Demographic profile of head injury cases in bhavnagar region, gujarat

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INTRODUCTION
Head injury is a morbid state resulting from or subtle, structural changes in the scalp, skull and / or the contents of the skull produced by mechanical forces. Any type of craniocerebral injury can be caused by any kind of blow or any sort of head. Head is also an easy and successful target for homicidal injuries. Head injuries are responsible for more than one-fourth of all traumatic deaths and nearly two-third of road traffic accident. Incidence of head injury is steadily rising all over the world. The burden is serious as majority of head injury victims belong to young and productive age group. Lack of reliable data on this aspect in Bhavnagar region motivated us conduct to this study.

MATERIAL AND METHOD
Present study was carried out in the year 2011[01/01/2011 to 31/12/2011]. During which total 1045 medico legal autopsies were conducted, out of which 176 autopsy cases of head injury were studied in detail. My article is purely based on my thesis work. Before starting my thesis, permission was granted by Institutional Review Board, Govt. Medical College, Bhavnagar.

Key Words: Head injuries, Road traffic accident (RTA), Haemorrhage, Skull fractures.

RESULTS
Table:1 distribution of cases of head injury according to age and gender.

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Total no. of cases % of Cases</th>
<th>No. of cases of Male % of cases of male</th>
<th>No. of cases of female % of cases of female</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 to10 yrs.</td>
<td>10 5.68%</td>
<td>06 3.40%</td>
<td>04 2.28%</td>
</tr>
<tr>
<td>11 to 20 yrs.</td>
<td>24 13.63%</td>
<td>21 11.93%</td>
<td>03 1.70%</td>
</tr>
<tr>
<td>21 to 30 yrs.</td>
<td>42 23.86%</td>
<td>39 22.16%</td>
<td>03 1.70%</td>
</tr>
<tr>
<td>31 to 40 yrs.</td>
<td>31 17.61%</td>
<td>25 14.20%</td>
<td>06 3.41%</td>
</tr>
<tr>
<td>41 to 50 yrs.</td>
<td>32 18.18%</td>
<td>21 11.93%</td>
<td>11 06.25%</td>
</tr>
<tr>
<td>51 to 60 yrs.</td>
<td>19 10.79%</td>
<td>13 7.38%</td>
<td>06 3.41%</td>
</tr>
<tr>
<td>61 to70 yrs.</td>
<td>13 7.38%</td>
<td>07 3.97%</td>
<td>06 3.41%</td>
</tr>
<tr>
<td>&gt;70 yrs</td>
<td>05 2.84%</td>
<td>03 1.70%</td>
<td>02 1.14%</td>
</tr>
<tr>
<td>Total</td>
<td>176 100.0%</td>
<td>135 76.70%</td>
<td>41 23.30%</td>
</tr>
</tbody>
</table>
In the present study male comprised 76.70% and Females 23.30% of the total victims of head injuries cases. Highest numbers of victims were found in the 21-30 years age group (23.86%) and least in the > 70 years age group (2.84%). Males are largely involved in the head injuries cases with male to female ratio is nearby 3.29:1, because males are more mobile due to going out for work and so more prone to RTA. This occurrence is seen in other study also.5,6

In our study highest numbers of victims were found in the 21-30 years age group (23.86%) and least in the > 70 years age group (2.84%). This can be explained by the fact that at the young age people are more mobile, go out for work and take risks, while elderly people and children usually stay at home, hence the young are more vulnerable to unnatural events like, road traffic accident, railway accident, assault, etc. This corresponds with other studies.2,3,4

In our study most of the incidence have occurred during 12.01 P.M to 6.00 P.M (34.10%) followed by 6.01 P.M to 12.00 Midnight (31.25%) and least during 12.01 A.M. to 6.00 A.M. (9.10%). It may be due to heavy traffic during these peak hours. This occurrence is seen in other study also.8

In the present study with higher incidence of head injuries were died within 24 hours (76.13%) of the casualty, BD (brought dead) cases were also involved in 0 to 12 hours. Only 3.42% cases survived for more than a week then died, which is similar with the observation of Akhilesh.
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Pathak et al. The time of survival of head injury patients varies as per the severity of the trauma and also the kind of treatment and response of the patient to the same.

In present study with maximum incidence of head injury in RTA and that is 66.47% of cases, followed by 20.45 % cases of fall down. Present study of mode of injury is consistent with the study conducted by A K Rastogi et al and Akhilesh Pathak et al. It can be explained due to the fact that maximum number of victims involved more commonly with relatively higher speed, which can be achieved over short distances and less stability of the vehicle with poor infrastructure. This may be explained due to the fact that untrained, unqualified and uneducated business oriented drivers overload their poorly maintained vehicles leading to an accident. The present study shows that brain was not injured in 73.29%, which is similar with the observation of the Dr. S. S. Agarwal et al. The present study shows that minimum incidence is of laceration of brain (5.68%). In our study most common type of skull fracture due to head injury was linear fracture and most common site of skull fracture was mixed (more than one part of the skull), which is followed by parietal part. It may be due to because of that this type of fracture is more common in cases where the head strikes by forcible contact with a broad resisting surface, as in RTA and fall down from height. This corresponds with other studies also.

In our study most common type of intracranial haemorrhage due to head injury was mixed type of haemorrhage. That is followed by subdural haemorrhage. This corresponds with other study. That is followed by subdural haemorrhage.

CONCLUSION
From the present study, following conclusions were derived regarding head injury cases:

Higher incidence of head injuries were died within 24 hours of the casualty, which is very alarming and highlights the need for taking urgent steps for establishing good pre-hospital care and provision of trauma services at site in India. It is essential for also shows that head injuries remain the most common and serious type of trauma seen in emergency department of our hospital and availability of good neurosurgical care is essential for also these patients.

The rate of incidence of head injury is higher in India because of its traffic patterns and possibly the lack of preventive measures such as helmets in motor cyclists and seatbelts in automobiles and poorly controlled traffic conditions and poor road conditions. It is necessary to do much more studies on RTAs and strict implementation of the already existing rules.

REFERENCES
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