Circumscribed Hematoma of the Lateral Ventricle Following Rupture of an Intraventricular Saccular Arterial Aneurysm

Case Report

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The occurrence of a circumscribed intraventricular hematoma is considered an extreme rarity. On the other hand, purely intraventricular saccular aneurysms are found even more seldom.

This report presents the case of a circumscribed hemorrhage into the lateral ventricle, caused by rupture of a saccular aneurysm located within the ventricular cavity.

Case Report

A 23-year-old female medical student was admitted on May 24, 1966, 1 hour after the sudden onset of severe neck pain with radiation to the entire head. There had also been profuse vomiting and mental confusion. Since these signs began immediately after a meal, food intoxication was suspected.

Examination. On admission, stupor, nuchal rigidity, and bradycardia (50/minute) were observed. A right-sided Babinski was the only focal sign. The fundi were normal. Lumbar puncture yielded grossly bloody fluid under moderate pressure. There was no deviation of the midline on the echoencephalogram. Serological studies were negative.

Hematological studies showed normal coagulation times.

Course. Despite the administration of sedatives, the patient remained somewhat restless and disoriented during the following 2 weeks. No focal signs developed. Electroencephalography revealed only a moderate generalized dysrhythmia. Bilateral angiographic studies of the carotid system disclosed a deep saccular aneurysm on the left side, directly fed by a basal perforating branch of the middle cerebral artery (Fig. 1), apparently a lenticulostriate artery. The carotid syphon was markedly spastic.

To study the anatomical relation between the aneurysm and the ventricular system, a tomographic air study was performed. This disclosed an elongated mass, filling most of the left lateral ventricle (Fig. 2). The frontal part of this mass extended across the midline and seemed to invade the right frontal horn.

By superimposing the angiographic and the encephalographic pictures, it was seen that the aneurysm was located within this intraventricular mass, in the body of the left lateral ventricle and lying over the thalamus (Fig. 3).

The diagnosis of intraventricular arterial

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Fig. 1. Angiographic picture of the saccular aneurysm, directly fed by a lenticulo-striate artery.
aneurysm, associated either with a clot or with a neoplasm, was made.

Operation. On June 28, a left-sided frontotemporal osteoplastic craniotomy was performed. Through a linear cortical incision between areas 6 and 8 of Brodman, access was gained to the middle part of the lateral ventricle. On its floor and underneath the choroid plexus there was a fusiform clot, which extended ventrally into the frontal horn and dorsally until the occipital horn. The ventricular fluid was clear. The choroid plexus was gently displaced and the clot was aspirated without difficulty, bringing a bean-sized aneurysmal sac into view. The aneurysm was entirely intraventricular and situated in the thalamo-striate sulcus. It had no direct relation to the choroid plexus, did not constitute part of an arteriovenous malformation, and was exclusively fed by a small artery plunging into the lateral ventricle through the thalamo-striate sulcus. After closure of this artery with one clip, the aneurysm was removed without bleeding and the operation was completed in the usual way.

Histological studies of the surgical specimen revealed the typical structure of a saccular aneurysm with incipient thrombosis.

Postoperative Course. The evening of the operative day the patient was able to answer