
Compiled by

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1. Intracranial Vascular Lesions

Jeffreys, R. V. (Mersey Regional Department of Neurosciences, Liverpool): Complications and Outcome Following Surgery for Ruptured Intracranial Aneurysm.

A personal prospective study has been carried out on 91 consecutive cases involving direct surgery on ruptured intracranial aneurysm on the anterior part of the circle of Willis. The protocol involved surgery for all cases in pre-operative Hunt and Hess grades 1, 2, and 3, and those cases in grade 4 and 5 in whom it was thought that hydrocephalus or intracranial haematoma was responsible for their lowly grading. During surgery the systemic blood pressure was maintained at or near pre-operative levels. Out of 44 patients in pre-operative grades 1 and 2, 93% went back to work and 7% were disabled or died. The corresponding figures for 47 patients in 3, 4, and 5 were 60% and 40%. 56% of patients presented no postoperative problems. The outcome of 44% of patients who developed early or late complications of surgery, or both, is discussed with particular reference as to the likelihood of recovery or otherwise in patients with such problems.

Kassell, Neal F. (Division of Neurosurgery, University of Iowa): Timing of Surgery for Ruptured Aneurysms.

The optimal timing for intracranial surgery to correct a ruptured aneurysm of the circle of Willis is one of the major controversies in neurosurgery today. In particular, considerable debate centers around the role of “early surgery”—operation within the first several days following subarachnoid haemorrhage (SAH). Between 1 July 1978 and 1 December 1979 at the University of Iowa Hospitals, 20 patients had intracranial surgery between 0 and 4 days after SAH. Patients ranged in age from 21 to 72. Three had two haemorrhages, and one had seven. Neurological status varied from 1 to 5 on the CAS scale. None had any signifi-
significant vasospasm on angiogram within 24 hours prior to surgery. Operating conditions were excellent in all patients. The degree of brain slackness was equivalent to that observed in cases operated upon later; dissection of the aneurysm and surrounding vessels through the fresh clot was considerably easier than through older fibrotic clot. Four aneurysms ruptured during dissection. One patient was worse immediately postoperatively, and eight deteriorated between two and five days after surgery (5 and 10 days after last bleed). Overall, 17 of the patients survived, and 14 had a favorable outcome. Of the 15 patients in CAS status 1 to 3 preoperatively, 13 survived, and all survivors had a favourable outcome.

This is a small anecdotal series which suggests that early surgery can be performed safely from a technical point of view and may produce acceptable overall case morbidity and mortality rates. However, no definitive evidence regarding the optimal timing of surgery is forthcoming from this study. Such evidence will only be available when a carefully designed study with a large number of cases is performed. The author will review the problem of timing of aneurysm surgery and discuss the means for determining the optimal interval for operation.

Frattarelli, M., Bollini, C., Limoni, P., Nuzzo, G., Grossi, C., Pozzati, E. (Department of Neurosurgery, Hospital “Bellaria”, Bologna): Prognosis of Cerebral Intraventricular Spontaneous Haemorrhages.

Eighty cases are reported after clinical, angiographic, and CAT scan study. The intraventricular blood was found associated with i) intracerebral “spontaneous” haematomas, ii) subarachnoid haemorrhages (SAH) with or without aneurysms or arteriovenous malformations (AVM). The neuro-radiological examination demonstrated i) the topography and importance of intracerebral haematomas; ii) the blood path to the ventricles; iii) the existence of SAH; iv) the site of aneurysms and AVM with or without cerebral arterial spasm.

The intraventricular bleeding did not necessarily affect unfavourably the final outcome. The prognosis seemed dependent on clinical grading at admission in all cases and on the topography of the intracerebral haematomas.


Three “giant” aneurysms, one intracavernous and two carotid-ophthalmic, were submitted to an STA/MCA anastomosis and subsequent gradual closure of the internal carotid in the neck with a Selverstone clamp and final ligature.

A satisfactory clinical result was obtained in all cases with a follow-up up to one year.

The postoperative angiographic study demonstrates exclusion of the aneurysms from the cerebral circulation and good patency for blood supply through the anastomosis.

The treatment is considered effective on those “giant” aneurysms which are not operable by direct approach, and this particularly in elderly patients.