



RETROSPECTIVE STUDY OF INCIDENCE OF POLYTRAUMA CASES AND THEIR OUTCOME IN MGM MEDICAL COLLEGE AND HOSPITAL, NAVI MUMBAI.

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ABSTRACT

Polytrauma is defined as trauma involving injury to two or more physical regions or organ systems, resulting in physical, cognitive, psychological, or psychosocial impairment and functional disability. In the late 70s of the last century, the mortality rate due to polytrauma amounted to 40%. The goal of this study is to determine the incidence of hospital mortality in polytrauma patients.

140 polytrauma patients who presented to the Emergency Department of MGM hospital were studied retrospectively wherein the mortality among 140 cases was found to be 26%.

The mortality rate in polytrauma patients in our institute is considerable and comparable with the international literature. It was observed that the mortality among elderly polytrauma patients was higher when compared to their younger counterparts.

KEYWORDS :

INTRODUCTION

Polytrauma cases are most often encountered in veterans of the military who are involved in active military duties, but can also be seen in civilians involved in everyday accidents. The vast majority of civilian polytraumas are caused by motor vehicle accidents or other types of accidents, occurring at a high velocity resulting in multiple injuries.⁽¹⁾

Lately controversies have been created regarding the definition of polytrauma. However, polytrauma is defined as trauma involving injury to two or more physical regions or organ systems, resulting in physical, cognitive, psychological, or psychosocial impairment and functional disability.⁽²⁾

Polytrauma and multiple traumata are medical terms describing the condition of a person who has been subjected to multiple traumatic injuries, such as a serious head injury in addition to a serious burn. The term is defined via an Injury Severity Score (ISS) equal to, or greater than 16.⁽¹⁾ The term is generic, however, and has been in use for a long time for any case involving multiple traumata.

Advances in medical procedures have led to a significant improvement in the treatment of polytrauma patients. The standard resuscitative protocols (Advanced Trauma Life Support, ATLS) are uniform and are applied to every patient who has suffered polytrauma. Trauma scoring systems, such as the Injury Severity Score (ISS), the New Injury Severity Score (NISS), and the Acute Physiology and Chronic Health Evaluation (APACHE II) score are often used to estimate the severity of trauma and the patients' physiological health but are not used to predict the outcomes of polytrauma patients.⁽⁵⁾ Therefore, on admission to the hospital any trauma patient should immediately undergo x-ray diagnosis of their cervical spine, chest, and pelvis, commonly known as a 'trauma series', to ascertain possible life-threatening injuries for example, a fractured cervical vertebra, a severely fractured pelvis, or a haemothorax.

A reduction in trauma-associated diseases and therefore the reduction of intensive-care-unit (ICU) days could also economically benefit financially stressed social health-care systems. Better medical management in polytrauma patients would lead to a reduction in the social costs and shorten the patients' rehabilitation period.⁽⁶⁾

In this study the aim was to observe the incidence of polytrauma cases and gauge mortality rate in our institution.

AIMS AND OBJECTIVES

1. To study the incidence of polytrauma patients in MGM Medical College and Hospital, Navi Mumbai.
2. To study in hospital mortality rate in polytrauma patients who presented to in MGM Medical College and Hospital, Navi Mumbai.

MATERIALS AND METHODS

Inclusion criteria: All cases of polytrauma presented to Emergency Department of MGM Medical College and Hospital, Navi Mumbai.

Exclusion criteria: Brought dead cases.

Study area: of MGM Medical College and Hospital, Navi Mumbai.

Study period: 1 January, 2016 - 30 June 2017

Sample size: All cases of polytrauma who presented to Emergency department in above mentioned time i.e. 140 cases.

Study analysis: Data was collected retrospectively from the records available in the form of files, registers, etc. Data was analyzed and appropriate statistical measurement like ratios, percentages, proportions were used.

DISCUSSION

A study conducted by El Mestoui Z et al illustrated that the median age of the polytrauma patients was 58.8 years and in the study 125 (i.e. 74.12%) patients were men.⁽²⁾

Hadžan Konjo et al observed that more than half of the patients in their study were younger than 50 years. In the age groups of more than 50 years, most frequently affected were 61 years and older (25.7%), 24.3% patients belonged to 51-60 years, and lastly 21.4% were in the 31-40 year old age group.⁽³⁾

In our study out 140 cases presented to the Emergency Department of MGM Hospital, out of which 103 (73.57%) were male patients while 37 (26.42%) were female patients. In terms of age, maximum number of cases i.e. 41 patients (29.28%) belonged to the age group of 31-40 years, followed by 32 (22.85%) cases from 21-30 years. Thereafter, 30 (21.42%) cases from 41-50 years, followed by 25 (17.85%) cases from 11-20 years, while extremes of the ages contributed to less than 12 cases (10%).

In terms of mortality, the study conducted by El Mestoui Z et al study depicted that out of the 1073 polytrauma patients who were treated during the study period, 205 patients (19.1%) did not survive during hospital stay.⁽²⁾

Hadžan Konjo et al study concluded that lethal outcome occurred in

10 patients (14.3%), while 60 patients (85.7%) survived and were treated until discharge or transfer to a different department.⁽³⁾

The study performed by Rob de Vries illustrated that the older patients represented 47.8% of the polytrauma population. The hospital mortality was doubled for the older polytrauma patients (19.8% vs. 9.6%).⁽⁴⁾

Whereas in our study out of 140 polytrauma cases 32 (22.85%) cases could not be revived, while the rest survived with or without any comorbidity.

RESULTS

Out of 512 trauma patients, 140 patients were cases of polytrauma.

Out of 140 cases, 103 (73.57%) were male patients while 37 (26.42%) were female patients.

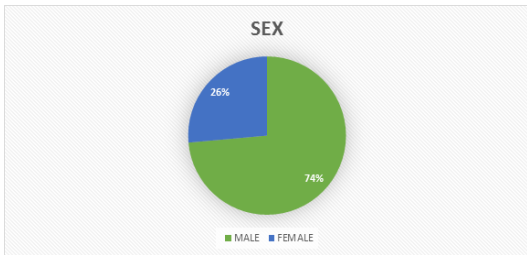


Figure 1- Sex-wise distribution of polytrauma cases

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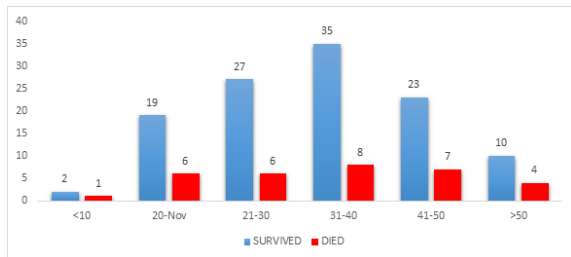


Figure 2- Depicts age wise distribution of polytrauma cases in terms of survival.

Analyzed data suggests that mortality was nearly 50% in extremes of ages, while it was less than 30% in rest of the ages combined.

Out of 140 polytrauma cases 32 (22.85%) cases succumbed to death, while the rest survived with or without any comorbidity.

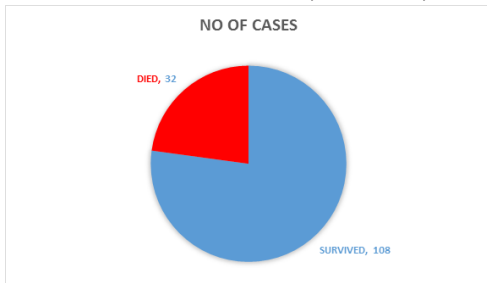


Figure 3- Illustrates the survival rate in polytrauma patients.

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