

Coil compaction

Recurrence following [endovascular treatment](#) of [intracranial aneurysm](#) is attributed to either coil [compaction](#) or aneurysm growth but these processes have not been studied as distinct processes.

The pixel size of the coil mass and aneurysm [sac](#), and the adjacent parent artery were measured and expressed as a ratio to the pixel size of the parent vessel diameter on immediate post-procedure and follow-up angiograms. Increase of aneurysm area or decrease in coil mass of 30% or greater on follow-up angiogram was used to define “significant” aneurysm growth and coil compaction, respectively.

Eleven patients had coil compaction, 14 patients had significant aneurysm growth and 4 patients had small aneurysm regrowth. Retreatment was performed in the 14 patients with “significant” aneurysm regrowth and 8 of the 11 patients with coil compaction at mean follow of 11 months (range 5-20 months) following the initial procedure. There were no events of new aneurysmal rupture in either 11 patients with coil compaction or 14 patients with significant aneurysm regrowth over a mean follow-up period of 22 months (range of 9-42 months).

This is one of the first studies to differentiate coil compaction and aneurysm growth as distinct etiologies for aneurysm recurrence ¹⁾

¹⁾

Abdihalim M, Watanabe M, Chaudhry SA, Jagadeesan B, Suri MF, Qureshi AI. Are coil compaction and aneurysmal growth two distinct etiologies leading to recurrence following endovascular treatment of intracranial aneurysm? J Neuroimaging. 2014 Mar-Apr;24(2):171-5. doi: 10.1111/j.1552-6569.2012.00786.x. Epub 2013 Jan 14. PubMed PMID: 23317437.

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Last update: **2025/05/13 02:01**

