associated with high morbidity and mortality rates, are expected to increase exponentially in frequency over the next 50 years. This is both a result of increased life expectancy and population growth.^[1]

In Sweden, it has been estimated that after the age of 50 years, 19.5% of all women will sustain a hip fracture.^[2] In the United States, it is estimated that hip fractures account for almost 140,000 nursing home admissions annually.^[3] Several previous studies have investigated factors associated with high rates of morbidity and mortality following operation for a displaced femoral neck fracture.^[4] The mortality found in these patients, and especially the mortality in short follow-up studies, varies both across studies and from country to country. Mortality at 3 months has been found to vary between 5% and 24%, while at 1 year, mortality has been found to be between 24% and 29%.^[5]

The most important causes of death seem to be related to cardiac and pulmonary factors. However, causes of death vary across studies. This is probably due to the fact that the exact cause of death in the elderly population is often difficult to determine. The importance of the interval between injury and surgery has been hotly debated, with

conflicting results reported for mortality due to operative delay.

In this study our main goal is to evaluate the factors which is affecting postoperative mortality of patients with displaced femoral neck fracture.

OBJECTIVE

To assess the evaluate the factors is affecting postoperative mortality of patients with displaced femoral neck fracture.

METHODOLOGY**Types of study**

It was a cross-sectional and analytical study.

Place and period of the study

The study place was carried out at Tertiary medical College Hospital, Bangladesh. Where data were collected from July 2019 to June 2020.

Study population

A total of 50 patients who hospitalized for intracapsular, displaced fracture of the femoral neck considered for the study population. Sample were collected through purposive sampling as per inclusion criteria.

Method

Both qualitative and quantitative (Mixed Method) data were collected by using a pre designed questionnaire. The questionnaire was prepared reviewing literature and consulting with medical research experts.

Data analysis

All collected data were coding and input in SPSS-25 for further analysis. Both descriptive and inferential statistics

done. Descriptive statistics included frequency distribution, percent, mean, standard deviation; graph, tables, figures and inferential statistics.

RESULTS

In figure-1 shows age distribution of the patients where most of the patients belong to >40 years age group, 53.30%. The following figure is given below in detail:

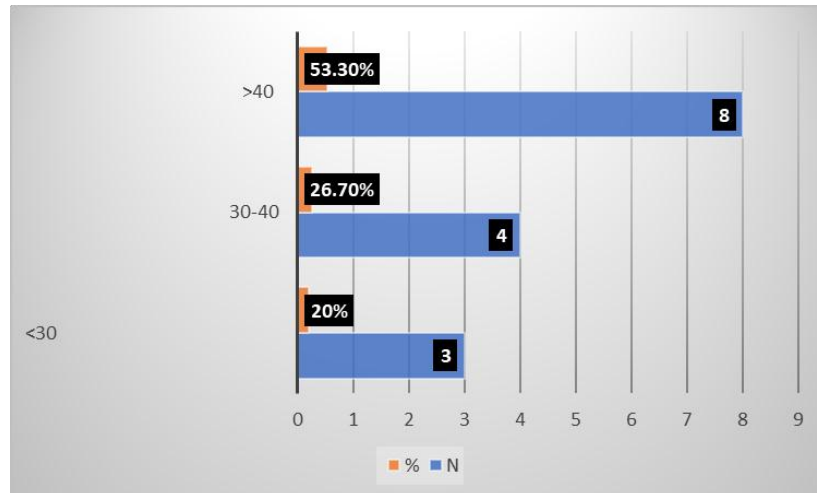


Figure-1: Age distribution of the patients.

In table-1 shows gender distribution of the patients where only 20 % patients were female, where 80% were male. The following table is given below in detail:

Table-1: Gender distribution of the patients.

Gender	%
Male	80%
Female	20%

In table-2 shows complications directly related to surgery where transfusion with more than two SAGMs 9%, deep infection 4%, cardiac arrhythmia 3%, cardiac arrest and wound infection 2.5% were common complication which was directly related to surgery. The following table is given below in detail:

Table-2: Complications directly related to surgery.

Complications directly related to surgery	%	P value
None	70%	0.002
Fracture (operatively treated)	1%	0.32
Fracture (conservatively treated)	1.4%	0.89
Bleeding and circulatory instability	1.5%	0.18
Transfusion with more than two SAGMs	9%	0.31
Wound rupture	2.5%	0.89
Deep infection	4%	0.03
Luxation of prosthesis	1.3%	0.2
Peroneal nerve palsy	2%	0.31
Cardiac arrhythmia	3%	0.021
Cardiac arrest	2.5%	0.05
Other	1.8%	0.8

In table-3 shows postoperative complications not directly related to surgery where 18.1% had pneumonia followed by 13% had UTI, 01.6% had confusion, 9.2% had heart failure, 6% had stress ulcer, 5.1% had cardiac arrhythmia. The following table is given below in detail.

