Spontaneous thrombosis of a giant aneurysm following pregnancy

Case illustration


Departments of Neurosurgery and Neuroradiology, King’s College Hospital, London, United Kingdom

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Giant aneurysms pose formidable management challenges. Rupture of other types of aneurysms during pregnancy and labor is well recognized and good outcomes have been reported following surgical treatment,3 but less is known about the management of giant aneurysms that rupture during pregnancy.

We report on a 29-year-old woman who developed sudden headache and a left third cranial nerve palsy with a Glasgow Coma Scale score of 15 during labor. Subarachnoid hemorrhage was confirmed on computerized tomography scanning, and the child was delivered by cesarean section. Cerebral angiographic studies demonstrated a giant aneurysm (Fig. 1). We elected to delay surgery, given the expected resolution of well-recognized hyperdynamic cardiovascular and hormonal changes of pregnancy,5 and the not inconsiderable risk from surgery.2 On magnetic resonance (MR) images obtained 1 month posthemorrhage, a reduction in external aneurysm dimensions and progressive luminal thrombosis were demonstrated (Fig. 2). Angiographic studies performed 6 months after delivery showed complete occlusion of the aneurysm (Fig. 3).

We believe that this case illustrates well the interplay between important factors promoting aneurysm formation and rupture; namely increased flow and pressure, together with increased laxity of collagen brought about by the endocrine changes of pregnancy,4 and the not inconsiderable protective factors—that is, the prothrombotic tendency of pregnancy.4 We assert that the resolution of the hyperdynamic and hormonal changes following delivery1 resulted in a reduction in aneurysm dimensions and facilitated luminal thrombosis. We continue to follow our patient with periodic radiological review and have discussed the possibility of aneurysm reappearance in future pregnancies.

References


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Address reprint requests to: Richard W. Gullan, F.R.C.S., Department of Neurosurgery, King’s College Hospital, Denmark Hill, London, SE5 9RS United Kingdom.