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Clinical Pattern of Pediatric Head Injury; A Retrospective Study

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ABSTRACT

History of head injuries is available before the period of Hippocrates and it accounts a majority of trauma patients till now. Head injuries are becoming more frequent in children and disabilities in this age group are more vulnerable so it is necessary to act on the prevention of the possible severe consequences. This retrospective study was conducted on patients with head injuries admitted in pediatric surgery department, Kamla Nehru hospital, Gandhi medical college, Bhopal. All patients are assessed for etiological factors and type of head injuries. CT scan of all patients was performed as a part of routine diagnostic work up and Correlation of CT scan findings with GCS scores and clinical profile was done and assessed.

KEYWORDS Glasgow Coma Scale, Head injury, Pediatric.

INTRODUCTION-

Head injuries form a major bulk of patients in pediatric age group and are one of the commonest cause of death in children. Trauma to head is of great importance as source of cribbing, disability and as an expensive drain upon the resources of the community. Children sustaining head injury have better chances of recovery as compared to adults. So, a retrospective study is conducted to identify the incidence and risk factors and associated clinical feature of head injuries patients in pediatric age group.

METHODS-

This retrospective study was conducted from October 2011 to December 2012 on head injury patients in pediatric surgery department, Kamla Nehru hospital, Gandhi medical college, Bhopal. All patients are assessed for etiological factors and type of head injuries and clinical features were analyzed.

OBSERVATION-

During the study period 538 pediatric age group patients were admitted in the department , out of which 90 cases were of head injury in which 30 (33.33%) patients had showed abnormal findings in CT scan and were included in study. out of 30 patients in study group 19 (60.33%) were male and 11 (36.66%) were females.

The tables below depict the observations and result obtained in this study-

TABLE NO.1- SHOWING AGE INCIDENCE OF HEAD INJURIES IN THE STUDY Group, n=30

Age in years	No. Of cases	percentage
0-1	3	10%
1-2	5	16.6%
2-5	10	33.3%
5-10	8	26.6%
10-12	4	13.3%

TABLE NO.2- SHOWING ETIOLOGICAL DISTRIBUTION, n=30

Mode of injury	No. of cases	percentage
Fall from height	22	73.33%
Road traffic accident	5	16.6%
Playground injury	2	6.66%
assault	1	3.33%

TABLE NO.3- SHOWING CLINICAL FEATURES, n=30

Clinical features	No. Of cases	percentage
Vomiting	26	80.6%
Unconsciousness	15	50%
E.N.T bleeding	5	16.6%
convulsions	8	26.6%

TABLE NO.4- SHOWING GLASGOW COMA SCALE IN HEAD INURY PATIENTS, n=30

G.C.S score	No. Of cases	percentage
<6	3	10%
7-9	9	30%
10-12	6	20%
13-15	12	40%

TABLE NO.5- SHOWING PERCENTAGE OF LESION ON C.T SCAN

C.T findings	No. Of cases	percentage
Contusion	16	59.3%
E.D.H	5	16.6%
S.D.H	5	16.6%
Intracranial bleeding	4	13.3%

TABLE NO.6- SHOWING CLINICAL FEATURE CORRELATION WITH TYPE OF LESION ON C.T SCAN

	E.D.H (n=5)	S.D.H (n=5)	Contusion (n-16)	Intracranial bleeding (n=4)
unconsciousness	02 (40%)	04 (80%)	06 (40.4%)	03 (75%)
Vomiting	05 (100%)	03 (60%)	15 (82%)	03 (75%)
Convulsion	00 (0%)	04 (80%)	03 (11.5%)	01 (25%)
E.N.T bleeding	02 (40%)	00 (0%)	03 (11.5%)	00 (0%)
G.C.S <6	00 (0%)	02 (40%)	01 (6.2%)	00 (0%)
G.C.S 7-9	03 (60%)	02 (40%)	02 (12.5%)	02 (50%)
G.C.S 10-12	01 (20%)	00 (0%)	04 (25.5%)	01 (25%)

G.C.S 13-15	01 (20%)	01 (20%)	09 (56.2%)	01 (25%)

DISCUSSION-

During the study period 538 pediatric age group patients were admitted in the department out of which 90 cases were of head injury in which 30 (33.33%) patients had showed abnormal findings in CT scan and were included in study. In study group of 30 patients 19 (60.33%) were male and 11 (36.66%) were females.

In our study group 27 (90%) were discharged and 3 (10%) patients who were having G.C.S <6 were died.

Maximum number of head injuries cases was reported in 2-5 years age group patients which was similar to study done by Chadwick et al (1991)[1] and Duhaime et al (1992)[2].

Maximum number of head injuries in pediatric age group was due to fall from height which correlate with study done by Hall JR et al (1989)[3] and Langois JA et al (2006)[4].

We observed that contusion was found in 16 patients (59.3%) and was the commonest intracerbral lesion .These result correlate with study done by Ng SM et al (1978)[5] in pediatric age group and was similar to study done by Dablin et al (1977)[6] Zinmerman et al (1978)[7] as they observed contusion as most common intracerbral lesion in adult head injury patients.

Majority of pediatric head injury patients with intracerbral lesions presented with vomiting except in patients with subdural haematoma in which unconsciousness was found to be most common symptom which was similar to study done by Vitzthum HE et al (1986)[8] who also reported vomiting as most common symptom in pediatric head injury patients as a part of "Pediatric contusion syndrome".

In our study we observed that mortality in pediatric head injury was high in patients with Glasgow coma scale score <6 as all patients who were having G.C.S <6 expired and this

correlate with study conducted by Gonnerally et al (1982)[9].

CONCLUSION-

With this study we came to conclusion that:-

1. *Maximum number of head injuries cases was reported in 2-5 years age group patients.*
2. *Majority of pediatric head injury patients were male as compared to female.*
3. *Maximum number of head injuries in pediatric age group was due to fall from height.*
4. *Contusion was found to be commonest intracerbral lesion in pediatric head injuries patients.*
5. *Vomiting was the most common symptom after head injury in pediatric age group.*
6. *Mortality was 100% in patients with G.C.S <6.*

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