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Endoskopische III.-Ventrikulostomie zur Behandlung des Okklusionshydrozephalus beim zerebellären Infarkt

Endoscopic third ventriculostomy for occlusive hydrocephalus due to cerebellar infarction

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Introduction

The surgical management of occlusive hydrocephalus due to massive cerebellar infarction still remains controversial. More common procedures to avoid progressive neurological deterioration base on transient external ventricular drainage (EVD) or the placement of permanent shunt-systems. To our knowledge this is the first report of using endoscopic third ventriculostomy (ETV) in patients with an occlusive hydrocephalus caused by cerebellar ischemic stroke. We report our experience of nine reviewed cases.

Methods

Between 1997 and 2004 8 patients (male: 5, female: 3, mean age: 59,9 years) with a resulting hydrocephalus due to a space occupying cerebellar infarction were managed with ETV. Clinical features (Glasgow coma score [GCS]), cause of stroke as well as computed tomographic (ct) signs, including the involved ischemic vascular territory and the brain oedema were noted. The postsurgical clinical outcome was evaluated. Ventricular size, before and after surgery was compared. Clinical outcome was evaluated by the Glasgow outcome score (GOS).

Results

There was a mean interval of 2.5 days from admission to operation in all patients, depending on the development of a progressive brain oedema.

Mean GCS at the time of intervention was 11.4. In 7 patients ETV was the initial procedure of ventricular drainage. One patient was primarily treated with an EVD , but the device dislocated on day 4 and ETV was performed. In one patient an EVD became necessary 7 days after the initial ETV due to a closure of the ventriculocisternostromy. Eight successfully ETV treated patients demonstrated a rapidly clinical improvement. Additionally ventricular size decreased in ct-scan follow up. Mean GOS on discharge was 3.6.

Conclusions

Occlusive hydrocephalus due to cerebellar infarction is less frequent. When noticed, ETV can be used successfully with minimal risks, especially with avoidance of a higher rate of infectious complications caused by external drainage systems.