Orginal Article

Characteristics of Medico-Legal Cases and Errors in Documentation of Medicolegal Reports at a Teaching Hospital in Nepal: A Descriptive Cross-Sectional Study

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Abstract

Introduction: Medicolegal cases (MLCs) are cases that require legal investigation to determine responsibility for injuries or illnesses. Errors in medicolegal reports (MLRs) issued by doctors can cause misinterpretations and legal disputes that can have serious consequences for the parties involved. Therefore, this study was conducted to explore the characteristics of MLCs and to identify errors in MLRs.

Methods: This was a descriptive cross-sectional study conducted from August 2020 to January 2021 at the Department of Forensic Medicine, Manipal College of Medical Sciences (MCOMS), Pokhara, Nepal. Ethical approval from the Institutional Review Committee was obtained and a total of 173 MLRs were analyzed for characteristics of MLCs and errors in documentation. All registered MLCs were included in the study, regardless of type, age, or gender. The study, however, did not include any brought-dead cases. A statistical package for the Social Sciences, version 20, was used to analyze the data and represented as frequency, percentage and ratio.

Results: A total of 173 MLRs were analyzed in this study. Male patients 109 (63%) accounted for the majority of the patients in MLCs. Maximum cases, 66 (38.15%), occurred in the age group 15-29 years. More than half of the MLCs were related to road traffic accidents (RTAs) 55(31.79%). Blunt injury 127 (73.41%) was the commonest type of injury in the majority of MLCs. The study found multiple errors in the documentation of MLRs.

Conclusion: RTAs comprised the major proportion of MLCs. No MLR written by doctors was found to be free of errors.

Keywords: *Blunt injury; Documentation; Errors; Medicolegal; Road Traffic Accident*

Introduction

A medico-legal case (MLC) is a case of any medical condition/injury where the treating doctor, after eliciting history and examining the patient, believes that further investigation by law enforcement agencies is required to establish and fix responsibility for the case in accordance with the law of the land.[1] Several MLCs presented to the emergency medicine department include road traffic accidents, blunt weapon injuries, sharp weapon injuries, firearms, sexual assault, poisonings, falls, burns, bites, and others.[1,2]

Medicolegal reports (MLRs) are important documents that are used in

legal proceedings. MLRs typically provide a detailed account of a patient's medical/injury history, diagnosis, treatment, and prognosis, as well as any other relevant medical information. This can help establish the cause of the injury or condition, identify potential suspects or perpetrators, and provide important evidence for legal proceedings.[3,4,5] However, MLRs can contain errors or inaccuracies that can have serious legal consequences for both the patient and the healthcare provider. These errors may include poor history taking, poor documentation of injuries, or failure to document proper examination and consciousness status of the patient, inadequate description of the medical procedures performed, and inaccuracies in the recording of vital signs and other clinical data. Such errors can potentially lead to incorrect or inappropriate legal decisions, negatively impacting the reputation and credibility of healthcare providers.[6] Writing the MLR effectively will provide a thorough understanding of the critical medical condition/injury and its significance, assisting law enforcement agencies in further investigation and making decisions.[3]

This study aimed to provide an overview of the characteristics of MLCs and identify errors in the documentation of MLRs, written by doctors working in the Department of Emergency Medicine of a teaching hospital in Nepal.

METHODS

This study was a descriptive cross-sectional study done in the Department of Forensic Medicine, Manipal College of Medical Sciences (MCOMS), Pokhara, Nepal, from January 2021 to July 2021 after ethical approval from the Institutional Review Committee (Reference number: MEMG/IRC355/GA).

The data were extracted from the medicolegal register maintained in the emergency department. Convenient sampling was used, and a total of 173 MLRs were analyzed for characteristics of MLCs and the identification of errors in the documentation of MLRs. All registered MLCs were included in the study, regardless of type, age, or gender. The study, however, did not include any brought-dead cases. The variables collected in the study included patients' demographic information, such as age, gender, address, and injury-related information, such as the cause, nature, type, duration, and location of injuries, and the weapon of infliction. Additional information collected included details about the date and time of the patient's admission and examination, level of consciousness, and the name of the physician who certified the medicolegal report (MLR).

During data collection, a pre-structured Proforma was used to collect the data, and it was entered and analyzed using IBM SPSS Statistics version 20 and represented as frequency, percentage and ratio.

