GLOBAL JOURNAL OF MEDICAL SCIENCES VOL. 1, NO. 1, 2002: 61 - 63

INJURIES AND DEATHS FROM VEHICULAR ACCIDENTS IN CALABAR

A. E. ARCHIBONG, and O. F. R. IKPATT

(Received 28 August 2001; Revision accepted 23 January 2002)

ABSTRACT

Four thousand five hundred and sixty (4560) accident cases that were reported to the traffic section of the Nigerian Police in Calabar were studied. Of this number, 1051 (23%) were fatal and post mortem examinations were carried out at the University of Calabar Teaching Hospital (UCTH). Six hundred and eighty-Two (682) were males while 369 were female victims. Head injury and ruptured abdominal viscera were the commonest causes of death.

Lack of good roads, indiscipline on the part of drivers/motorcycle riders and absence of good law enforcement measures by the relevant authorities all combine to render vehicular movements unsafe. It is hoped that the reinvigoration of the Federal Road Safety Commission and the reactivation of the Marine police will help reduce vehicular accident-related deaths.

INTRODUCTION

Urbanization and sophisticated modes of transportation have made traffic-related injury a common phenomenon world-wide. However, the peculiarities of certain areas determine the pattern of accidents prevalent in those areas. Reports from some centers 1,2 have highlighted the medicolegal implications of such accidents. Previous reports from this centre (3,4) emphasized the injury pattern of certain accidents but none has focused exclusively on the epidemiological implications of such accidents in the region. The aim of this study therefore was to determine the pattern of vehicular accident-associated injuries and deaths in the region, with a population of about 2.5 million. The study, it is hoped, will assist health planners, public health practitioners and policy makers to address this important public health and medico-legal problem.

MATERIALS AND METHOD

This was a prospective study of all cases of vehicular traffic accident deaths that were reported to the traffic section of the Nigeria Police in Calabar Nigeria, between January 1994 and December 1998. Post-mortem examinations were carried out and the following data were noted – type of accident, causes of death, status of the victims (passenger, pedestrian or driver), age and sex of the victims and time of the accident. Intentional homicide and suicide cases were excluded.

RESULTS

During the period of this study 4560 accident cases were reported, of which 1,051 (23.%) were fatal. The age distribution is shown in Table 1. The sex distribution shows that 682 males (64.9%) and 369 (35.1%) females were involved giving a male: female ratio of 1.8:1. The injuries and causes of death are shown in Table II with head injury as the leading cause of death. The victims are shown in Table III with passengers being the main victims constituting 58.5% of cases.

DISCUSSION

This study gives an idea of the pattern of vehicular accident-related deaths in our environment. The male predominance in this study is similar to those in other reports (3,4) and possibly may be due to the adventurous nature and active life of males. The age distribution shows the highest incidence in the 20-40 year age range, followed by the first ten years of life. Frequently

A. E. ARCHIBONG, Dept. of Surgery, College of Medical Sciences, University of Calabar Teaching Hospital, Calabar, Nigeria
O. F. R. IKPATT, Dept. of Pathology, College of Medical Sciences, University of Calabar Teaching Hospital, Calabar, Nigeria

within the first 10 years of life children are seen in the streets of Calabar, hawking fruits, bread, etc. or returning from school and since there are few pedestrian walkways, they are often easily knocked down by motor cars or motor cycles, (4,5). The involvement of the 20-40 year age range coincides with the prime of active life necessitating a lot of movement either as passengers or as drivers. This report is similar to those from other centers in Africa, (1,5-7) but differs from those from the American continent (8,9) where pedestrian and railway-related injuries accounted for a significantly more number of deaths. The pattern in America may be ascribed to the good road net-work, in-built safety systems, and proper enforcement of precautionary measures all of which combine to enhance the safety of the occupants of vehicles.

The poor condition of roads in our region, lack of pedestrian walkways, indiscipline on the part divers/ motorcycle riders and the relatively recent

TABLE I
DISTRIBUTION OF VICTIMS AACORDING TO AGE AND SITE OF ACCIDENT

Site of Accident	Age (Years)							
	0-9	19-Oct	20-29	30-39	40-49	50-59	60^{+}	Total
Road	137	98	246	211	108	99	15	914
Water	13	17	27	52	19	4	3	135
Air	-	-	1	-	1	-	-	2
Total	**150**	**115**	**274**	**263**	**128**	**103**	**18**	**1051**

