**Original article:**

**Spectrum of various patterns of injuries in cranio-cerebral trauma: CT evaluation**

**1Dr. Kaleem Ahmad , 2Dr.** **RK Rauniyar, 3Dr. Sajid Ansari, 4Dr. Mukesh Kumar Gupta**

1Associate Professor, Department of Radiodiagnosis, B.P. Koirala Institute of Health Sciences, Dharan, Nepal.

2 Professor, Department of Radiodiagnosis, B.P. Koirala Institute of Health Sciences, Dharan, Nepal.

3Assistant Professor, Department of Radiodiagnosis, B.P. Koirala Institute of Health Sciences, Dharan, Nepal.

4Associate Professor,Department of Radiodiagnosis, B.P. Koirala Institute of Health Sciences, Dharan, Nepal. **Corresponding author:** Dr. Kaleem Ahmad ; E mail address**:** drkalim17@yahoo.co.in

**ABSTRACT**

**Background:**Cranio-cerebral injury secondary to road traffic accidents are the leading cause of head injury in teenagers and young adults. Every trauma victim with altered level of consciousness must be evaluated for brain injury. With the advent of CT, the diagnosis of head injury has significantly improved which facilitates early management and targeted intervention.
**Method:**The study was carried out on a prospective basis over a period of six months. After taking informed consent, the detailed clinical history was taken and local & systemic examination was done. The age, sex and the mode of head injury was recorded. Computed tomography (CT) of the head was done on Dual slice CT scanner. The images were viewed in brain and bone windows with multiplanar reconstruction (MPR) in coronal and sagittal planes.

**Results:**Out of 400 cases, 307 (76.7%) were males and 93 (23.3%) were females. The highest frequency occurred in the 21-30 years age group (29.75%), followed by 31-40 years (24.25%) and 41-50 years (17%). The major causes of head injury were road traffic accidents, fall from height and physical assaults. Cerebral contusion was seen in 58.25%, skull fracture in 57.75%, scalp hematoma/laceration in 53.25%, intraparenchymal hematoma in 52%, cerebral edema in 49.25%, extradural hematoma in 32%, subarachnoid hemorrhage in 31.75%, midline shift in 22.75%, subdural hematoma in 22.25%, intraventricular hemorrhage in 8.25%, pneumocephalus in 7.75% and diffuse axonal injury in 6.5% of cases.

**Conclusion:**CT scan helps in the evaluation of cranio-cerebral trauma rapidly, accurately and non-invasively and in assessing the nature, site and mode of injury and impending herniation leading to prompt and effective management. The high prevalence of cranio-cerebral trauma and significant CT findings justifies the use of CT in head trauma patients.

**KEY WORDS:** Cranio-cerebral trauma , Intracranial injuries , Mode of injury , Computed Tomography