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Present study was conducted at M.L.B. Medical College, Hospital, Jhansi. Which consisted of 250 patients, out of which 50 died, so a 4-10 weeks follow up was possible for only 200 cases. Which were divided into a study group of 100 patients and given encephabol along with usual conservative treatment for craniocerebral injuries and a control group of 100 patients without Encephabol. A comparative study was carried out regarding the development of various neurological sequelle after head injury and their duration, between both the groups.

Kalsbeck (1980) reported that head injuries are leading cause of death in 1-44 years age group. In present study maximum incidence was found upto 40 years of age (83.2%). It was observed that maximum incidence was in third and fourth decades mainly because this group comprised of working class of people exposed to accidents. A gradual decline was observed in incidence of head injury with advancing age after fourth decade, which may be attributed to relatively inactive and sedentary lifestyle of elderly patients.

Incidence of head injury was observed three times more prevalent in males as compared to females (M : F ratio being 3.17 : 1). The fact may be related
to the reason that males frequently go outdoor for their occupation and females do household works in our society. In females maximum incidence observed in 1st decade of life. We can ascribe it to crawling inquisitiveness of infants, experimentation of toddlers and bravado of older children as is also the case with male children.

More head injury cases were reported from rural areas than urban ones. The rural : urban ratio being 1.19 : 1. This could be related to the fact that they had to travel long distances upto city by their vehicles through highways, hence at risk for roadside accidents.

Chapman (1967) reported that accidents are more common at extremes of age i.e. childhood and old age. He also reported that principal cause of death in children in developed countries is accidents. In the present study it was observed that accidental head injury was most prevalent between 16 to 45 years age group(58%). Although children between 0 to 15 years of age were the next most prevalent (30%), elderly patients were least in number to suffer from injury i.e. 9.6% in 46-60 years age group and only 2.4% in above 60 years age group.

Children mostly sustained head injuries due to fall from height. Road side accidents were principal cause of head injury in 16-45 years of age group. Medicolegal injuries were commonest in young adults i.e. 16-30 years of age.
In this study majority (87.2%) of cases were of closed head injury. Only 12.8% patients had open craniocerebral injury, but severity of injury was not directly related with type of injury. Since many patients with open head injuries were having better Glasgow coma scale than those with closed head injury.

Alan Grockard reports in Watson-Jones book of fractures and joint injuries that it is unusual for head injury to occur in isolation. Head injuries are commonly present (80%) in road-traffic accidents along with other major injuries like limb fractures, fractures of pelvis and ribs. While accidents at homes i.e. in falls from height have high incidence of limb fracture whereas head is involved in only 40% of such patients. Similarly industrial accidents have highest incidence of limb fractures and only 2% of cases suffer from head injury.

In present study we observed that 32.4% cases (81 out of total 250 cases) were having other major injuries along with craniocerebral injury hence majority of cases suffered isolated head injuries leaving aside other trivial injuries. 25(10%) cases suffered face and skull bone fractures all belonged to road side traffic accidents upper limb and thoracic cage fractures were found in 38 (15.2%) cases. Of these 15 cases sustained injury due to fall from height. Other in road side accidents lower limb and pelvis fractures were present in 15(6.0%) cases.
only and in 3 (1.2%) cases blunt injury abdomen was present and all these cases sustained injury in road side accidents.

Crockard HA (1981) was of the view that assessing injury severity is a major problem in management of trauma, in assessing effects of therapy. In an effort to standardize an international scale has been adopted known as GLASGOW COMA SCALE enabling one to describe the degree and types of impaired consciousness in clearly defined terms and has been used successfully in comparing treatment from one country to another. The 15 point scale assesses patient's level of consciousness in terms of three categories, eye opening, verbal response, and best motor response to external stimuli.

In the present study patients were divided into 3 categories for purpose of grouping and comparison between similar cases. The mild head injury cases (Glasgow coma scale 13-15) comprised the bulk (53.6%) of total patients while moderate head injury cases (GCS 10-12) comprised 26.4% and severe head injury cases (GCS <10) comprised only 20% of total cases studied.

Allan H Freidman stated in Sabiston's text book of surgery that patients with mild head injuries and brief loss of consciousness are expected to make an uneventful recovery, mortality is unusual in such cases.
Patients with moderate head injury suffer a long period of post injury morbidity in form of persistent headache, memory deficits etc., but mortality is less. Severe head injury patients with a Glasgow coma scale of 9 or less exhibit a very high degree of mortality and 40% of them have a focal intracranial mass lesion and elevated reflexes can be demonstrated in approximately one third of the patients and is associated with increased mortality. According to Allan Freidman (Text book of Surgery, Sabiston, p. 1386, Vol. 2, 13th edition) mortality was found proportional to patient's age.

