

Post Traumatic Hydrocephalus In Severe Head Injury – Risk Factors

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Purpose

To identify the risk factors like age, admission Glasgow Coma Scale (GCS), decompressive craniectomy (DC) and findings in initial Computed tomography (CT) scan like Subarachnoid hemorrhage (SAH), Intraventricular hemorrhage (IVH) and skull base fracture which may predispose for the development of hydrocephalus in traumatic severe head injury patients

Materials and methods

Single center prospective observational study in which patients with age ≥ 14 and GCS ≤ 8 are followed with regular CT scan for a period of 4 months during January 2013 to January 2016 admitted in our hospital

Results

A total of 32 post traumatic hydrocephalus cases have been identified among 489 cases included in the study resulting in the incidence of 6.54 %. Mean duration of presentation was 48.76 \pm 33.26 days. 82% of patients in hydrocephalus group had SAH while 52% in non hydrocephalus group had SAH in initial scan ($P=0.001$). Decompressive craniectomy was done in 69% patients with hydrocephalus while only 32% of non hydrocephalus group underwent DC ($P=0.00001$). Other parameters namely age, sex, GCS, IVH and skull base fractures were not significantly associated with development of hydrocephalus.

Conclusion

Decompressive craniectomy and SAH significantly increases the probability of development of post traumatic hydrocephalus while other factors like IVH, base of skull fracture, age and admission GCS do not increase the development of hydrocephalus. Early cranioplasty may prevent the development of hydrocephalus is to be studied.