Longstanding overt ventriculomegaly in adult

A new entity of chronic hydrocephalus was introduced in the international literature: longstanding overt ventriculomegaly in adults. Previous experience with this disorder has demonstrated that shunt therapy for such patients involves a considerable risk of overdrainage.

see arrested hydrocephalus.

Case series

A total of 26 adults (age range, 17-75 yr) with macrocephaly and progressive hydrocephalus symptoms underwent implantation of either an adjustable Codman Hakim gravity-assisted shunt (Codman Medos, LeLocle, Switzerland) plus an Aesculap-Miethke ShuntAssistant (Miethke KG, Kleinmachnow, Germany) or a nonadjustable gravitational shunt (Aesculap-Miethke gravity-assisted valve). The follow-up period averaged 29 +/- 13 months (range, 6-48 mo).

Significant sustained clinical improvement was achieved in 87% of patients. In more than 90% of patients, Evans index decreased postoperatively by less than 10%. No correlation was documented between the degree of ventricle width reduction and clinical improvement. Only two patients developed subdural hematoma, which was caused by insufficient hydrostatic pressure compensation owing to errors in estimation of intraperitoneal pressure.

Unlike conventional differential pressure shunts, gravitational shunts can be used in the treatment of high-risk patients with longstanding overt ventriculomegaly in adults. Significant risk of overdrainage can be avoided. Gravitational shunts offer a viable alternative to endoscopic third ventriculostomy, provided the choice and adjustment of the shunt opening pressure is based on a correct assessment of the hydrostatic pressure to be compensated for [1].

1)
Kiefer M, Eymann R, Strowitzki M, Steudel WI. Gravitational shunts in longstanding overt ventriculomegaly in adults. Neurosurgery. 2005 Jul;57(1):109-19; discussion 109-19. PubMed PMID: 15987546.