Road Traffic Accidents in Peshawar.

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An analysis of 361 road traffic accident victims, which were treated over a period of one year, from Dec 1999 to Nov 2000, at Khyber Teaching Hospital, Peshawar is presented. The results revealed the sex bias towards males (8:1) with majority of the victims (63%) less than 30 years of age. Maximum cases were received during the months of June to August. Head (101 cases) was the most vulnerable part followed by chest (38), Abdomen (13) and pelvis (12). Leg and arm bones were fractured in 40 cases. Thirty-two patients died providing the mortality of 9%. The hospitalization period ranged from 5-70 days. Use of seatbelts, strict enforcement of speed limit, severe penalties for dangerous driving, highway code, education regarding safe driving and regular checks and changing of tires is suggested to lessen morbidity and mortality and to improve road safety.
Key words: Road traffic accidents, traffic injuries, disability, seat belt, cause of death.

Road traffic injuries are the major killer of young men between 10-30 years. Many useful lives are lost and number of people are disabled. These also account for being the biggest cause of ill health and premature deaths in developing countries like Pakistan.

To look at the different factors, which contribute in the causation of road traffic accidents and the injuries sustained by the victims, the following study is conducted. To lessen morbidity and mortality and to improve the road safety, some measures are also suggested.

Patients and methods

This study was carried out on those patients of road traffic accidents, who sought initial consultations at the emergency Department of Khyber Teaching Hospital, Peshawar, during December 1999 to November 2000. Other cases of trauma or those victims, which were dead on arrival, were not included in the study.

The Khyber Teaching Hospital is situated on the busy Jumroad road, which although is an excellent metelled road but is a common place for the accident.

For all patients, a detailed history and physical examination was undertaken. The cause of the accident was recorded along with whether the driver and any passengers were using seat belts.

Results

The total number of road traffic accident victims treated during the one-year study period was 361. The highest incidence of road traffic accidents was during the months June to August. None of the car occupants was wearing seat belts. Of the patients treated 321(89%) were male and only 40(11%) were female (male/female ratio 8:1), 16% were less than ten years of age, and 63% less than 30 years of age. Half of the children involved in the traffic accidents were pedestrians.

Head injury was the most common sequela of road traffic accidents: Out of 101 head injuries; 39 were discharged home with instructions only; 19 were transferred to another hospital with neurosurgical facilities; 43 were admitted for observation. Most of these patients were discharged without complications: There were 6 linear and 2 depressed skull fractures; 1 subdural haematoma; 1 extra dural haematoma; one intra cerebral haematoma. One patient, who subsequently died, was convulsing on arrival with an open skull fracture. Forty-nine had severe facial injuries, half of which were the traditional de-scalping injury.

There were 7 fracture / subluxations of cervical spine. Thirty-eight patients were treated for chest injuries with fractures of the ribs, the most common injury. Five developed a pneumothorax (one of these patients had a tension pneumothorax which was missed for one and a half hours in the emergency department), 2 haemothorax, 1 fractured sternum, 1 flail chest and 12 patients had moderate bruising of the chest wall. There were only 13 abdominal injuries, which included one ruptured spleen, one diaphragmatic tear and three cases of intra abdominal bleeding. The remaining cases had only moderate bruising of the abdomen.

There were 12 pelvic fractures, including 2 central dislocation of the hips, 8 fractures of pelvic rami and fractures of ischium. There were 40 fractures of long bones, including 18 fractured femurs and 5 fractured tibia and fibula, 6 fractured humerus, 4 radius and ulna, 2 ankle and 7 scapulae.

There were nine back injuries including one fractured lumber spine 2 fractured transverse process.

The minimum time from patient arrival to transfer to either the ward or to another hospital was 90 minutes and the maximum time 8 hours. The average time was 4 hours 10 minutes. All patients were treated satisfactorily as judged by the detailed audit of the case notes. There was however, room for improvement regarding the need for fluid replacement. Only 14 of the 361 died, providing a mortality of 4 % (these were all severe head injuries). A further 18 patients died who were transferred elsewhere, increasing the mortality to 9%. The hospitalization period ranged from 5 to 70 days (average was 27 days).

Discussion

This study reveals the extent of motor vehicle accidents as a major health hazard in Peshawar. The data reveals that maximum numbers of patients were seen during the months of June to August coinciding with the period of summer vacations in schools. The sex bias against females (1:8) is to be expected because of the household chores in the society.

Many of the patients (77%) were under 40 years old. This reflects experience in the United Kingdome, Germany and Australia where road traffic accidents contribute to more then half of all deaths in the younger age group. This has particular relevance as these are in the economically active age group. Younger people tend to suffer more frequent serious injuries, but are less likely to succumb then older people. Older people are more likely to be vulnerable pedestrians hit by vehicles, and less likely to survive, as encountered in this study. Half the children involved in this study were pedestrians. This observation is in agreement with other studies. Legislation in the United Kingdome to make the use of seatbelts compulsory for drivers and front seat passengers was associated with an initial fall in the deaths of front seat occupants of 400 per annum. Severe injury amongst survivors was also substantially reduced. More recently, rear seat belts have been shown to significantly reduce injury severity and protect against abrasions, bruising and lacerations. Furthermore, they prevent ejections from a vehicle and reduce the duration of in-patient stay.

Burst tires were identified as a common cause of accidents. With intense heat in the summers, tires are likely to blowout, especially if the vehicle is going fast. Education about the schedule of changing tires is needed (how often they should be changed, taking into consideration climate/environment in which you live), and the possible results of leaving your vehicle for long periods of time exposed to the sun.

What can be done to improve safety on the roads in Peshawar? The following points bear urgent consideration.

1. The use of seat belts both back and front should be compulsory, and if this legislation were introduced it would greatly reduce the severity of injuries in road traffic accidents, and in many cases prevent injuries altogether.
2. Strict enforcement of the speed limit.
3. Severe penalties for dangerous driving.
4. Education regarding safe driving and the Highway Code through television, newspapers and other media.
5. No overcrowding in vehicles. A safety limit should be determined per vehicle size. No children in the back of pick-up vans or trucks.
6. Regular checks and changing of the tires.

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