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| ORIGINAL ARTICLE |

**Assessment of CT scan findings in children with head trauma in emergency department of Hamadan Besat hospital in the first half of 1398**

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| Abstract |  |
| **Introduction:** Head trauma is one of the major causes of death and disability from traumatic injuries. Due to industrialization and increased recreational and sports facilities in cities and villages, this problem has increased in children. Considering to the importance of brain scanning results of patients with traumatic brain injury and their relation to the symptoms and mechanisms of head trauma, this study was performed to investigate the results of CT scan in children with head trauma in emergency department Besat Hospital of Hamadan. **Methods:** In this descriptive-analytical study, all children with head trauma referred to the emergency department of Hamadan Besat hospital were evaluated for demographic variables, cause and outcome of trauma and CT scan results. The collected data were recorded in a researcher-made checklist and analyzed by SPSS 22 software. **Results:** In this study 248 persons with mean age of 5.38 ± 4.30 years were evaluated which 63.8 percent of them were male. Falling down (69 percent) and accidents (20.6 percent) were the two main causes of head trauma, respectively. Most CT scans results in children with head trauma were normal (89.9 percent) and the most abnormal results were fractures (4.4 percent). Most patients (75.8 percent) were discharged from the emergency department with good condition and 21 patients (8.5 percent) were admitted to other wards. Most of children (88.7 percent) had normal GCS. The patient's final outcome was significantly correlated with the cause of injury and the patient's GCS (P-value<0.01). Also, CT scan findings were significantly correlated with GCS of patients (P-value <0.01). **Conclusion:** In this study falling down was the most common cause of trauma. Most patients had normal GCS and CT scan. The most common abnormal finding was fracture. There was a significant relationship between patient's final outcome with the cause of injury and GCS. GCS of patients was also correlated with CT scan findings. |
| **Key words**: Head Injuries, Tomography, Emergency Medical Services, Child |