Acquired arachnoid cyst after a coil-ruptured aneurysm

Case illustration

JUDITH MARCOUX, M.D., M.S.C., DANIEL ROY, M.D., AND MICHEL W. BOJANOWSKI, M.D.

Services de Neurochirurgie and Neuroradiologie, Hôpital Notre-Dame, Centre Hospitalier de l’Université de Montréal, Canada

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This 62-year-old woman presented with a subarachnoid hemorrhage (SAH) in the interhemispheric space and the left sylvian fissure (Fig. 1 left). Angiographic studies revealed a single aneurysm (Fig. 1 center), pointing upward at the left A1–A2 junction of the anterior communicating artery (ACoA) behind the plane of the pericallosal arteries (PerAs). After randomization for an international research project, embolization of the aneurysm was performed.

Seventeen months after aneurysm rupture, the patient reported progressive gait disturbances, headache, increased urinary frequency, and confusion. Computerized tomography (CT) (Fig. 1 right) and magnetic resonance studies revealed a nonenhancing cystic lesion just above the embolizing coils that measured 2.5 cm and was producing a mass effect, with consequent obstruction of the foramina of Monro and lateral ventricular hydrocephalus. A right pterional approach was performed and an interhemispheric cyst was found above the lamina terminalis. The wall of the cyst, which contained xanthochromic fluid, was opened in the subarachnoid space; the lamina terminalis was also opened. A postoperative CT scan demonstrated disappearance of the cystic lesion; however, the lesion recurred 2 months later. Via an anterior transcaldosal approach, a communication between the cyst and the right lateral ventricle was established. The patient made a complete recovery, and at follow-up review 18 months later there was no evidence of recurrence on neuroimaging studies.

Acquired arachnoid cysts are thought to arise from a postinflammatory process after head trauma, surgery, intracranial infection, and hemorrhage.1–4 These cysts are a rare complication of SAH.1 In this case, the endovascular approach, which was used instead of a standard craniotomy with concomitant opening of the subarachnoid spaces and removal of blood, could have contributed to the cyst formation.

References


Fig. 1. Left: Axial noncontrast-enhanced CT scan revealing a Fisher Grade 2 SAH in the interhemispheric space and left sylvian fissure. There is no hydrocephalus. Center: Cerebral angiographic study of the left carotid artery, lateral view, revealing an ACoA saccular aneurysm pointing upward and behind the PerAs. Right: Axial noncontrast-enhanced CT scan revealing a cystic lesion situated just above the platinum coil mass within the aneurysm and obstructing foramina of Monro leading to hydrocephalus.