58 - CHARACTERIZATION OF TRAFFIC ACCIDENTS: STUDY PERFORMED ON VICTIMS ATTENDED TO IN AN EMERGENCY HOSPITAL IN THE GREATER NATAL/RN

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INTRODUCTION

Traffic accidents (TAs) are responsible for an increasingly larger number of deaths, as well as for the increase in their victims' morbidity, in virtually the entire world. According to statistics from the Brazilian Ministry of Health (MH), External Causes (ECs) were responsible for 118,615 deaths in Brazil in 2001, whereas the same type of cause is associated with a total 127,470 deaths notified by the Mortality Information System (MIS) in 2004 (BRASIL, 2007a).

These events have, then, reached alarming points, in regard to the number of victims, only surpassed by neoplasia and cardiac-vascular diseases. In this context, land transportation accidents are responsible for the second greatest cause of death among ECs, representing 28% of that total, second only to aggression (SEQUEIRA, TAVARES, 2003; BRASIL, 2007a).

According to the International Statistical Classification of Diseases and Health-Related Problems, in its 10th Revision, (IDC-10), Chapter XX, ECs are defined as being all events resulting from falls, poisoning, intentionally self-provoked injuries, aggressions, suicides and TAs (BRASIL, 1993).

The Brazilian association for traffic medicine (ABRAMET) presents data on the amount of running vehicles in Rio Grande do Norte and comments it has raised from 88.8/100 thousand inhabitants in 2000 to 136.1/100 thousand inhabitants in 2005. This increase may be responsible for the growth of injuries, deaths and reversible or irreversible handicaps (MELLO JORGE; KOIZUMI, 2007).

Both the increase in the number of vehicles, especially due to the ease of acquisition, as well as the precarious conditions of our country's roads, have contributed significantly to the occurrence of these events, affecting mainly young males, in the height of their productive age.

In an attempt to justify the age group of the victims most affected by these events, Braga Júnior et al. (2005) state that this phenomenon happens to young people because they develop more active and challenging activities. They add that this problem can also be associated with this age group's imprudence and inconsequence, often compelled by an enterprising personality directly related to dangerous activities, representing a risk towards the occurrence of accidents.

It's important that both government agencies responsible for traffic in the country as well as health professionals that deal with these victims in the various emergency services acquire previous knowledge of some variables that characterize these events in society. In this sense, these data are indispensable for the establishment of adequate actions and prognosis, from the conception of specific prevention actions to its planning and execution (BATISTA et al., 2006).

As health professionals performing our professional activities in trauma emergency, concerned with the magnitude of TAs and seeking to add data that may serve as base for the event's prevention as well as that of its consequences, we decided to develop this study, which is part of a larger research.

With this purpose, we question: which types of motor vehicle are most often involved with TA occurrence? What's the type of public road user most affected by these events? Which are the most common types of accident?

In order to answer our questions, we constructed the following objective: to characterize TAs according to vehicle type most often involved, type of public road user and type of accident recorded most often.

MATERIAL AND METHOD

The study is exploratory-descriptive, with quantitative approach and prospective data. The choice of quantitative approach is due to the fact it allows systematic collection of numerical information, through tightly controlled conditions and an analysis of information through statistics (POLIT; BECK; HUNGLER, 2004).

The study was performed in the Walfredo Gurgel hospital complex (HMWG), in the polytrauma, reanimation, ICU units and other clinics where the traffic accident victims were interned. HMWG is a public network hospital institution geographically situated in eastern Natal city. It receives patients incoming from other hospitals in the city, the State's municipalities, as well as neighboring States. It's a reference for all emergency care, including trauma and other health aggravations.

The studied population consisted of 605 traffic accident victims admitted to the aforementioned hospital, in the months of November and December 2007 and January 2008.

We included in the study AT victims aged 18 or older that allowed researchers to inspect their injuries, within a maximum interval of 72h after the event's occurrence, having been previously inspected by a physician and who, in situations of coma or inability for verbal communication, were accompanied.

