

# Suprasellar arachnoid cyst case reports

A 36-year-old woman admitted with a 2-week history of headaches and blurred vision. Her medical history was positive for irregular menses and hypothyroidism. Visual field tests revealed defects in the upper quadrants bilaterally and blood tests indicated slightly elevated prolactin levels (24.4; range 4.8 to 23.3), reduced morning cortisol (3.8; range 4 to 22), and reduced growth hormone levels (<0.05; range 0.13 to 9.88).

Magnetic resonance imaging identified a well-delineated, homogeneous, cystic sellar lesion with suprasellar extension and thin walls. The pituitary gland and stalk appeared to be stretched over the cyst boundaries and compressed against the dorsum sellae. No calcifications or solid areas were identified.

The patient underwent endoscopic endonasal surgery, and the lesion was decompressed. She had good evolution after the surgery, and pathological examination of the walls confirmed the diagnosis of an arachnoid cyst <sup>1)</sup>.

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Bobble-Head Doll Syndrome in a Child with Suprasellar Arachnoid Cyst <sup>2)</sup>.

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A case of Rathke cleft cyst concomitant with sellar/suprasellar arachnoid cyst <sup>3)</sup>.

## 2015

A [premature neonate](#) who developed a large, acquired arachnoid cyst as a consequence of intraventricular haemorrhage. The child was managed with endoscopic fenestration and made an excellent recovery <sup>4)</sup>.

## 2014

Rao et al. report a Giant suprasellar arachnoid cyst presenting with precocious puberty <sup>5)</sup>.

## 1995

Santamarta et al. report one case of a suprasellar arachnoid cyst in which a slit-valve mechanism observed by means of cine-mode MRI preoperatively and confirmed during the endoscopic intervention <sup>6)</sup>.

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Kaisho et al followed a case of suprasellar arachnoid cyst for 12 years. The patient was a sixteen-year-old girl without particular problems in her general condition. She showed optic atrophy in both eyes

and optic nerve hypoplasia with an inferotemporal quadrantanopsia in the left eye. A suprasellar arachnoid cyst communicating with the tubarachnoid space was found to extend into the sella turcica as an empty sella. A cyst wall was resected and a cyst-peritoneal shunt performed. After 12 years from the operation, sensitivity was slightly depressed in the visual field where it had already been disturbed. Although there are few reports in the literature on involvement of the optic nerves and chiasma by suprasellar arachnoid cysts, papilledema and optic atrophy are often found in children, and infero-temporal quadrantanopsia or homonymous hemianopsia have been reported. Visual field defects were most likely caused by compression of the optic nerve by cyst or prolonged papilledema. They also suspect that some kind of disturbance to the optic nerve occurred during extension of the arachnoid cyst as an empty sella, or during formation of arachnoid cyst in the fetus stage <sup>7)</sup>.

## 1993

Rosso et al report a case of periodic sweating with multifocal dystonia is reported in a 60-year-old woman. At the age of 48 years, she presented with involuntary twisting of the lower face on the right. Six months later she noticed similar movements in the head and right arm. Four years later she began having attacks of generalized sweating over the whole face, anterior region of the trunk and both arms. The attacks occurred hourly each and every day. They lasted for about 10 min and were followed by voluntary urinary voiding. The biochemical and laboratory investigations showed no abnormalities except for the luteinizing hormone and follicle-stimulating hormone values that were below normal. The computerized tomography and magnetic resonance imaging scans revealed a suprasellar cyst <sup>8)</sup>.

## 1988

A 2-year-old infant who presented with paroxysm and short changes characterized by acute drowsiness, cold sweats, ocular reversion, facial cyanosis, and bradycardia. Between these attacks, the condition was normal, suggesting diencephalic seizures. Over 2 months five fits were observed by the parents when some to-and-fro bobbing of the head onto the trunk appeared during drowsiness. One electroencephalogram was normal without a slow background or spikes discharges. As the skull radiographs showed erosion of the jugum and chronic intracranial hypertension features, a CT scan was performed and showed hydrocephalus associated with a congenital suprasellar cyst. The cyst was opened into basal cisterns with cystoperitoneal shunt. The histological examination revealed that it was an arachnoid cyst. Six months later, the infant was free of diencephalic seizures and head bobbing. Thus, we can assert that there was a direct relationship between this cyst and the diencephalic seizures. From this case, the authors make a review of the clinical features of diencephalic epilepsy, and their different causes and show that both diencephalic epilepsy and suprasellar arachnoid cysts are not common <sup>9)</sup>.

<sup>1)</sup>

Mangussi-Gomes J, Gentil AF, Filippi RZ, Momesso RA, Handfas BW, Radvany J, Balsalobre L, Stamm AC. Sellar and suprasellar arachnoid cyst. *Einstein (Sao Paulo)*. 2019 Jan 31;17(1):eAI4269. doi: 10.31744/einstein\_journal/2019AI4269. English, Portuguese. PubMed PMID: 30726308.

<sup>2)</sup>

Saracoglu M, Kazan MS, Ozak A, Haspolat S. Bobble-Head Doll Syndrome in a Child with Suprasellar Arachnoid Cyst. *Mov Disord Clin Pract*. 2018 Nov 8;6(1):83-84. doi: 10.1002/mdc3.12680. eCollection 2019 Jan. PubMed PMID: 30746423; PubMed Central PMCID: PMC6335371.

3)

Yamamuro S, Yoshimura S, Oshima H, Yoshino A. A case of Rathke cleft cyst concomitant with sellar/suprasellar arachnoid cyst. *Acta Neurol Belg*. 2017 Jun;117(2):561-563. doi: 10.1007/s13760-016-0705-3. Epub 2016 Oct 12. PubMed PMID: 27734277; PubMed Central PMCID: PMC5440490.

4)

Palin M, Anderson I, O'Reilly G, Goodden JR. A suprasellar arachnoid cyst resulting from an intraventricular haemorrhage and showing complete resolution following endoscopic fenestration. *BMJ Case Rep*. 2015 Apr 29;2015. pii: bcr2015209290. doi: 10.1136/bcr-2015-209290. PubMed PMID: 25926587.

5)

Rao K, Levy ML, Crawford JR. Giant suprasellar arachnoid cyst presenting with precocious puberty. *BMJ Case Rep*. 2014 Aug 19;2014. pii: bcr2014205750. doi: 10.1136/bcr-2014-205750. PubMed PMID: 25139925.

6)

Santamarta D, Aguas J, Ferrer E. The natural history of arachnoid cysts: endoscopic and cine-mode MRI evidence of a slit-valve mechanism. *Minim Invasive Neurosurg*. 1995 Dec;38(4):133-7. Review. PubMed PMID: 8750654.

7)

Kaisho Y, Miyazaki S, Shimo-oku M, Hayashi T, Tani E. [A case of suprasellar arachnoid cyst followed up for a long time]. *Nihon Ganka Gakkai Zasshi*. 1995 Jan;99(1):109-14. Review. Japanese. PubMed PMID: 7887322.

8)

Rosso AL, Mattos JP, Novis SA. A case of periodic sweating associated with a subarachnoid cyst and multifocal dystonia. *Clin Auton Res*. 1993 Oct;3(5):299-301. PubMed PMID: 8124061.

9)

Giroud M, Sautreaux JL, Thierry A, Dumas R. Diencephalic epilepsy with congenital suprasellar arachnoid cyst in an infant. *Childs Nerv Syst*. 1988 Aug;4(4):252-4. PubMed PMID: 3167881.

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