

Railway fatalities - a five year retrospective study of the cases at medicolegal autopsy in silchar medical college, Silchar, Assam

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Abstract

Introduction: A retrospective study carried out in the Department of Forensic Medicine, Silchar Medical College, Silchar to study the Railway fatalities occurring during the period 01.01.2009 to 31.12.2013 with an aim to find out the demographic trend and causative factors. Data collected and compiled from the records of postmortem examination, inquest report, dead body challan and forwarding letter were analysed and inferences drawn. Observation reveals that fatalities were more in males and in the age group of 30-40 years. Natural deaths also contributed to a good number of deaths. More deaths were also found in the month of December. In conclusion, it can be said that enforcement of law, public awareness of safety measures, co-ordinated approach of Railway and District Administration will definitely help in minimising Railway fatalities.

Keywords: Railway, Fatality, Medicolegal Autopsy, Postmortem examination.

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INTRODUCTION

Railways being one of the most comfortable means of transportation have a long history and an unprecedented contribution to the human civilisation. Originally developed for the transportation of goods from one place to the other, Railways have now entered every sphere of human life, making day-to-day travel and vacations more comfortable. For the common man, Railways provide affordable, fast and reliable means of day-to-day travel and also a mode of travel for vacation and religious pilgrimage. Every setup has its own flaws which at times breakdown and Railways are also no exception. Railway accidents do occur and for which both human error and mechanical failures have always been blamed. In

addition, in recent years terrorist activities have also been directed to cause damage to the Railways that at times perpetuate train disasters. Moreover, Railway premises being the most suitable shelter for homeless and beggars, it also accounts for deaths due to natural causes in persons who are victims of poverty and trafficking. A study of the cases of death in the Railway premises and the areas covered under the term Railway area will definitely give us an idea as to the prevention of deaths related with it. Silchar is a town situated in the southern part of Assam connected to the rest of the part of India by a Metre-Gauge(MG) line only. Though there is no Broad-Gauge (BG) line connecting Silchar to other places and a very few MG passenger trains runs from this place, death do occur in the premises of the available Railway stations and also along the Railway lines, be it unnatural or natural. This study is an attempt to find out demographic trend of the railway fatalities of the last five year duration giving importance to the causative factors. An attempt is also made to find out preventive measures so that such fatality can be minimized to the utmost level.

AIMS AND OBJECTIVE

Taking into account the very meaning of the word 'Fatality' as "a death that is caused in an accident or a

war or by violence or disease”¹, this study is done with the following objectives.

1. To find out the demographic trend of the deaths related with Railways.
2. To find out whether all deaths labelled as “Railway fatality” are actually result of any accident or violence or some of them are because of any natural cause also.
3. To find out any inherent factors contributing to the deaths labelled as Railway Fatalities.

To find a relation between demographic trends of the commuters succumbed to death with the causative factors.

MATERIAL AND METHODS

The present study is carried out on the basis of the data available on the records of postmortem examination, inquest report, dead body challan and forwarding letter of the Investigating officers of the cases carried out from 01.01.2009 to 31.12.2013. The deaths taking place inside the train (running or stationary), Railway track, Railway Platform, and in the Railway premises which come within the purview of Inquest carried out by Government Railway Police in the District of Cachar, Assam are included in the study. The Cases of death brought by Police stations other than Government Railway Police, where the death occurred at the Railway Station, Railway premises, Railroads or along the side of Railroads within the District of Cachar, Assam where there was no provision for investigation by Railway Police, are also included in this study. However, the deaths which occurred in the Residential area of the Railway Administration in the District of Cachar, Assam, brought by Railway Police or other Police Stations are not included. Data pertaining to the age, sex, residential address, locality of death, injuries sustained, disease process if any, cause of death, time since death are extensively studied and compared with each other.

