CASE REPORT: DERMOID CYST OF THE FRONTAL LOBE WITH INTRAVENTRICULAR RUPTURE

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Intracranial dermoid tumours are rare, and in most reported cases they have been situated in the posterior cranial fossa. This case presented many puzzling clinical and diagnostic features.

Case History

A man, aged 30, gave a two-year history of seizures associated with generalized twitching lasting a few seconds and followed by deep sleep for about one hour. The attacks always occurred at night. In all there had been about six. There was a history of "convulsions" in infancy and "fits" as a schoolboy, and of progressive mental deterioration during the past year. The patient had been unable to work, and recently could not be allowed to go out alone. He had complained of frontal headaches for six months.

On examination he was quite alert but showed an extreme degree of mental deterioration. He did not know the day, or where he was, nor could he give any account of himself. He was totally dependent on his wife.

The ocular fundi showed some blurring of the disc margins. He had a slight tremor of both hands and poorly coordinated movements of the left leg. He was unsteady on his feet, tending to stagger to either side. Otherwise his central nervous system was normal. Lumbar puncture showed a pressure of 150 mm. water; 85 cells per c.mm. (half polymorphs and half lymphocytes); 260 mg. of protein per 100 c.cm.

Ventriculography showed a marked increase in pressure and ventricular capacity. At the end of the ventricular aspiration, the syringe became filled with white opaque oily material from both ventricles. The radiographs showed an extreme hydrocephalus (Figs. 1 and 2) with good filling of the third ventricle and the upper part of the aqueduct. The intraventricular cerebro-spinal fluid showed 3 cells per c.mm. and 250 mg. of protein per 100 c.cm.

At this stage we assumed that only a dermoid cyst could explain the picture and that it was likely to be in the posterior fossa. Immediate exploration proved to be negative. A polythene tube was then inserted into the lateral ventricle for external drainage, but it was only on further study of the ventriculograms that a vague outline of the cyst was recognized (Fig. 1), as it was filled with air and communicated with the anterior horn of the right lateral ventricle. On the plain radiographs nothing of the cyst could be seen. The patient's condition quickly deteriorated and he died in a few days without having rallied sufficiently for anything further to be done.

Necropsy revealed a dermoid cyst in the right frontal pole (Fig. 3) reaching the surface at the outer side of the gyrus rectus. This cyst communicated with the anterior end of the right lateral ventricle. It contained fatty debris and some hair. There was a generalized ependymitis of the ventricles which looked coarsely granular, and became most marked in the aqueduct. The aqueduct was completely blocked by swollen and

FIG. 1.—Ventriculogram (lateral view) showing air in the cyst.
and it is interesting to attempt to explain the various stages of the clinical picture. Presumably the "fits" which began during childhood may be attributed to the dermoid acting as an epileptogenic focus. The progressive mental deterioration, which was a very marked feature, may well have been caused by a slow leak of the cyst contents into the ventricle and the resulting chronic ventriculitis. Then, during the last six months of life, headaches supervened and were probably attributable to the progressive ventricular obstruction occurring as the result of the polypoid hypertrophic reaction in the aqueduct.

Howard Brown (1947), in reporting a rather similar case, had not found in the literature a record of any other such case. He thought that the hydrocephalus was probably due to the mechanical result of debris obstructing the iter. In the present case the obstruction was shown to be due to an inflammatory ependymal thickening in the region of the aqueduct.

References


Discussion

In this case the dermoid cyst had discharged spontaneously into the ventricular system, which looked like a polypoid tumour (Fig. 4).

Microscopical examination of the cyst showed that in most areas the lining was degenerate and resembled a chronic abscess, but in other parts squamous epithelium was recognizable (Figs. 5 and 6). The lining of the ventricles showed a great infiltration of small inflammatory cells, and the polypoid mass in the aqueduct had the appearance of a small abscess.

Discussion

In this case the dermoid cyst had discharged spontaneously into the ventricular system,
Fig. 4.—Section through the aqueduct in which a polypoid mass can be seen at the side of the obstruction.

Fig. 5.—Hair follicles in the wall of the cyst with areas of inflammatory reaction containing foreign-body giant cells.

Fig. 6.—Wall of the cyst in which calcification is also evident.