Transethmoidal encephalocele

Transethmoidal basal encephalocele is a rare condition in adult patients. It is usually diagnosed during childhood by cerebrospinal fluid rhinorrhea, meningitis, a nasal mass, or seizures.

Radovnický et al., from the Masaryk Hospital, Usti nad Labem, Czech Republic, present a case of an adult woman with CSF rhinorrhea following resection of an occipital meningioma. The cribriform plate defect containing the encephalocele was diagnosed by computed tomography and magnetic resonance imaging. Transcranial surgery using a patch was performed successfully. They also discuss the possible pathophysiologic mechanisms of encephalocele and treatment options [1)].

Upasani et al., reported the case of a neonate with a transethmoidal encephalocele, who presented with an externally visible intranasal mass at birth. Clinical suspicion of intracranial extension was confirmed by radiological imaging. A bifrontal craniotomy was done to divide the narrow communicating duct. The mass was delivered through the nostril and duraplasty was completed. The postoperative recovery was uneventful [2)].

A case of a 3-year-old boy with transethmoidal encephalocele is presented. The patient was found to have bacterial meningitis, which responded well to an intravenous antibiotics therapy. No physical anomaly was evident on examination but plain skull X-ray film showed cloudiness of the left nasal antrum. Coronal CT scan disclosed a defect in the left cribriform plate and soft tissue mass in the left nasal cavity. MRI showed an anterior basal encephalocele protruding into the nasal cavity. Hypothalamic-pituitary system and the optic nerves appeared normal in the sagittal image. CSF rhinorrhea was confirmed by RI cisternography. An operation was performed transcranially. After a left frontal craniotomy, a unilateral bony defect in the cribriform plate and protrusion of the brain was observed subfrontally. The crista galli was intact. The herniated brain substance was transected and partially removed and the bony defect plugged by temporal muscle and covered by lyofirized dura. Microscopic examination of the herniated brain mass revealed gliosis and capillary proliferation. The patient recovered well and there has been no recurrence of CSF rhinorrhea or meningitis. Basal encephalocele is a very rare congenital anomaly. It is reported to constitute 1 to 10% of all encephaloceles. Incidence is estimated as 1 in every 35,000 to 40,000 live births. The anomaly is classified into two subtypes; transethmoidal (TE) and transsphenoidal (TS) [3)].

Transsphenoidal and transethmoidal encephaloceles. A review of clinical and roentgen features in 8 cases [4)].

References

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