A PROSPECTIVE STUDY ON CLINICAL FORENSIC CASES EXAMINED AT NORTH COLOMBO TEACHING HOSPITAL; NEW CHALLENGES FOR THE 21ST CENTURY

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ABSTRACT

The specific objective of the study is to do a quantitative analysis of forensically relevant clinical cases examined at North Colombo Teaching Hospital with a view of identifying lapses in the medico-legal management and suggest recommendations to improve the system. The data was collected by analyzing the completed Medico-legal Examination Forms (MLEF) and personal notes made by the examining doctor attached to Department of Forensic Medicine at the North Colombo Teaching Hospital. The study revealed that the majority of the victims were male (73.3%) and belong to the age group of 19-59 years (84%). The victims who were examined had sustained injuries mainly due to assaults and accidents. (71%) Wife battery amounted to 5.9% of the cases. A sound medico-legal service is important for the existence of a good criminal justice system. MLEF is an important tool to gather vital information. A modified MLEF, Forensic Nurse, Basic infrastructure facilities for all medico-legal centres with necessary equipment, statistics and costing of injured patients and prevention programmes to minimize accidents and violence are some of the recommendations from the authors.

Keywords: Clinical forensic cases; medico-legal service; new challenges

INTRODUCTION

There are several types of clinical forensic cases examined at North Colombo Teaching hospital. The statutory requirement laid down by the Department of Health instructs that doctors must inform the police about all patients who are seen in a hospital for treatment of injuries sustained as a result of accidents, assaults, sexual abuse[1]. In each and every case the doctor, has to record all the findings and must try to keep the story in line and proceed chronologically through the events[2]. The detailed analysis of cases would help to enhance patient care, identify the required skills of the doctor, improve required facilities and correct lapses in the system[3]. Since the examining doctors accommodate medico legal cases on a 24 hour roster basis it is imperative to know whether the level of care given is similar at any given occasion. In Sri Lanka the medico legal system has a long history and it is vital to know whether the existing system is strong enough to meet the current challenges with regard to patient care and other medico legal issues. This study helped to identify shortcomings and areas of improvement.

OBJECTIVES AND METHODOLOGY

The specific objective of the study is to do a quantitative analysis of forensically relevant clinical cases examined at North Colombo Teaching Hospital with a view of identifying lapses in the medico-legal management and suggest recommendations to improve the system. The data was collected by analyzing

the completed Medico-legal Examination Forms (MLEF) and personal notes made by the examining doctor attached to Department of Forensic Medicine at the North Colombo Teaching Hospital. The data of each clinical forensic case examined during the period commencing from January 1st 2012 to June 31st 2012 was extracted into a pre-planned work sheet by the investigators and analyzed using a SPSS package. A total of 187 clinical forensic cases which were examined during the said period were included.

RESULTS

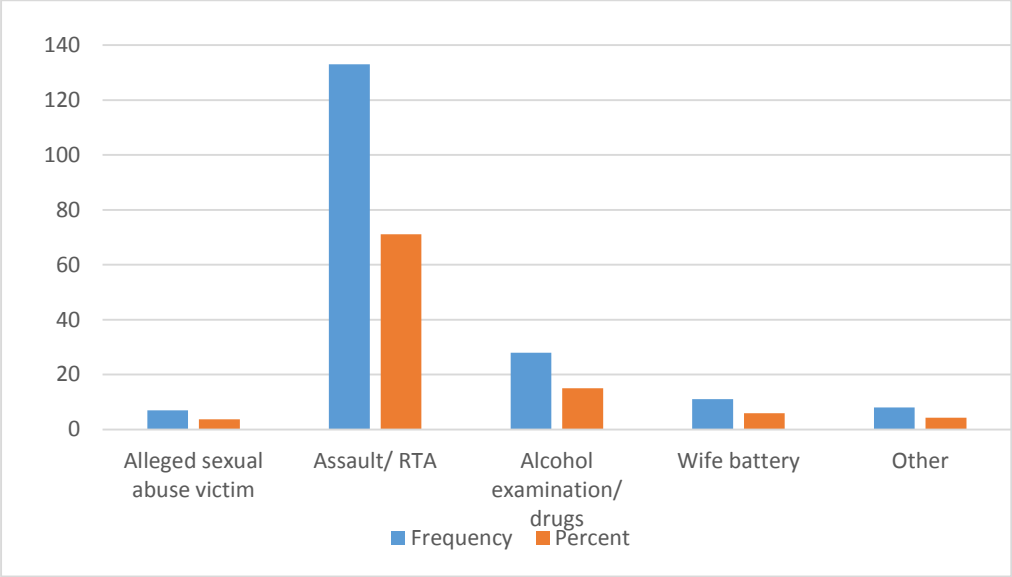
The study revealed that the majority of the victims were male (73.3%) and belong to the age group of 19-59 years (84%). This is followed by the 13-18 years (8%). The least affected were children below 12 years (1.60%).