After consent from CEP-UFRN, report #246/2007, data collection was performed in the Clovis Sarinho Emergency Room (PSCS) and in the Monsenhor Walfredo Gurgel hospital (HMWG), in the months of November and December 2007 and January 2008, in the afternoon and night shifts, on traffic accident victims,

The data collected was categorized and electronically processed through Excel 2007 and Statistica 6.0 software, as well as analyzed bu descriptive statistics presented in the form of tables.

RESULTS AND DISCUSSION

According to type, the vehicle most often involved in TA's was the motorcycle, on its own, present in 322 (53.2%) accidents, followed by motorcycle/car accidents, 143 (23.6%), and car accidents 67 (11.1%).

Data from Detran-RN show the total distribution of running vehicles in Rio Grande do Norte in the year 2006 was 551,522, of which 168,573 (30.57%) were motorcycles. The current number of running vehicles, however, is 592,796 and 183,277 (30.92%) correspond to motorcycles (RIO GRANDE DO NORTE, 2008). That said, we can observe the considerable growth of motorcycles in RN and, consequently, the risks to which motorcycle drivers are exposed, which may justify the high number of TA's involving thus type of vehicles recorded in this study.

According to Oliveira (2002), the motorcycle makes their users more vulnerable to all kind of external interference, as they

don't provide the protection four-wheeled vehicles do. It is then easier to understand the reasons of the high number of TA's associated with motorcycles.

TABLE 01 - Distribution of traffic accident victims according to type of public road user and gender. HMWG NATAL/RN, 2007.

Type of public road user	Sexo					
	Female		Male		Total	
	N	%	N	%	N	%
Pedestrian	10	9,6	36	7,2	46	7,6
Car passenger	23	22,1	13	2,6	36	6,0
Motorcycle passenger	22	21,2	73	14,6	95	15,7
Bicyclist	3	2,9	22	4,4	25	4,1
Car driver	1	1,0	22	4,4	23	3,8
Motorcycle driver	43	41,3	328	65,5	371	61,3
Other	2	1,9	7	1,4	9	1,5
Total	**104**	**100,0**	**501**	**100,0**	**605**	**100,0**

Analyzing Table 01, we notice there was a predominance of TA's involving motorcycle drivers, 371 (67.3%). Among these, 238 (88.4%) were male and 43 (11.6%) female. Once again, the male gender predominance in TAs is confirmed. The second most frequent type of victim was the motorcycle passenger, totaling 95 (15.7%) individuals. From this total, 73 (76.8%) were male and 22 (23.2%) were female.

The fact motorcycles have lower prices to four-wheeled automobiles makes it a more accessible vehicle which can be purchased even by people from the lowest social classes, which is not true for cars. This may justify the high number of motorcycle drivers and passengers attended to in this public institution, when compared to other types of victim.

Data similar to ours were found by Soares (2003), who observerd the prevalence of motorcyclists with 1.338 victims (38.3%) over other victims, with a male predominance 1138 (85.5%) over female 200 (14.95%).

Regarding accident type, there was a predominace -374-(61.8%) of collision, followed by fall (34.9%) and 3.3% rolling. It's important to remind that, according to ICD-10, running over is a type of collision involving a vehicle and a pedestrian. That said, all accidents resulting from running over were included under the collision category.

According to Oliveira (2002), collision is one of the most usual types of accident, especially with motorcycles. Data from ABRAMET show collision and bumping were the most frequent type of accident over the last 7 years, representing 47.9% of TA's in 1999, 42,5% in 2000, 51,9% in 2001, 53,6% in 2002, 53,0% in 2003, 52,2% in 2004 e 53,5% in 2005 (MELLO JORGE; KOIZUMI, 2007).

CONCLUSIONS

TA's are characterized as having motorcycle, on its own, as the type of vehicle most often involved, representing 53.2% of the accidents; regarding type of public road user, motorcycle drivers were most often affected by these events, adding up to 61.3% of the population. Among these, 88.4% were male and 11.6% female; As for the type of accident, there was a predominance of collisions, 61.8%. We reaffirm that this study may bring some contribution to the prevention and promotion of health in the field of trauma, as we detected a lack of studies that portrait the severity of trauma and injuries resulting from these events, especially in northeastern Brazil.

