Suprasellar arachnoid cyst

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Suprasellar arachnoid cyst is a type of intracranial arachnoid cyst.

They differ from other arachnoid cysts in several ways, making a separate analysis of these cysts worthwhile.

**Epidemiology**

The sellar region can be affected by a variety of non-pituitary cystic lesions, including craniopharyngiomas, Rathke’s cleft cysts, and arachnoid cyst 1).

Such lesions represent only 5.5% of all sellar lesions, with arachnoid cyst comprising up to 20% of them 2) 3).

Sellar arachnoid cyst is therefore rare, representing only 0.6 to 0.8% of all sellar lesions 4) 5).

In adults suprasellar cysts represent 9% of all the arachnoid cysts while in pediatric population this percentage reaches 15%. 6).

**Classification**

Suprasellar arachnoid cyst classification

**Pathophysiology**

Suprasellar arachnoid cyst pathophysiology.

**Histology**

Although their true histological nature is rarely known because their membranes are not often analyzed histologically, it is reasonable to think that the majority are arachnoid cysts.

**Clinical Features**

Suprasellar arachnoid cyst clinical features.

**Diagnosis**

MRI reveal cerebrospinal fluid (CSF) intensity on both T1- and T2-weighted images 7).
As with arachnoid cysts elsewhere, they are very thin walled (often imperceptible except on dedicated high resolution T2 imaging) cystic lesions which follow CSF on all imaging modalities. There is no solid component and no enhancement.

These cysts invaginate superiorly into the third ventricle, and may even extend into one or both foramen of Monro.

Differential diagnosis

Suprasellar arachnoid cyst differential diagnosis

Treatment

see Suprasellar arachnoid cyst treatment.

Outcome

Suprasellar arachnoid cyst outcome.

Case series

Suprasellar arachnoid cyst case series.

Case reports

Suprasellar arachnoid cyst case reports.
De novo suprasellar arachnoid cyst

2015

A case of a 2-year-old boy who presented with instability and episodes of ocular deviation. A computed tomography scan (CT scan) and magnetic resonance imaging (MRI) of the brain revealed a suprasellar cyst and obstructive hydrocephalus. At birth a transfontanellar ultrasound was normal. The cyst underwent endoscopic fenestration with complete remission of symptoms. In the review of the literature, Gelabert-González et al. found only 6 previous cases of an intracranial arachnoid cyst whose origin was not clearly congenital or traumatic, and Gelabert-González et al. is the second case of a suprasellar arachnoid cyst to arise de novo.

2012

A 4-year-old child who was incidentally found to have a suprasellar arachnoid cyst (SAC) after initial CT imaging at 6 weeks of age but who demonstrated no anomalies. This is only the sixth case of intracranial de novo ACs documented in the English literature and only the second case of SAC to arise de novo.

With the use of fast MRI scans instead of CT scans and the continued neuroimaging of premature infants, we can take a better look at the anatomy and better determine the timing of development of the SAC.

References