The victims who were examined had sustained injuries mainly due to assaults and accidents. (71%) Wife battery amounted to 5.9% of the cases. The victims who were produced for intoxication following alcohol/drugs attributed to 15% of the total cases. Alleged sexual abuse victims accounted for 3.7% of the cases. The other group of miscellaneous cases mainly involved burns and no referrals were received for falls or occupational injuries.

Table 1: Age distribution

Age (years)	Frequency	Percent (%)
<12	3	1.6
13-18	15	8.0
>18 (19-59)	157	84.0
>60	12	6.4
Total	187	100.0

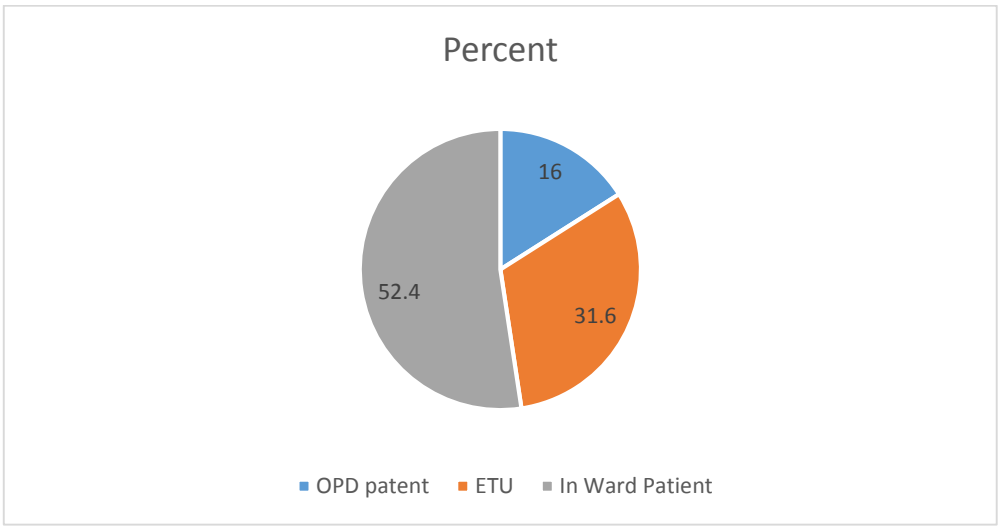
Distribution of the examined clinical cases



Majority of patients sought medical care during weekdays from 8am to 4 pm (173 cases). Out of the total of 187 patients, the number of outpatient department patients (OPD) were 30, emergency transfer unit (ETU) 59 cases and inward patients were 98.

