

Intracranial aneurysm coiling complications

Li J, Liu C, Liu X, Luo W, Bao K, Huang C. Efficacy and complication rate of aneurysm interventional embolization in the treatment of aneurysm subarachnoid hemorrhage. *Minerva Med.* 2021 Jun 18. doi: 10.23736/S0026-4806.21.07617-5. Epub ahead of print. PMID: 34142780.

Distal [coil migration](#) or stent migration is a rare, but potentially morbid complication of intracranial aneurysm embolization.

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 ¹⁾.

[Periprocedural complications.](#)

Parent artery occlusion

[Coil migration](#) either during the procedure or after [coil embolization](#).

[Intraprocedural aneurysm rupture.](#)

Thromboembolism

see [Thromboembolism During Aneurysm Coiling](#).

References

¹⁾

Yeon EK, Cho YD, Yoo DH, Lee SH, Kang HS, Kim JE, Cho WS, Choi HH, Han MH. Is 3 years adequate for tracking completely occluded coiled aneurysms? J Neurosurg. 2019 Aug 16:1-7. doi: 10.3171/2019.5.JNS183651. [Epub ahead of print] PubMed PMID: 31419789.

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