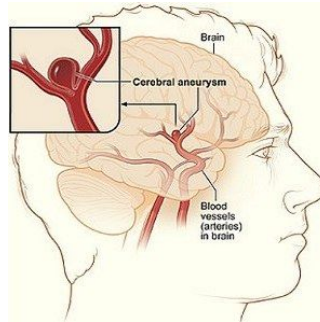


## Aneurysms May Recur Years After Endovascular Treatment



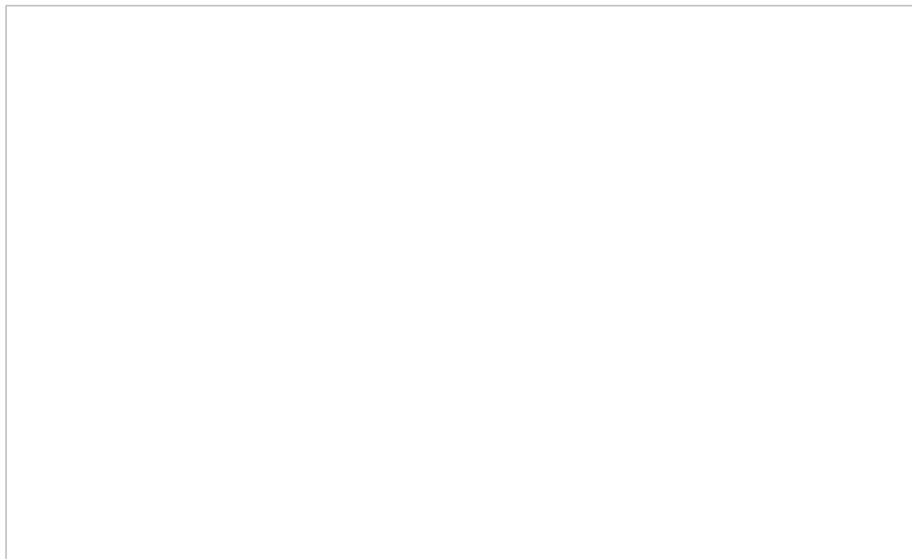
While endovascular treatment (EVT) of intracranial aneurysm is effective in preventing long-term bleeding, this may be followed by aneurysm recurrences in a significant proportion of cases. In particular, patients with larger aneurysms or incomplete occlusion face a long-term risk of aneurysm recurrences.

The findings are based on a new magnetic resonance angiography (MRA) study appearing in the journal *Radiology*. If supported by additional research, the findings may mean that longer follow-up protocols are necessary for some intracranial aneurysm patients who undergo EVT.

EVT with coils was developed in the 1990s and became an established treatment for intracranial aneurysm in the early 2000s. In EVT, coils are threaded via a micro-catheter through a blood vessel in the groin to the location of the aneurysm. The coils expand and cause formation of a clot in the aneurysm that provides a seal, or occlusion, to prevent further bleeding. The main drawback of EVT is recanalisation, or a return of blood flow into the original aneurysm.

The study looked at the long-term efficacy of EVT in preventing aneurysm ruptures. Researchers performed clinical examination and 3-Tesla MRA 10 years after EVT of intracranial aneurysm in a single institution. In addition, they reviewed results from the medical literature to identify studies reporting bleeding and/or aneurysm recurrence rate in patients followed beyond 10 years after EVT. Key findings of the study include:

- Among 129 aneurysms followed for more than 10 years, 16 (12.4 percent) demonstrated recanalisation between midterm and long-term MRA.
- Incomplete occlusion on midterm MRA and retreatment within five years were risk factors for late recurrence.
- The literature review of 2,902 aneurysms revealed that incomplete occlusion and aneurysm size of greater than 10 millimetres were risk factors for late recurrence.



“This result is of importance since a large proportion of patients in the study were young, with a mean age of 47 years,” notes Olivier N. Naggara, MD, PhD, from the Centre Hospitalier Sainte-Anne in Paris. “We believe that the subgroup of patients with aneurysm size 10 millimetres or more and patients with incomplete occlusions should be followed by noninvasive imaging exams for 10 years or more, particularly young patients.”

EVT can be repeated to prevent a potential angiographic recurrence. However, more research is needed to develop a clearer picture of the risks and benefits of this approach, according to Dr. Naggara.

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