Thromboembolic Complications of Endovascular Aneurysm Occlusion Using Matrix Detachable Coils

To the Editor:

We read with great interest the article by Taschner et al. The authors presented their philosophy in case selection for aneurysm occlusion using matrix detachable coils and their clinical results. Of the 25 total procedures, 5 were complicated with a thrombus formation in the parent artery during the intervention. One patient was clinically symptomatic with an increased dysarthria and hemiparesis immediately after the treatment, with complete symptom resolution within a few days. In 1 patient, the embolization had to be stopped because of the thromboembolic complications before complete occlusion of the aneurysm.

The reported thrombus formation rate at the neck of cerebral aneurysm using guglielmi detachable coils was up to 4.3% (9/210). The thrombus formation rate in this matrix coil embolization series was 4 times higher and difference was statistically significant using Fisher exact test ($P=0.009$).

The authors had not specified their heparinization regimen, but it would be presumed that the procedures were done under full heparinization. It would be crucial to know about any possible contributing factors, such as coil protrusion, to account for the difference. Bioactive copolymer coating was designed to accelerate clot maturation and aneurysm fibrosis. The effect of protruding matrix coil was not reported previously. Clinician should be aware of this possible complication, and prompt treatment with platelet glycoprotein IIb-IIIa inhibitor or systemic heparin may be necessary.

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