RESULTS

A total of 173 MLRs were analyzed during the study period. The majority of the MLCs occurred in the age group 15-29 years 66(38.15%). Among all MLCs 109 (63.00%) patients were males and 64 (36.99%) were females. Table 1

Table 1: Demographic profile of patients in Medicolegal cases (MLCs)

Variable	Number	Percentage
Sex		
Male	109	63.00
Female	64	36.99
Total	173	100.00
Age range (Years)	Number	Percentage
<15	11	6.36
15-29	66	38.15
30-44	55	31.79
45-60	26	15.03
>60	15	8.67
Total	173	100.00

More than half 55(31.79%) of the cases recorded were related to road traffic accidents, followed by poisoning 30(17.34%) and fall injuries 28(16.18%). The nature of the injury was missing in 26(15.03%) of the cases. The majority of road traffic accidents 45(84.90%), were due to two-wheeler vehicles, where the patient was either a driver 35(77.77%), a pillion rider 9(20.00%), or a pedestrian 5(11.11%). In poisoning cases, poisoning was caused primarily by organophosphorus (OP) compounds 8(26.66%) and rodenticides 7(23.33%). However, in 9(30%) poisoning cases, the type of poison was unknown. Table 2

Table 2: Nature of medicolegal cases (MLCs)

Nature of injury	No	Percentage
RTA	55	31.79
Fall	28	16.18
Poisoning	30	17.34
Physical assault	20	11.56
Self-inflicted injuries/Attempted suicide	1	0.58
Drowning	2	1.16
Hanging	1	0.58
Burn (Flame, scalds, electrical, blast)	8	4.62
Snakebite	2	1.16
Missing data (not specified)	26	15.03
Total	173	100

There were 141(81.50%) cases related to the injury. Among these, blunt injury was the most prevalent in the majority of the MLCs 127(73.41%) followed by fractures 23(13.29%) and sharp injuries 16(9.25%). The type of injury was missing in 26(15.03%) of the cases. Table 3

Table 3: Type of injury

Type of injury	No	Percentage
Blunt injuries (contusions, lacerations)	127	73.41
Sharp injuries (incised wound)	16	9.25
Punctured wounds (Snakes, insects, animal bites/hits)	8	4.62
Burn wounds (Flame, scalds, blast, electric)	7	4.05
Fractures	23	13.29
Missing data (not specified)	26	15.03

Table 4 represents the errors found in the documentation of MLRs. It was found that demographic information such as the patient's name, age, gender, and address was recorded in all 173(100%) MLRs. The patient's mental state at the time of hospitalization was not documented in 158 (91.33%) MLRs. The information of the person accompanying the patient at the time of admission was not mentioned in 89 (51.45%) of MLRs. The patient's time and date of admission were not recorded in 21(10.24%) and 18(8.78%) of the MLRs, respectively. There was a lack of description of the size of the wound, time since injury, and weapon causing injury in all injury-related MLRs141 (100%). Other errors in the MLRs included failure to document the nature of injury 26 (15.03%), the type of injury 11 (6.36%, and the location of injury 42 (29.79%).

In terms of medical personnel documentation, the complete name and designation of the attending doctor were not specified in 9(5.20%) and 6(3.47%) of MLRs respectively.

Table 4: Type of errors

Type of errors	No	Percentage
Complete description of Identification marks not mentioned	159	91.91
Date of admission not written	18	8.78
Time of admission not written	21	10.24
Accompanying person detail not mentioned	89	51.45
Date of examination not written	78	45.09
Time of examination not written	85	49.13
Brief history of case not written	37	21.39
Brief examination of case not written	35	20.23
Mental status of the patient not written	158	91.33
Complete description of the type of injury not written	51	36.17
Size of injury was not written	141	100.00
Location of injury was not written	42	29.79
Age of injury was not written	141	100.00
Weapon of infliction not mentioned	100	70.92
Signature of attending Doctor was not written	4	2.31
Complete name of attending Doctor was not written	9	5.20
Designation of attending Doctor was not written	6	3.47
Registration number of the doctor not written	3	1.73

Discussion

The current study provided an overview of the characteristics of MLCs and identified errors in the documentation of MLRs prepared by on-duty doctors in the Department of Emergency Medicine of a teaching hospital in Nepal. The study found that (63%) of the MLCs involved male patients, which is consistent with the findings of other studies.[1,2,6] This could be attributed to their exposure to outdoor activities and behaviors that expose them more to the risk of injury than females. The age group 15–44 years formed the largest proportion of patients, accounting for (69.94%) of the MLCs. This demographic variable, age, appears to be consistent with previous reports from various countries.[1,2,3] This age group is economically active and frequently involves in outdoor activities, which makes them more vulnerable to injuries. Road traffic accidents (RTAs) continue to be a significant cause of medico-legal cases (MLCs) reporting to emergency departments.[1,6,7,8,9] Similarly, in our study RTAs accounted for (31.79%) of MLCs. This emphasizes the need for more effective measures to improve road safety, such as improving the road infrastructure, promoting safe driving practices, and enforcing traffic safety regulations.

