

FP111**Cauterization of third ventricular floor in endoscopic third ventriculostomy**

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Introduction: Justifiably, endoscopic third ventriculostomy is considered the greatest breakthrough in the management of hydrocephalus since the introduction of Sialistic shunts (Hopt NJ, Gruner P, Fries G, et al 1999). The rate of intraoperative hemorrhage was 3.7%, the rate of severe intraoperative hemorrhage was 0.6% (including a 0.21% rate of Basilar rupture).

The early post-operative mortality rate was 0.21% (6 patients died; 2 of sepsis and 4 of hemorrhage).^[1]

Intraoperative complications included intraventricular hemorrhage, cardiovascular changes, such as, bradycardia during fenestration and inflation of the balloon of the Fogarty catheter, and damage to the hypothalamus and fornix.^[2]

Bradycardia has been reported in up to 41% of the cases during fenestration of the third ventricular floor and the mechanisms postulated include stimulation of the pre-optic area, at which time there may be associated hypotension.^[3]

Material and Methods: Retrospective study of 392 endoscopic third ventriculostomy for 374 patients of different ages and etiologies with 54% males and 46% females were carried out between April 2004 – June 2012 at Al-Azhar University Hospitals and health insurance hospitals. Patients were followed up at 3, 6 and 12 months post-operatively using C.T brain, MRI and C.S.F Flowmetry in some cases. In 48% of cases perforation of the floor of third ventricle was carried out using the balloon of fogarty catheter were in 61.5% of cases the perforation of third ventricular floor was carried out using diathermy either monopolar or bipolar diathermy.

65% just opening the floor and completing the procedure with the Fogarty catheter balloon and 35% of cases the whole stoma was carried out with diathermy.

Results: The complications especially cardiovascular and hemorrhagic complications of the third ventricular floor, cisterns are much less with using diathermy to open third ventricular floor.

Also closure of the stoma is markedly less with using diathermy (1.33% versus 3.47%).

While late failure of endoscopic third ventriculostomy are 41.6% with using diathermy and 58.3% with using the balloon of Fogarty catheter.

Early post operative mortality are much less with using diathermy (0.8% versus 1.87%).

Conclusion: Using the diathermy for perforation of third ventricular floor in endoscopic third ventriculostomy should be preferred than the Fogarty catheter balloon.

References:

¹ Bouras T, Sgouros S, J NEUROSURG PEDIATR. 2011, JUN

² Navarro R, Gil-Parra R, Reitman AJ, et al 2006

³ Anandh B, Madhusudan Reddy KR, et al 2002