Table-3: Postoperative complications not directly related to surgery.

Postoperative complications	%	P value
None	50.5	0.06
Pneumonia	18.1	<0.0001
Pulmonary embolism	1.4	0.04
Deep venous thrombosis	0.5	0.9
Decubitus	2.3	0.7
Urinary tract infection	13	0.007
Wound infection	.5	0.7
Stress ulcer	6	0.04
Cardiac arrhythmia	5.1	0.2
Confusion	10.6	0.5
Abstinence	.1	0.6
Heart failure	9.2	0.7
Stroke	0.8	0.5
Other	13.1	0.08

In table-4 shows operation characteristics where waiting time for surgery, duration of operation, bleeding, blood

transfusion was assessed. The following table is given below in detail:

Table-4: Operation characteristics.

Operation characteristics	Waiting for operation (Days)	Duration of operation (min)	Bleeding (ml)	Blood trans-fusion
Women	4	61 min	315	1.3
Men	3	63 min	313	1.4

DISCUSSION

Excess mortality in patients presenting with hip fracture, been well-documented in numerous previous studies.⁶ While an increased rate of mortality has been well-documented, fewer studies have sought to assess the factors which influence mortality following a hip fracture using multivariate models of analysis.^[7]

While an increased rate of mortality has been well-documented, fewer studies have sought to assess the factors which influence mortality following a hip fracture using multivariate models of analysis.^[8]

One study focused on investigation of factors influencing mortality for the most severe Hip fractures found in both male and female patients.^[9]

Transfusion with more than two SAGMs 9%, deep infection 4%, cardiac arrhythmia 3%, cardiac arrest and wound infection 2.5% were common complication which was directly related to surgery. 18.1% had pneumonia followed by 13% had UTI, 01.6% had confusion, 9.2% had heart failure, 6% had stress ulcer, 5.1% had cardiac arrhythmia. Which is supported by several studies.^[10-11]

CONCLUSION

The present study confirms that fractures are a part of the aging process, because of heart problems and dementia disorders which are typically linked with a general ageing process and are two major reasons that adverse impacts on survival. Further analysis is needed in order to ascertain the exact relative contribution of the hip fracture case to the underlying co-morbidity.

REFERENCE

1. Bredahl C, Nyholm B, Hindsholm KB, et al. Mortality after the hip fracture: results of operation within 12 h admission. *Injury*, 1992; 23: 83—6.
2. Browner WS, Pressman AR, Nevitt MC, Cummings SR. Mortality following fractures in older women. The study of osteoporotic fractures. *Arch Intern Med*, 1996; 156: 1521—5.
3. Casaletto JA, Gatt R. Post-operative mortality related to waiting time for hip fracture surgery. *Injury*, 2004; 35: 114—20.
4. Center JR, Nguyen TV, Schneider D, et al. Mortality after all major types of osteoporotic fracture in men and women: an observational study. *Lancet*, 1999; 353: 878—82.
5. Clague JE, Craddock E, Andrew G, et al. Predictors of outcome following hip fracture. Admission time predicts length of stay and in-hospital mortality. *Injury*, 2002; 33: 1—6.
6. Eiskjaer S, Oestgaard SE. Risk factors influencing mortality after bipolar hemiarthroplasty in the treatment of fracture of the femoral neck. *Clin Orthop*, 1991; 270: 295—300.
7. Eiskjaer S, Ostgaard SE, Jakobsen BW, et al. Years of potential life lost after hip fracture among postmenopausal women. *Acta Orthop Scand*. 1992; 63: 293—6.
8. Forsen L, Sogaard AJ, Meyer HE, et al. Survival after hip fracture: short- and long-term excess mortality according to age and gender. *Osteoporos Int.*, 1999; 10: 73—8
9. Grimes JP, Gregory PM, Noveck H, et al. The effects of time-to-surgery on mortality and

- morbidity in patients following hip fracture. *Am J Med*, 2002; 112: 702—9.
10. Heikkinen T, Parker M, Jalovaara P. Hip fractures in Finland and Great Britain—a comparison of patient characteristics and outcomes. *Int Orthop*, 2001; 25: 349—54.
 11. Ions GK, Stevens J. Prediction of survival in patients with femoral neck fractures. *J Bone Joint Surg Br.*, 1987; 69: 384—7.