Case Report

Bull Horn Head Injury with Retained Horn in Brain: A Rare Case Report

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INTRODUCTION

Pediatric head injury is a common emergency noted in the trauma departments worldwide. Children are vulnerable to sustain head injuries. The more interesting fact in pediatric head injury is that home of a child itself is a very potential place of trauma. This is in contrary to the adult head injury, which is most commonly seen on the roads. The various modes of injury implicated are fall, hit with an object, road traffic accidents (RTAs), and sports injuries.[1] One commonly observed mode of injury in Indian society is animal hitting the individual. Such animal hit often results in chest, abdomen, or perineal injuries commonly. We here report an interesting case of a child sustaining head injury by a stray bull over the road, resulting in a penetrating head injury with retained broken bull horn in brain and its management.

CASE REPORT

A 3-year-old female child was brought to the Department of Neurosurgery of our institute with a history of sustaining head injury by a stray animal on the road. The child was received and managed by on-duty resident as per the institutional protocols. The vitals of the child were stable. The child was drowsy and localizing to painful stimuli. The pupils were of normal size and normally reacting to light bilaterally. There was weakness of the left upper and lower limbs. On local examination, there was a lacerated wound of size 6 × 5 cm with irregular margins on the right frontal scalp convexity. To the great surprise of the resident was that the broken bull horn was impacted deep inside the head itself. The noncontrast computed tomography (NCCT) scan was performed, which revealed 9-cm-long elongated foreign body in the right frontal lobe with fractured segments of the frontal bone going deep inside [Figures 1-4]. It was the broken bull horn along with the depressed fractured segments. There were few small foci of contusion in the brain parenchyma near the bull horn. Three-dimensional (3D) reconstruction was also performed [Figure 5]. The child was operated by the senior consultant of the department. The retained bull horn was removed en bloc. The contused part of the right frontal lobe was also removed along with fractured segments of bone. The dural tears were repaired with the G-patch. The postoperative NCCT revealed no intracranial foreign body and depressed fracture segments [Figure 6]. The patient was managed postoperatively in intensive care unit as per the standard institutional protocols. The patient was discharged in good clinical condition with residual weakness of the left upper and lower limbs with power grade of 3/5. On 2- and 6-month follow-up, the condition of child was satisfactory and the power improved to 4/5.

DISCUSSION

The pediatric head injury is a major life-threatening emergency in trauma centers worldwide. In a study...
performed at tertiary care hospital of New Delhi, of 796 patients of head injury in the age range between 1 month and 92 years, 45 patients were infants. Overall 34% patients were of age below 10 years, and 11% were in the age group 11–20 years.[2] Many authors have reported the highest incidence of traumatic brain injury (TBI) in the age group 2–10 years.[3] TBI in children is a serious problem in our country, and the child who survive may later on live with certain neurological deficits and neurocognitive problems. The various common modes of injury implicated in the pediatric populations are fall from height, RTAs, objects hitting head, and sports injuries. In one study, trauma was found to be the leading cause of death in children above the age of 1 year amounting to 81% and abuse in 19% cases.[2] Various authors have divided the head-injured
Figure 5: Preoperative NCCT head and 3D CT scan of the head showing retained bull horn
children in different three to four groups. The causes of head injuries vary in different age groups, and the causes in younger children are fall from height followed by abuse, RTAs, and sport injuries. India is a country with predominant rural population. The practice of cattle grazing and keeping these animals in households is common. There have been a number of articles stating the bull horn injuries to the body. The common sites of trauma are the abdomen and the perineum followed by the groins and chest also. These injuries have been managed by various authors conservatively as well as surgically. Bull horn injuries are also reported commonly from European continent where “bull fight” game is practiced. We performed thorough search of the literature and found no case of a child sustaining head injury with bull horn along with retained bull horn inside the brain.

Our case report is the only one reporting a pediatric head injury sustained by bull horn. We managed it surgically with good outcome. Looking at the rarity of the event, such case reports are worthwhile taking into medical literature such that any future management protocols can be set forth for these cases. It is also the duty of the medical fraternity to bring to the notice of the public various health hazards sustained by bull horn injuries and the need to learn various precautions to avoid them.

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Conflicts of interest
There are no conflicts of interest.

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