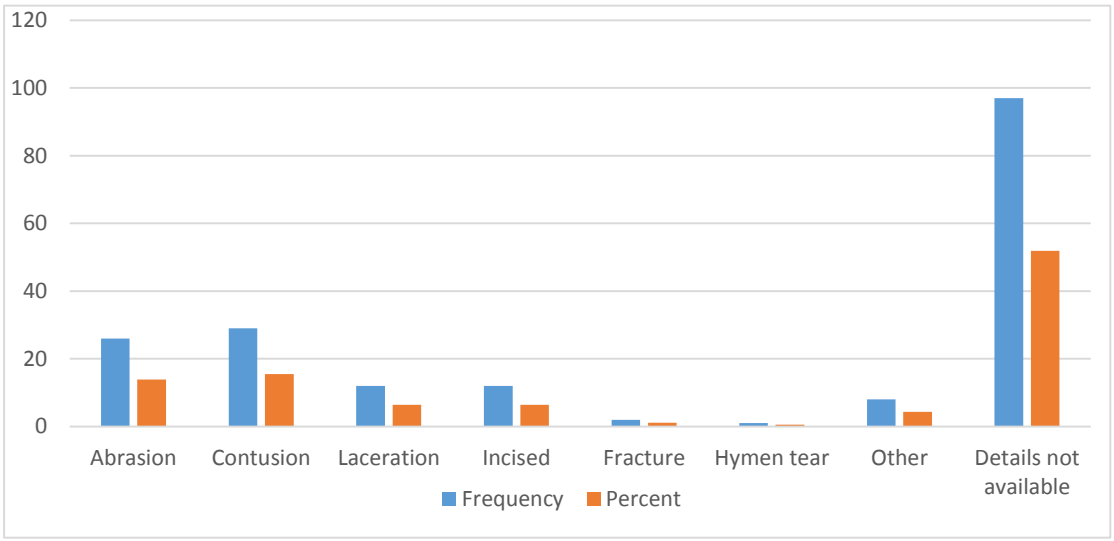
Out of the 187 patients 100 patients were examined in the ward and 80 patients in the JMO office. The other seven patients included PCU and other places. Out of 187 patients 74 patients were examined in a separate examination room.

Clinical cases in the hospital



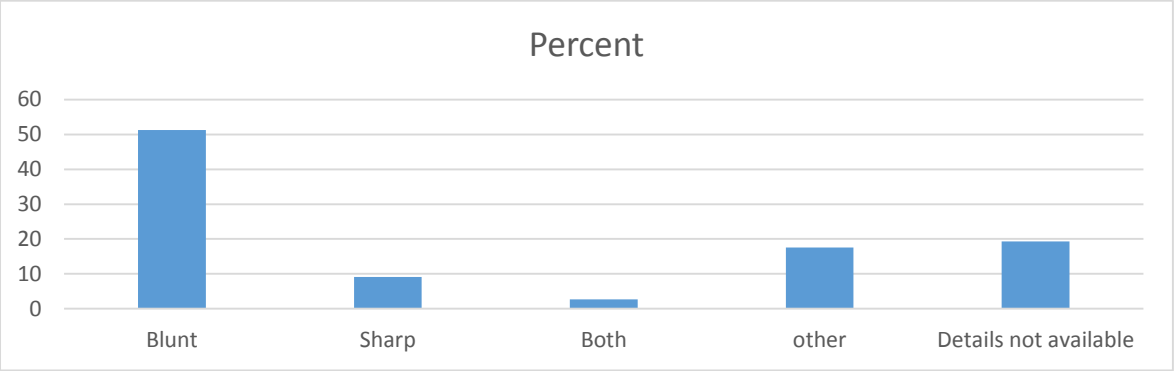
The pattern of injury distribution of the affected victims was as follows.