Furthermore, we expect this study to contribute to the designing of a strategy for facing these events, as well as to give instruments for emergency professionals in the attending to severely injured victims, providing an estimate as to these individuals' prognosis.

KEYWORDS: External Causes; Accidents, Traffic; Motor Vehicles.

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CHARACTERIZATION OF TRAFFIC ACCIDENTS: STUDY PERFORMED ON VICTIMS ATTENDED TO IN AN EMERGENCY HOSPITAL IN THE GREATER NATAL/RN

ABSTRACT

Traffic accidents (TA's) are responsible for an elevated number of deaths, as well as for the increase in their victims' morbidity, all around the world. For this reason, previous knowledge of variables that characterize these events in society is deemed essential for the establishment of adequate actions and prognosis. This article's objective is to characterize TA's according to the type of motor vehicle most often involved in the accident, type of public road use and the most often identified accident. It's a descriptive-exploratory study, quantitative with prospective data, performed in the Hospital Monsenhor Walfredo Gurgel hospital complex, in the polytrauma, reanimation and ICU units as well as other clinics where TA victims were interned. The population consisted of 605 TA victims, between the months of November 2007 and January 2008. The data was analyzed by descriptive statistics and presented in the form of tables. TA's are characterized with motorcycles, on their own, as the type of vehicle most often involved (53.2%); as for the type of public road user most often affected, motorcycle drivers were predominant, adding up to 61.3%. Among these, 88.4% were male and 11.6% female; regarding the type of accident, there was a predominance of collisions (61.8%). We expect this study to contribute to the formulation of a strategy for facing these events, as well as to give instruments for emergency professionals in the attending to severely injured victims, providing an estimate as to these individuals' prognosis.

KEYWORDS: External Causes; Accidents, Traffic; Motor Vehicles.

CARACTÉRISATION DES ACCIDENTS DE LA CIRCULATION: ÉTUDE MENÉE AUPRÈS DE VICTIMES TRAITÉES AUX URGENCES D'UN HÔPITAL DE NATAL/RN

RÉSUMÉ

Les accidents de la circulation (AC) sont responsables d'un grand nombre de morts, ainsi que de l'augmentation de la morbidité de ses victimes, dans le monde entier. Ce pourquoi, la connaissance préalable des variables qui les caractérisent dans la société est indispensable pour établir des conduites et des pronostics adéquats. Le but de cet article est de caractériser les AC quant au type de vehícule à moteur le plus souvent impliqué dans les accidents, le genre d'usager de la voie publique et le type d'accident le plus fréquent. Il s'agit d'une étude descriptive, exploratoire et quantitative, aux données prospectives, menée au sein du Centre Hospitalier Monsenhor Walfredo Gurgel, dans les unités de polytraumatisés, réanimation et autres cliniques, où des victimes de AC étaient hospitalisées. La population compta 605 victimes d'AC, hospitalisées entre novembre 2007 et janvier 2008. Les données furent analysées statistiquement de façon descriptive et présentées sous tableaux. Les motos furent les véhicules le plus fréquemment impliqués dans les AC de façon isolée (53,2%); quant au genre d'usagers de la voie publique les plus impliqués, les motocyclistes constituèrent le 61,3% des cas: 88,4% étaient de sexe masculin et 11,6% de sexe féminin; quant au type d'accident, il y eut une prépondérance des collisions (61,8%). Nous souhaitons que ce travail puisse contribuer à l'élaboration de stratégies pour faire face à ces accidents, ainsi que donner des outils pour les professionnels des urgences au niveau des soins des victimes les plus gravement blessées, tout en offrant une estimation du pronostic de ces invididus.

MOTS-CLÉS: Causes externes; Accidents de la Circulation; Automobiles.

