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Evaluation of pediatric head trauma in the emergency department

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Head trauma is one of the most common childhood injuries. More than 80% of these injuries are mild, but traumatic brain injury is the leading cause of death due to trauma in children. Skull radiographs and computed tomography (CT) can accurately identify fractures and intracranial complications, respectively. Nevertheless, their indiscriminate use wastes resources and raises costs. Guidelines have been published for the management of minor closed head injury in children 2–20 years of age [1, 6] and for infants less than 2 years old [6, 9]. Acute evaluation of the head-injured child requires careful history-taking with a focus on the mechanism and biomechanics of the injury, and a physical examination that includes a complete neurological examination. Issues in the management of the pediatric patient with head trauma include the need for cranial CT, hospitalization, outpatient follow-up, and a consideration of the possibility of child abuse [3, 7].

The study of Da Dalt et al. [4] in this issue addresses whether clinical features of children with head trauma predict the risk of intracranial injury. A total of 3,806 children under the age of 16 years were enrolled in a prospective multicenter study in Italy. Based on the history and clinical examination, the children were classified into different risk categories and consecutive management – i.e., discharge, observation, admittance to the intensive care unit, or neurosurgery. Intracranial injury was diagnosed on CT (79 children underwent a CT, and intracranial injury was identified in 22) and was assumed to be absent in the case of an uneventful course, as determined by a follow-up telephone call (about 10 days after discharge), or the lack of a re-admission to hospital. The large majority of children had

minor head trauma with asymptomatic presentation or with a history of only temporary loss of consciousness. This study emphasizes the practice that CT is rarely necessary in these children, but – and most importantly – only after careful clinical evaluation and a knowledge of the risk factors for intracranial injury [2, 5, 6, 8].

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