TABLE II
TABLE SHOWING THE TYPE OF INJURY/CAUSE OF DEATH

INJURIES / CAUSE OF DEATH	SITE OF ACCIDENT ROAD	WATER	AIR	TOTAL	(%)
Head injury	286	8	2	296	28.3
Ruptured abdominal viscera	185	-		185	17.6
Cardiovascular injury – mainly vascular	158	7		165	15.6
Fracture in limbs with its complications					
Multiple organ failure	100	-		100	9.6
Inflammation e.g meningitis pneumonia, osteomyelitis	92	15		107	10.1
Asphyxia / Drowning	83	17		100	9.6
	10	18		98	9.4
Total	**914**	**135**	**2**	**1051**	**(100%)**

TABLE III
VICTIMS ACCORDNG TO SITE OF ACCIDENT

VICTIMS	SITE OF ACCIDENT ROAD	WATER	AIR	TOTAL	(%)
Passenger	492	121	2	615	(58.5)
Pedestrian	205	-	-	205	(19.5)
Driver/Rider	217	14	-	231	(22.0)
TOTAL	**914**	**135**	**2**	**1051**	**(100.0)**

commercialization of motor-cycle transport all combine to render road transportation in our region unsafe. Perhaps the empowerment of the Federal Road Safety Commission to conduct frequent checks, and enforce all safety regulations including anti-alcohol measures, together with the mandatory provision of pedestrian walkways in busy roads may reduce the menace of road traffic accidents. Accidents on water, a common phenomenon in the riverine communities of our regions, accounted for 135 deaths, a distant second from road traffic accidents with 914 deaths. The picture may not be accurate because most of the drowned victims in the creeks are not reported. However our finding is similar to that in South Africa where drowning was the second most common cause of death following road vehicular accidents (7).

The causes of death and types of injuries are shown in Table II where head injury accounted for about 1/3 of all deaths. The lack of the necessary personnel to initially manage these victims at the sites of the accidents may be a major contributory factor to these deaths. In addition, in most hospitals across the region basic items are either lacking or cannot be afforded by the victims who in most cases are conveyed to these hospitals/centers by passersby/sympathizers (10). The same situation obtains in injuries like ruptured abdominal viscera with severe hemorrhage where basic operations may not be feasible due to lack of facilities for prompt management or the high cost of care.

The depressed economy of the third world countries has severely affected the living standards in Nigeria and this region is no exception. Unemployment and poverty have necessitated the increased use of motor-cycles for commercial purposes, by untrained riders who often have no knowledge of the basic traffic rules. This phenomenon, with the deteriorating condition of our roads, ultimately render this mode of transportation very unsafe.

Since the major forms of transportation are by road and water, the reinvigoration of the Road Safety Commission will be a welcome relief. Hopefully, this will lead to the enforcement of training and re-training of drivers/riders, acquisition of basic life support skills, wearing of crash helmets by motor cyclists, seat belts in cars and life jackets by travelers on water. Furthermore, vehicles used for public or private transportation should be subjected to periodic checks for road worthiness.

Further ways to reduce deaths in the long term from vehicular accidents include the establishment of ambulance services to give prompt first aid assistance and provide transport for victims to the nearest health facility. The exorbitant cost of treatment can be obviated by the institution of free treatment for accident victims. Hopefully the National Health Insurance project may provide a solution. The much delayed but vital establishment of a National Blood Bank service with working facilities will help accident victims with severe hemorrhage who are in shock. Finally, a good communication network must be contemplated as a means of alerting health facilities in cases of mass casualty and ease of referral of accident victims.

REFERENCES

Ebong, W. W., 1990. Pattern of injuries from Road Traffic Accidents among children. Nig. J. Paediatrics 7:20-25.

Rafindadi A. A., 1998. Sudden medicolegal deaths in Zaria. Nig. Postgraduate Med. J. 1:28-30.

Asindi, A. A., 1986. Efem S. E. E.; Onuba O; Asuquo M. F. Accidental Trauma in Children. Nig. J. Paediatrics 13: 17-8.

Archibong, A. E., 1995. Abdominal Trauma in Children. Postgraduate Doctor 17: 56-60.

Tahir, A., Hassan A. W., 1998. An analysis of the fracture pattern in Children at the University of Maiduguri Teaching Hospital. Nig. J. Med. 7:109-11.

Lever, I. B., Matzopoulos R. G. Philips R., 1997. Violence and Injury mortality in the Cape Town metropole. S Africa Med. J. 87: 298-301.

Wyndham C. H., 1996. Deaths from accidents, poisoning and violence; Differences between the various population groups in R. S. A. South Africa Med. J. 26; 69:559-558.

Lever I. B.; Kugel C., 1998. Delays in the identification of non-natural mortality Am J. Forensic Med. Pathol. 19: 347-351.

Loftus I. A., Dada M. A., A retrospective analysis of alcohol in Medicolegal Post-mortems over a period of five years. Am J. Forensic Med Pathol 13:24-252.

Naidoo P.; Shapter M. 1993. Bicycle injuries in a tropical city (Townsviller).Trop. Doctor 23·62-63