Intracranial aneurysm case series

compared two groups of patients (non-elderly, < 65 years; elderly, ≥ 65 years) who underwent surgical clipping or endovascular coiling and were registered in a nationwide database in Japan from 2010 through 2015. The odds ratio (OR) and 95% confidence interval (CI) of each risk factor were calculated through multivariate logistic regression analysis for poor outcome according to a modified Rankin Scale (mRS) score >2 at discharge for each group.

In all groups, the risk factors for poor outcome were older age, male sex, neurological grade on admission, diabetes mellitus, and use of anticoagulation drugs. Inverse risk factors were a high-volume hospital, academic hospital, hypertension, and use of an antiplatelet drug (OR 0.63-0.81: 95%CI 0.56-0.88). Chronic heart disease was also a risk factor, but use of a statin drug (0.85-0.87: 0.76-0.97) and location on the anterior communicating artery (0.74-0.80: 0.67-0.91) were inverse risks in both elderly and endovascular coiling groups.

Management for patients with aSAH was recommended in high-volume and academic institutes with the administration of antiplatelet drugs and consideration of several risk factors. Elderly patients undergoing endovascular coiling might be better given a statin drug, and patients with chronic heart failure or an anterior communicating artery aneurysm should be better treated more carefully 1).

In a retrospective review, Yeon et al. examined 299 patients with 339 aneurysms, all shown to be completely occluded at 36 months on follow-up images obtained between 2011 and 2013. Medical records and radiological data acquired during the extended monitoring period (mean 74.3 ± 22.5 months) were retrieved, and the authors analyzed the incidence of (including mean annual risk) and risk factors for delayed recanalization.

A total of 5 coiled aneurysms (1.5%) occluded completely at 36 months showed recanalization (0.46% per aneurysm-year) during the long-term surveillance period (1081.9 aneurysm-years), 2 surfacing within 60 months and 3 developing thereafter. Four showed minor recanalization, with only one instance of major recanalization. The latter involved the posterior communicating artery as an apparent de novo lesion, arising at the neck of a firmly coiled sac, and was unrelated to coil compaction or growth. Additional embolization was undertaken. In a multivariate analysis, a second embolization for a recurrent aneurysm (HR = 22.088, p = 0.003) independently correlated with delayed recanalization.

Almost all coiled aneurysms (98.5%) showing complete occlusion at 36 months postembolization proved to be stable during extended observation. However, recurrent aneurysms were predisposed to delayed recanalization. Given the low probability yet seriousness of delayed recanalization and the possibility of de novo aneurysm formation, careful monitoring may be still considered in this setting but at less frequent intervals beyond 36 months 2).

Of 818 patients undergoing Microsurgical Clipping of Intracranial Aneurysms who underwent cranial operations, 28 (3.4%) had a ventriculoperitoneal shunt. Four of these 28 (14.3%, 95% confidence interval [CI] 4.0%-32.7%) developed postoperative complications, compared to 42 of 790 (5.3%, 95% CI 4.0%-7.1%) without a history of VP shunt (P = .07). In addition, patients with a shunt were more likely to have longer cranial procedures (P = .04), longer hospital stays (P = .05), and more computed
tomography scans during their craniotomy-associated admission (P = .002). Multivariate analysis, though not significant, demonstrated that the presence of a shunt contributed to the development of complications (odds ratio [OR] 2.24, 95% CI .70-7.13, P = .17). Length of surgery (OR 1.17, 95% CI 1.04-1.31, P = .01) and length of stay (OR 1.04, 95% CI 1.01-1.07, P = .01) were significantly longer in those with a postoperative complication.

Linzey et al. from Ann Arbor, found a nonsignificant trend toward increased postoperative complications in patients with a VP shunt who underwent a subsequent cranial operation 3).

A total of 53 patients from a single institution who initially presented with a subarachnoid hemorrhage and underwent surgical clipping of a previously coiled intracranial aneurysm between December 1997 and December 2014 were studied. Clinical features, hospital course, and preoperative and most recent functional status (Glasgow Outcome Scale score) were reviewed retrospectively.

The mean time interval from coiling to clipping was 2.6 years, and mean follow-up was 5.5 years (range, 0.1-14.7 years). Five patients (9.8%) presented with rebleed prior to clipping. Most patients (79.3%, 42/53) experienced good neurologic outcomes. Most showed no change (81%, 43/53) or improvement (13%, 7/53) in functional status after microsurgical clipping. One patient (2%) deteriorated clinically, and there were 2 mortalities (4%).

Microsurgical clipping of previously ruptured, coiled aneurysms is a promising treatment method with favorable clinical outcomes 4).