Different types of sustained injuries



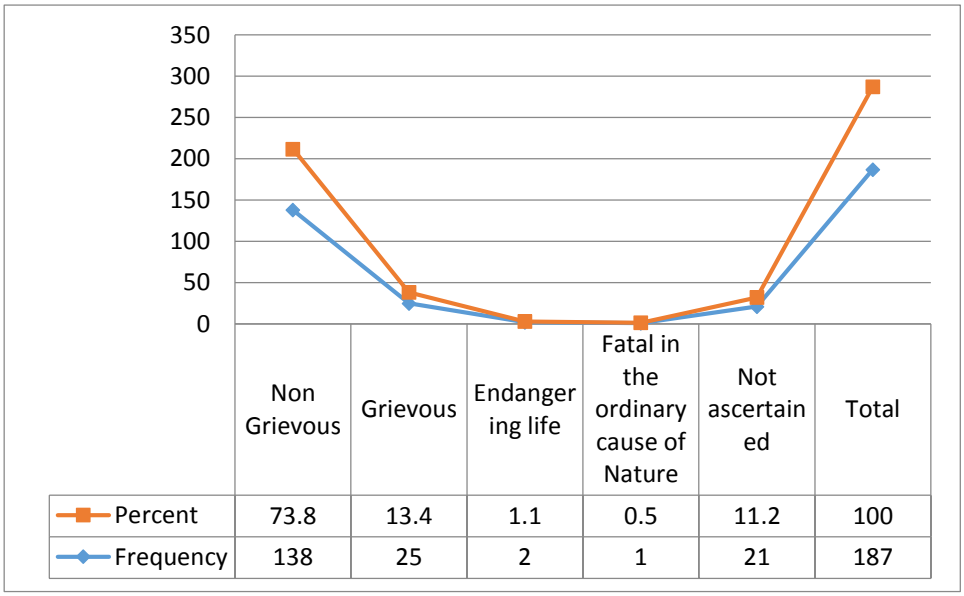
The abrasions and contusions were the common among the recorded injuries. However 51.7% could have been due to the combination of several injuries which is the usual phenomenon following trauma. The lack of analysis of several combinations of injuries may be a drawback in this study however it may not deter the outcome of the study. Out of the 187 patients 112 were subjected to radiological examinations.

Type of weapon



When it comes to the type of weapon which caused the injuries 51.3% of the injuries were caused by blunt force trauma. Sharp force trauma was responsible for 9.1%% of the injuries. Both types of injuries were present in 2.7% of cases. The category of hurt of the individuals according to the Medico Legal Examination Form (MLEF) revealed 73.8 % of individuals were categorized as nongrievous hurt. Grievous hurt attributed to 13.4% and endangering life (1.1%) and fatal in the ordinary course of nature (0.5%) (FOCN) were 1.6%. The rest may be awaiting (11.2%) follow up due to need assessment from referrals or further examination of injuries.

Category of Hurt



	Non Grievous	Grievous	Endangering life	Fatal in the ordinary cause of Nature	Not ascertained	Total
Percent	73.8	13.4	1.1	0.5	11.2	100
Frequency	138	25	2	1	21	187

Ninety six percent of patients were issued MLEF by the police approximately within 24 hours of admission to hospital and 68% of cases finished medico-legal work within 24 hours following the issuance of an MLEF. 18.2% of the individuals were positive for both breath smelling and under influence of alcohol. 2.7% were under influence of drugs.

In only 20% of the personal notes of the doctor the occupation of the victim was mentioned. Date of discharge is mentioned only in 24% of cases.

Twelve patients needed special instruments such as glass rod, magnifying glass and speculum. Eight patients needed samples

such as blood, vaginal swabs and smears for special investigations. 112 patients needed radiological examination. Out of 187 patients 172 were walking and 15 were bed ridden. There were 34 alcohol related and 5 drugs related cases. There were 13 cases which needed specialist referral out of them eye-1, ENT-1, odontology-3, forensic odontology-1, psychiatry-4 and other types of referral-3.

DISCUSSION

The study revealed that a large number of patients who came to hospital with MLEF were males and between the age group of 18-59 years. The majority of the medico legal cases were due to assault and road traffic trauma (71%). The sexual assault cases were also recorded (3.7%). There were patients with other types of injuries (4.3%) such as burns, eye, ear and dental injuries. The adult males are more prone to sustain injuries due to violence and accidents probably due to their involvement in work outside the house and other activities which result in altercation. In comparison the children and elderly are found to be less prone to injuries related to accidents and violence. In Sri Lanka males are mostly the bread winners in a family.

Injuries are a major and persistent public health problem but a comprehensive and detailed over view of the economic burden is missing when considering the quantitative analysis of medico- legal cases. A study done in Netherlands had highlighted the costs involved in managing injuries (4). The World report on violence and health is the first comprehensive review of the problem of violence on a global scale – what it is, whom it affects and what can be done about it (5). This study poses a challenge in considering cost effectiveness when managing a patient with injuries following assault and accidents.

