Wrapping

Wrapping or coating the aneurysm: although this should never be the goal of surgery, situations may arise in which there is little else that can be done (e.g. Fusiform Aneurysm on the Basilar Artery Trunk, aneurysms with significant branches arising from the dome, or part of the neck within the cavernous sinus)

a) Norman McOmish Dott published in 1933 the first method used to surgically treat an aneurysm with muscle [1] (the patient described died from rebleeding)

b) In 1958 Gillingham popularized wrapping with cotton or muslin [2]. An analysis of 60 patients showed that 8.5% rebled in ≤ 6 mos, and the annual rebleeding rate was 1.5% thereafter [3] (similar to the natural history)

c) Wrapping with plastic resin or other polymer: maybe slightly better than muscle or gauze [4].

One study with long follow-up found no protection from rebleeding during the first month, but thereafter the risk was slightly lower than the natural history [5]. Other studies show no difference from the natural course [6].

d) Teflon and fibrin glue [7]

AUTOGENOUS FASCIA AND A CYANOACRYLATE [8].

In 1990 Fujiwara et al. published the long term result of the treatment of 29 intracranial ruptured aneurysms by wrapping with or without coating. These patients were followed for a mean period of 11 years. The outcome of all patients was as follows; 19 were categorized as good, 2 were severely disabled, on the Glasgow Outcome Scale (GOS), and 8 died. The rebleeding occurred in 5 patients within 3 years after surgery, and all died. There was an overall rate of 17% of rebleeding in our series, which is much higher than the rebleeding rate after aneurysm treatment by clipping of the neck but lower than the usual rebleeding rate in conservatively treated cases. In conclusion, the wrapping as a choice of treatment of ruptured aneurysms is not a safe alternative to the direct operative occlusion of the aneurysmal sack [9].

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see also wrap-clipping.

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