



**Relevance of Neck Remnants in Posterior Circulation Aneurysms Treated Endovascularly**  
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**Introduction**

According to the ISAT trial the risk of intracranial aneurysm (IA) rupture after endovascular treatment is 1.2%. Incomplete treatment is seen in up to 50% of IA managed endovascularly. A large criticism of endovascular techniques is the presence of neck remnants commonly seen after treatment and the possible risk of re-rupture. Clinical relevance of aneurysm neck remnants of the posterior circulation is unclear.

**Methods**

From a group of 422 IAs treated at our institution between 2007 and 2012, 50 aneurysms were located at the posterior circulation. We identified 39 aneurysms that had radiographic residual (Raymond class II or III) and which we included in our analysis. All patients had radiographic follow-up.

**Results**

The mean patient age was 64 years, and 28 (71.8%) were women. The mean aneurysm size was 8.53 mm. Of the 39 aneurysms with radiographic residual, 12 (30.8%) patients underwent treatment at the discretion of the treating physician. Despite treatment, 29 (74.4%) aneurysms remained with radiographic residual (Raymond class II or III) throughout the duration of the long-term follow-up at 16.2 months (12-39months). We did not observe any ruptures after initial treatment.

**Conclusions**

Radiographic neck remnant of IAs of the posterior circulation treated endovascularly may have little to no risk of re-rupture in patients with appropriate long-term follow-up. Larger cohorts may be necessary to validate these findings. Potential risks of retreatment efforts to achieve complete radiographic occlusion should be weighed against the very low likelihood of rupture in these aneurysm neck remnant.

**•Learning Objectives**

- Identify the relevance of aneurysm neck remnant of previously treated posterior circulation aneurysms with endovascular therapy.
- Describe the necessity of aggressive retreatment of posterior circulation aneurysms with neck remnant