CARACTERZACIÓN DE LOS ACCIDENTES DE TRÁNSITO: ESTUDIO REALIZADO CON VICTIMAS ATENDIDAS EM UN HOSPITAL DE URGENCIA DE LA GRANDE NATAL/RN

RESUMEN

Los accidentes de tránsito (AT's) son responsables por un alto número de muertes bien como por el aumento de la mortalidad de sus víctimas en todo el mundo. Por esa razón el conocimiento previo de las variables que caracterizan esos agravios en la sociedad se vuelve indispensable para el establecimiento de conductas y pronóstico adecuados. El objetivo de este artículo es caracterizar AT's, cuanto al tipo de vehículo motorizado más comprometido en el accidente, la calidad del usuario de la vía pública y el tipo de accidente más identificado. Se trata de un estudio descriptivo-exploratorio, cuantitativo y datos prospectivos, realizados en el Complejo Hospitalar Monseñor Walfredo Gurgel, en las unidades de politrauma, reanimación, UTI y demás clínicas donde estaban internadas las víctimas de AT's. La población consto de 605 víctimas de AT's, entre lo meses de noviembre de 2007 y enero de 2008. Los datos analizados por la estadística descriptiva y presentados en forma de tablas. Los AT's se caracterizan por tener como tipo de vehículo más comprometido la motocicleta aisladamente, (53,2%), cuanto a la calidad de usuarios de la vía pública, más accidentados fueron los conductores de moto, sumando 81,3%. De estos, 88,4% eran hombres y 11,6% mujeres, cuanto al tipo de accidente, hubo una predominancia de las colisiones (61,8%). Se espera que este trabajo pueda contribuir con la formulación de estrategia de enfrentamiento de esos agravios. Además de perfeccionar a los profesionales del área de urgencia en el atendimiento a las víctimas mas gravemente heridas, proporcionando una estimativa cuanto al pronóstico de esos individuos.

PALABRAS CLAVE: Causas Externas, Accidentes de Tránsito, Vehículos a Motor.

CARACTERIZAÇÃO DOS ACIDENTES DE TRÂNSITO: ESTUDO REALIZADO COM VÍTIMAS ATENDIDAS EM UM HOSPITAL DE URGÊNCIA DA GRANDE NATAL/RN

RESUMO

Os acidentes de trânsito (AT's) são responsáveis por um alto número de mortes, bem como pelo aumento da morbidade de suas vítimas, em todo o mundo. Por essa razão, o conhecimento prévio das variáveis que caracterizam esses agravos, na sociedade, torna-se indispensável para o estabelecimento de condutas e prognóstico adequados. O objetivo deste artigo é caracterizar os AT's quanto ao tipo de veículo a motor mais envolvido no acidente, a qualidade do usuário da via pública e o tipo de acidente mais identificado. Trata-se de um estudo descritivo-exploratório, quantitativo e dados prospectivos, realizado no Complexo Hospitalar Monsenhor Walfredo Gurgel, nas unidades de politrauma, reanimação, UTI e demais clínicas onde estavam internadas as vítimas de AT's. A população constou de 605 vítimas de AT's, entre os meses de novembro de 2007 e janeiro de 2008. Os dados foram analisados pela estatística descritiva e apresentados em forma de tabelas. Os AT's caracterizaram-se por ter como tipo de veículo mais envolvido a motocicleta isoladamente, (53,2%); quanto à qualidade do usuário da via pública mais acometidos, foram os condutores de moto, perfazendo 61,3%. Destes, 88,4% eram homens e 11,6% mulheres; quanto ao tipo de acidente, houve uma predominância das colisões (61,8%). Espera-se que este trabalho possa contribuir com a formulação de estratégia de enfrentamento desses agravos, além de instrumentalizar os profissionais da área de urgência no atendimento às vítimas mais gravemente feridas, fornecendo uma estimativa quanto ao prognóstico desses indivíduos.

PALAVRAS-CHAVE: Causas Externas; Acidentes de Trânsito; Veículos Automotores.