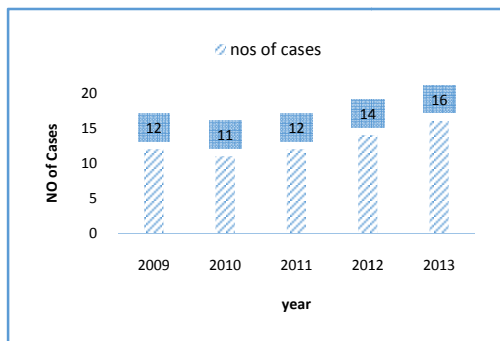


Figure 1: year wise distribution of railway fatalities

OBSERVATION AND RESULTS

During the five years period of this study extending from 01.01.2009 to 31.12.2013, a total of 3305 cases of medicolegal postmortem examinations were carried out in the Department of Forensic Medicine, Silchar Medical College, and Silchar which on analysis yields number 65 cases to be labelled as Railways Fatalities. Though negligible in terms of total number of cases, yet very significant considering the very few passenger trains running in the region and having only Meter-Gauge Lines. From a minimum of 11 number of cases in the year 2010 (1.88%) to a maximum of 16 cases in 2013 (2.29%), an increasing trend is seen in the occurrence of the fatalities. Of all the victims, 80% (52) of the cases were male with a peak trend of 10 cases in the month of December. The common age group found to be victims of Railway Fatality was 30-40 years of age where a total of 17 cases are found. The railway track happens to be the area where most of the deaths occurred as 23 (35.38%) cases incident leading to the fatality occurred in the railway track and 19 (29.23%) near the track. Surprisingly, 20 out of 65 total cases came out to be death due to natural causes where disease like Tuberculosis, Acute or chronic Coronary Insufficiency, Chronic malnutrition and Hepatic Failure are found. In those cases, where the cause was unnatural, 10 cases were found in two parts and nine cases in more than 3 parts (i.e. separation of body parts because of the incident leading to death). In most of the cases, the separations of the body were at the level of thorax and abdomen. Among the 45 unnatural deaths, 35 cases (53.85%) of accidents, 7 cases (10.77%) of suicide and 3 cases (4.62%) of homicide were found. In terms of cause of death, natural cause outnumbered the other contrary to the popular belief, followed by instantaneous death in 16 (24.62%) and coma in 15 (23.10%) cases.