It is worth noting that some studies report physical assault as the most common cause of MLCs, indicating that the causes of MLCs may differ depending on the region or demographic factors.[1,10] This highlights the significance of conducting region-specific studies to identify the risk factors for MLCs in different areas and populations. Nevertheless, the prevention of all types of MLCs requires a concerted effort from the government, law enforcement agencies, healthcare providers, and the general public.

In our study, blunt injury was the most prevalent type of injury observed in majority (73.41%) of the MLCs. A similar finding was reported in a Nepalese study, where more than half (63.20%) of the injuries in MLCs were blunt injuries.[7]

In terms of the documentation of MLRs, no single MLR was found to be free of errors. It was observed, that the details of the person accompanying the patient at the time of hospitalization were not recorded in a significant

proportion of MLRs (51.45%). This finding is consistent with the result of another study, which discovered that details related to the person accompanying the patient during hospitalization were missing in (55%) of cases.[11] All relevant information about the patient, including the date and time of their admission and details about the accompanying person, must be recorded in the MLRs, as this information can provide valuable context for their medical care and legal proceedings. The study also found high rates of incomplete documentation of identification marks (91.91%) and consciousness levels (91.33%) of the patients in the MLRs. Our findings are consistent with a Turkish study that reported a lack of documentation of the patient's level of consciousness in (58.7%) of the cases[11]. In contrast, another Turkish study found a lack of documentation of consciousness status only in (1.8%) of cases.[6] This could be due to a variety of factors, including staff being overburdened with other duties in emergency situations, a lack of training or awareness of the importance of collecting this information, or logistical barriers that make it difficult to collect or record such information consistently.

The study also found multiple errors in MLRs in terms of documentation of injury. In majority of cases, there was no description of the injury with respect to its type (36.17%), dimensions (100%), location (29.79%), or weapon-causing injury (70.92%). Our findings are consistent with those of a similar study conducted in Saudi Arabia, which found a lack of documentation of the size of the injury in (98.1%) of reports, an incomplete description of the type of injury in (41.9%) of reports, and a lack of documentation of the age of injury in (26.1%) of reports. Similarly, an Indian study also observed an absence of a complete description of injury with respect to its type (18.57%), dimensions (68.58%), and diagrammatic representation (44.29%) in a number of MLRs.[12] Studies conducted in Turkey also reported poor identification of external traumatic lesions in (62.4%) and (30.5%) of reports, respectively.[6,11] It is concerning that the name of the physician who drafted the MLR was not mentioned in (5.20%) of MLRs. Our finding is consistent with a Turkish study which found that the name of the physician who drafted the MLR was not documented in (8%) of cases.[11] It is important that the physician who drafted the MLR is clearly identified, as this information can be important in assessing the credibility and reliability of the report. If the name of the physician is not documented, it can lead to questions about the objectivity and impartiality of the report, and potentially impact the outcome of legal proceedings. Therefore, it is important that efforts are made to ensure that all MLRs contain clear documentation of the physician responsible for drafting the report.

Conclusion

The study analyzed the characteristics of Medical Legal Cases (MLCs) and identified errors in the documentation of Medical Legal Reports (MLRs) written by doctors in the Department of Emergency Medicine of a teaching hospital in Nepal. The majority of patients involved in MLCs were male, and the highest proportion of MLCs occurred in the age group of 15-29 years. Road traffic accidents accounted for more than half of the MLCs, indicating the significance of traffic safety measures in Nepal. Blunt injury was the most frequent type of injury observed in most of the MLCs. This finding highlights the need for effective injury prevention strategies and proper management of blunt trauma cases in the emergency department. The study identified several errors with references to errors in MLR documentation. These included a lack of complete description of identification marks, poor injury description, and failure to document the patient's level of consciousness. When handling MLCs, doctors have a legal and ethical obligation to accurately document the findings, provide appropriate medical care, and notify the appropriate authorities for further investigation. Proper documentation aids in legal proceedings, insurance claims, and maintaining patient care quality.

We recommend training programs for doctors working in the emergency department to improve their skills in writing MLRs according to standard norms. This training should focus on the importance of complete and accurate documentation. By implementing these recommendations, the hospital can enhance the quality of MLR documentation, ensure legal compliance, and provide better patient care in cases of MLCs.

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