

CT Scan findings in minor head trauma in children under 2 years old

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Introduction: Minor blunt head trauma is a common reason for children to present to the emergency department (ED). Crania computed tomography (CT) is the choice for evaluating children with blunt head trauma in the ED, but few shows abnormal findings. In this study we aim to evaluate CT findings in children with blunt head trauma and predictors of abnormal findings.

Methods: In this prospective study, 218 children under 2 years of age (121 male and 97 female with mean age of 11.24 ± 4.31 months) with compliant of minor blunt head trauma visiting the ED between April 2011 and April 2013 were included. Physical examination and clinical symptoms, as well as CT findings and patients' outcome were evaluated.

Results: Physical examinations were normal in 95.9%, and clinical symptoms were present only in 25.7% including vomiting in 16.1%, loss of consciousness in 8.3%, ear/nose bleeding in 4.1% and seizure in 5.5%. CT scan was requested in 189 cases (86.7%) of which, 7.9% were abnormal including linear fracture in 5.3%, subgaleal hematoma in 1.1% and depressed fracture, subcutaneous hematoma and intracranial hemorrhage each in 0.5%. Among all cases, 89% were discharged from ED with no further observation, 6% discharged after

48 hour observation and 5% were hospitalized. There was significant correlation between abnormal CT findings and having any clinical symptoms, vomiting and Ear/nose bleeding.

Conclusion: In children <2 years old with minor blunt head trauma, most CT scans are unnecessary. Considering clinical symptoms we can reduce unnecessary CT scans.

Keywords: Children; Mild blunt head trauma; emergency department; Computed tomography