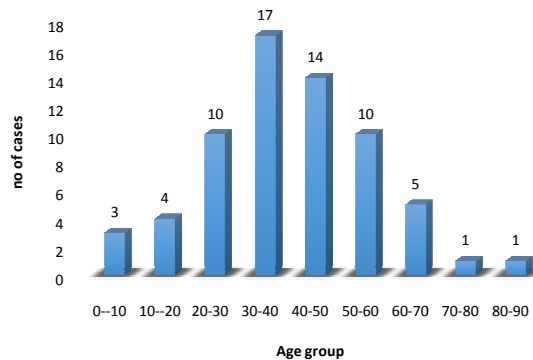


Figure 2: Age distribution

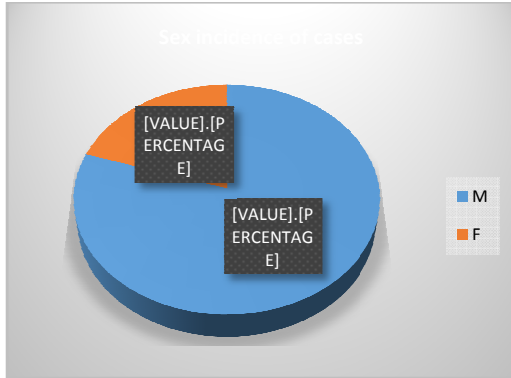


Figure 3: showing sex incidence of cases

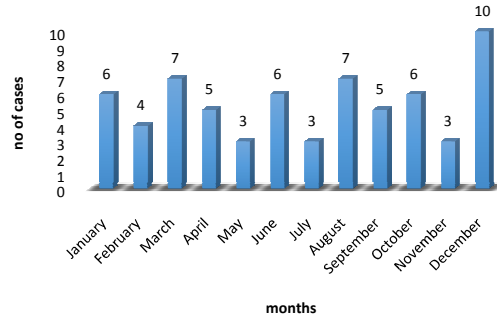


Figure 4: showing incidence of cases in each Month

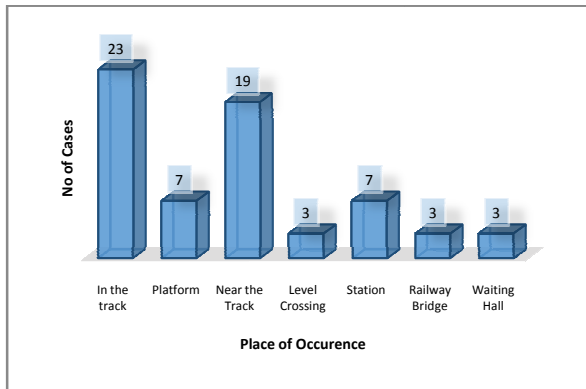


Figure 5: showing place of occurrence of the cases

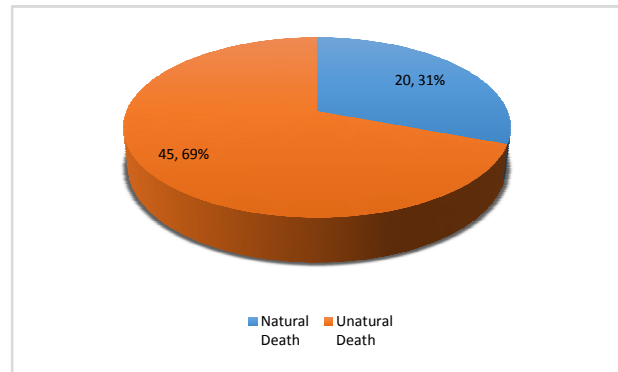


Figure 6: showing distribution of cases

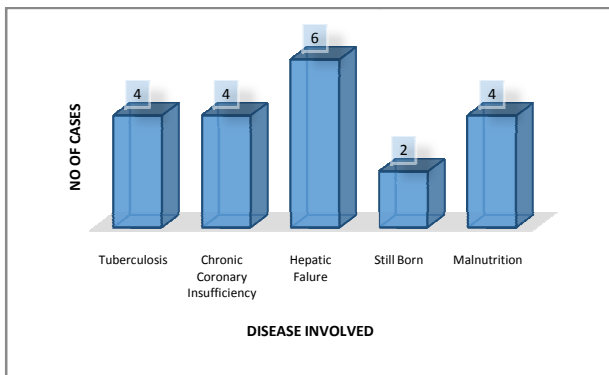


Figure 7: Showing disease process involved

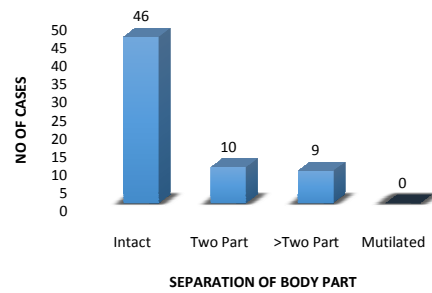


Figure 8: showing separation of body parts

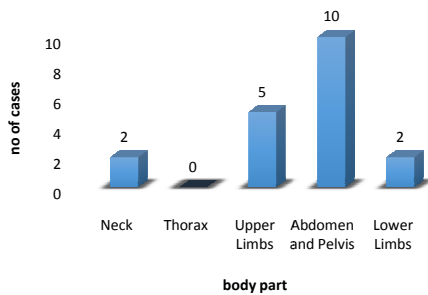


Figure 9: Showing the body region involved in separation

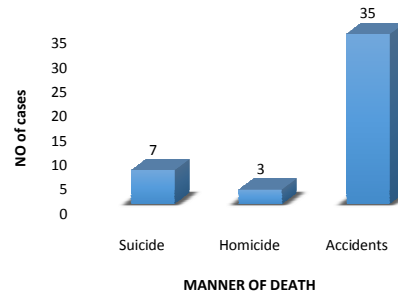


Figure 10: Showing manner of death

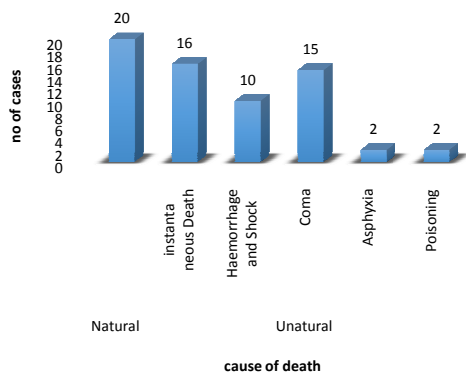


Figure 11: showing the cause of death

DISCUSSION

The aim of the study was to understand the nature and causes of railway related deaths along with the patterns of injuries or diseases associated, so as to contribute to the existing knowledge regarding ways to regulate safe railway traffic to avoid incidents or accidents which often lead to unexpected casualties. **Basu, R., Bose, T.K. et al** (2002) found 299 (6.11%) cases of Railway fatalities among a total of 4893 Autopsies at Kolkata between 1-1-2000 to 30-6-2001. The discrepancy with this study can be attributed to the fact that Kolkata being a Metro city, there is much more Railway traffic as compared to the Cachar District which is a small district comprising the district headquarter Silchar. Age and Sex incidence of the cases are found to be similar with the study carried out by **Das, G** (2007) at Gauhati Medical College, Guwahati during the period 01.06.2005 to 31.05.2006. More death in the track may be attributed to the fact that the commuters remain in a hurry always to cross the Railway Platform using the track instead of the Foot-Bridge. The interesting fact of getting a good number of natural death cases can be understood by the fact that the Railway premises provide a good attraction for the homeless and beggars because of the availability of water, shelter and left-over food by the commuters. The variation of getting more cases towards the month of December is seen usually because of the winter season in which usually people travel more on vacation.

CONCLUSION

The present study was an effort to analyse the spectrum of perpetuating factors leading to Railway fatalities, possible conditions which could aggravate pre-existing diseases in a commuter and the human errors and mechanical failures which can lead to railway related deaths. The main aim of was to help ourselves to formulate the preventive measures that could avert the railway fatalities and preserve human life and property.

As per the observation, deaths in the track and near the track can be attributed to the absence of any barricade to seclude the tracks. A frequently observed phenomenon is the attempt made by pedestrians to cross the standing train from below the bogies or through the doors or the links. Even passengers in the station at times cross the railway tracks to change the platforms rather than using the overhead bridge made for the purpose. A strict legislation and active role of the law enforcing agency can definitely minimise such misshape. Sometimes expression of heroism compounded by conduct disorder, use and abuse of psychoactive substance, all potentiates unlawful activities and maladaptive behaviour; which in turns exposes these groups of people to railway fatalities. To prevent a majority of railway related incidents it is imperative that the Railway and District Administration should go hand in hand and work for stricter implementation of the existing laws. In the recent times there has been numerous initiatives taken up by the authority to upgrade the level crossings and track conditions. Such initiatives would definitely bring down these unfortunate railway incidents and prevent fatalities. In terms of natural death cases, setting up of an organised emergency medical centre would facilitate to bring down those cases where acute intervention is necessary. Public awareness about safety measures and existing law will also alleviate some of the fatalities

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