Among the injuries with the available data most common is the abrasions and contusions and cut injuries are the least when a single injury is considered. It should be kept in mind that most of the time victims sustain injuries as a combination rather than an isolated injury. Blunt weapon injuries are more common than the sharp weapon injuries. This is due to the availability of weapons, intention of the perpetrator, etc. The significant amount of the injuries in the study population was categorized as non-grievous hurt. Priority health-risk behaviours, which contribute to the leading causes of morbidity and mortality among youth and adults, often are established during youth, extend into adulthood, are interrelated, and are preventable(6,7). This is true in this study since another major challenge for the next century is the prevention of these injuries. Therefore a more detailed study of the injury pattern with careful analysis will enhance the medico-legal as well as the healthcare system.

Another important factor which had to be highlighted from this study is the exposure of victims to radiological examinations. A total number of 112 patients were subject to x-rays. If the x-rays were really warranted for screening and management purposes then of course it must be performed. Further as mentioned before the different combinations of injuries were not extensively analyzed the necessity of ordering investigations should not be underestimated. In the context of practicing evidence based medicine when ordering investigations especially x-rays which is vital when confirming a fracture for medico-legal purposes the real challenge is the appropriateness of investigations.

It had to be mentioned that a sizable number of patients were examined at the office of the Judicial Medical Officer. A proper examination room to do a detailed examination and record injuries is the need of the hour. Doctors have to examine fresh injuries which are having dressings or sutures. Some cases are referred for blood drawing such as alcohol intoxication and blood samples for DNA analysis. When considering examination of victims following sexual assault the presence of a

forensic nurse would benefit both the patient and the examining doctor. Here the challenge is upgrading the existing system with suitably qualified staff.

It is true that most of the city centres may have these facilities but the standard of care should prevail the same in all parts of the country. The examination room should have all the facilities to collect samples for necessary investigations. Further making available the services of a forensic nurse would uplift the professional standards of handling a clinical forensic case[8,9,10].

In only 20% of the MLEF personal notes of the doctor the occupation of the patient was mentioned. MLEF has no place to document the occupation of the patient. If injuries are related to occupation and in special cases like compensation or sexual abuse if there is a place in MLEF for occupation it will be filled automatically by the relevant doctors. The study pose a new challenge in modifying the existing MLEF to accommodate other relevant information.

Date of discharge is mentioned in 24% of cases only. Most of the MLEF are issued on the 1st day of the incident and if there is no special reason, most of the patients were seen by judicial medical officers within one day of period. Although medico-legal procedures of the patient are completed within few days' time the medical management may not be over. So the patients have to wait in the hospital even after filling of the MLEF. It was found that if there is no special reason to review the patient, most of the MLEF recordings the doctors could not enter the date of discharge which is essential to fill the Medico Legal report. Therefore this shortcoming also needs to be addressed. The number of days of hospital stay also matters especially in compensation cases. The expected new challenge is to device a system to address civil compensation cases. When considering civil compensation cases the mere categorization of hurt would not be sufficient. The disability in each patient is vital when deciding the amount of money in civil compensation cases. Therefore the medico-legal system must be restructured to address civil compensation cases.

LIMITATIONS

This study involved a limited number of clinical forensic cases. Large number of data may further strengthen the already arrived conclusions and identify new problems.

The following information were not catered when collecting data since no cages exist in the current MLEF to collect information such as occupation, duration of hospital stay, reason for referral, fitness for detention, fitness for driving a motor vehicle and permanent disabilities for compensation. Though this is a prospective study with a designed questionnaire the tendency to miss information was observed. This is because while examining a patient the usual practice is always there to collect information relevant to the MLEF and Medico Legal Report (MLR).

CONCLUSIONS AND RECOMMENDATIONS

A sound medico-legal service is important for the existence of a good criminal justice system. MLEF is an important tool to gather vital information. A modified MLEF, Forensic Nurse, Basic infrastructure facilities for all medico-legal centres with necessary equipment, statistics and costing of injured patients and prevention programmes to minimize accidents and violence are some of the recommendations from the authors.

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