In the present study mortality was very low in cases of mild and moderate head injury cases. Only 2 cases out of 134 mild head injury cases and again 2 cases out of 66 moderate head injury cases died. But severe head injury cases exhibited highest rate of mortality viz. 46 patients died out of 50 patients admitted with severe head injury (92% mortality). It was also observed that no patient with a Glasgow coma scale of 8 or less remained alive. This difference in mortality between western data and our set up is probably due to limited investigative (CT scanning and neurological) facilities in our set up. In our study total 20% mortality was recorded among 250 cases studied.
Rimel (1981) documented that patients with mild head injuries suffer a surprising degree of post injury disability in the form of persistent headaches, memory deficits, impairment of concentration and difficulties with activities of daily living that persist for months following injury. He reported that one third of patients sustaining minor head injury, had not returned to gainful employment for 3 months following injury.

Declerck (1969) used pyritinol in treatment of head injuries, treating 123 patients with 300-600 daily doses of pyritinol. He observed that post head injury symptoms as headache, impairment of memory and concentration, mental irritability, vertigo and other such disorders were completely relieved in 85% and 90% patients were able to resume gainful employment, as compared to only 40% patients of control group returning to gainful employment.

In the present study 94% of total 100 patients of control group developed post head injury headache. In mild head injuries 6 patients were found not to have any post injury headache and majority of patients developed it from 0 to 7 days. Only one patient out of 66 mild head injury patients had it for 3-4 weeks. In cases of moderate head injury all patients developed headache and majority of them had it for more than one week. Only
2 cases were available of severe head injury in control group both developed headache from 2 to 4 weeks. A more than 4 weeks follow up was possible for a small number of patients.

In our study group (pyritinol given) only 66% of patients developed headaches. While 34% were free of headache out of total 100 patients. In most of the patients of mild head injury headache persisted upto one week only and in none the headache persisted for more than three weeks. More over the number of patients having headache for 2-3 weeks became only 5 with pyritinol in comparison of 11 patients without pyritinol.

In moderate head injury cases of study group, 8 patients did not develop any post injury headache, and the number of patients developing headache for more than one week reduced considerably in comparison to control group.

In severe head injury no effect of pyritinol was exhibited (Table 9 and 10).

Declerck (1969), Gerstenbrand (1969) and Bystricky et al (1977) concluded that administration of pyritinol to head injured patients effectively reduces the incidence and duration of post head injury sequelae including vertigo, headache, impairment of concentration.
etc. 85% of cases were completely relieved of such sequela in Declarck's experiments.

In our study 66 patients out of 100 patients of control group developed vertigo and 34% did not. In mild head injury group, 30 out of 66 patients did not have any headache while 21 patients had it for less than one week and only 15 patients had it for 1-2 weeks. No patient in this group had a persistent headache for more than two weeks.

In moderate head injury, cases of control group (No pyritinol given) 4 patients did not have any headache, 16 had it for less than one week, 10 for 1-2 weeks and only 2 patients had persistent headache for 3-4 weeks. Both the severe head injury cases had persistent headache for 2-3 weeks (Table 11).

In study group (Pyritinol was given in appropriate doses) of similar patients a considerable increase was observed in number of patients not developing any post head injury headache and hence decrease in number of patients developing post injury headache in both mild and moderate degrees of head injury. In this study group also only 2 patients of severe head injury were available and both of them developed post injury headache but for shorter duration i.e. 1-2 weeks only (Table 12).
Kitamura (1980) also studied 270 patients dividing them into study and control group, treated with pyritinol or placebo respectively and concluded that pyritinol significantly reduced post head injury neurological sequelae. In present study out of 100 patients of control group 44% patients had post injury irritability ranging from 0–4 weeks depending upon severity of injury while 56% of cases did not had any mental irritability after regaining consciousness (Table 13).

In study group which was given pyritinol in appropriate dosage only 34% patients exhibited post head injury mental irritability. However no significant change was observed in duration of mental irritability after giving encephabol (a brand of pyritinol).

In control group of 100 patients 35 patients showed impairment of concentration and memory for varying periods, most of them upto 2nd or 3rd post injury days and a few were upto 1-2 post injury weeks. Only three patients exhibited such sequelae for 2-3 post injury weeks and only one patient of severe head injury had it for more than 3 weeks. Rest of 65% patients were free of these sequelae (Table 15).

In study group only 18 out of 100 patients exhibited impairment of concentration and memory deficit, and those who exhibited it after using pyritinol did so.
for a shorter period than control group of similar patients.

Soo Young Oh (1975) worked on 42 patients of coma after head injury using pyritinol in high doses till the patients regained consciousness, he concluded that encephabol (pyritinol) produced a more rapid recovery of consciousness. In present study 50 cases of mild head injury from control group regained consciousness in 1 day, 10 cases in 2 days and remaining 6 cases in 3 days. While in study group which were given pyritinol 55 patients regained consciousness in just 1 day, 6 in 2 days and 5 in 3 days.

In the present study it was observed that pyritinol enhances recovery from unconsciousness to consciousness.

Patients with severe head injury did not exhibit any effect of encephabol to regain consciousness (Table 17 and 18).

Bystricky et al (1977) observed effect of pyritinol over patients of craniocerebral injuries recovering from coma and reported that the drug had no side effects.

In present study also we found no untoward side effects of the drug.