Posterior fossa arachnoiditis

For a cyst formed by thickened arachnoid in the cerebellomedullary cistern, many different terms have been used, such as “arachnoid cyst of the cerebellomedullary cistern”, “cystic hydrops of the posterior fossa” or “inferior midline cyst” [1].

In 1889, Maunsell [2] first reported an arachnoid cyst in the posterior fossa. In 1932, Craig [3] reported chronic cystic arachnoiditis described the clinical manifestations and ascribed the disease to an inflammatory reaction of the arachnoid. In 1958 and 1959, Ogleznev [4] and Laponogov [5] reported their experience with the surgical treatment of this disease. Later, the clinical features, pathogenesis, and treatment of the condition occasionally were described, but large collections of patients were reported rarely [6] [7] [8]

Epidemiology

Chronic arachnoiditis in the posterior fossa is not rare, particularly in northern China. Most of the patients are young and very few are over the age of 50 years [9].

Etiology

Symptomatic arachnoiditis after posterior fossa neurosurgical procedures such as decompression of Chiari malformation is a possible complication.

Clinical features

Clinical presentation is generally insidious and delayed by months or years. It causes disturbances in the normal flow of cerebrospinal fluid and enlargement of a syrinx cavity in the upper spinal cord.

The illness is with long intermissions between relapses which are finally recognized as due to “increased intracranial pressure”.

Treatment

Posterior fossa arachnoiditis treatment.

Outcome

The outcome of correct management is usually satisfactory.

Case series

Between 1970 and September 1981, 82 patients with chronic arachnoiditis in the posterior fossa were admitted to this department. All the cases were confirmed by operation and, in most cases, by histological examination of the removed tissue. These patients constituted 0.94% of 8708 neurosurgical cases admitted during the same period. They also constituted 22.84% of 359 who had posterior fossa operations with increased intracranial pressure [10].

[1], [6]
Little JR, et al. Infratentorial arachnoid cysts. J Neurosurg 1973;39:380-6.
[2]
Maunsell HW. Subtentorialhydatidtumorremovedby trephining: recovery.NZ MedJ 1889;2:151-6.
[3]
Craig WM. Chronic cystic arachnoiditis.Am J Surg 1932;17:384-8.
[4]
OgleznevK, Ya. (Clinical characteristics of arachnoiditis of the posterior cranial fossa in children.) Vopr Neirokhir1958;1:28-34,(Rus).
[5]
LaponogovOA.(Surgical therapy of inflammatory occlusions in the posterior cranial fossa.) Vopr Neirokhir 1959;3:35-40, (Rus).
[7]
Gomez MR, et al. Arachnoid cyst of the cerebellopontine angle and infantile spastic hemplegia:case report. J Neurosurg 1968;29:87-90.
[8]
Kumihiko Ebina, Shigeharu Suzuki, Takashi Iwabuchi. Clinical study on the chronic arachnoiditis in the posterior fossa. No To Shenkei 1975;27:853-60 (Japan).
[9], [10]
Rongxun Z. Chronic arachnoiditis in the posterior fossa: a study of 82 cases. J Neurol Neurosurg Psychiatry. 1982 Jul;45(7):598-602. PubMed PMID: 6981688; PubMed Central PMCID: PMC491474.