

<div><div>Introduction</div><div><p>The outcomes stereotactic radiosurgery (SRS) for intracranial arteriovenous malformations (AVM) with patent intranidal and prenidial AVM-associated arterial aneurysms (AAA) are poorly understood, since many AAAs are embolized prior to nidal intervention. The aim of this retrospective cohort study is to analyze the SRS outcomes for AVMs with AAAs.</p></div><div><div>Methods</div><div><p>We evaluated an institutional database of AVMs treated with Gamma Knife SRS from 1989 to 2013. AVMs with patent AAAs at the time of SRS were selected for analysis. AAAs were classified as intranidal (type I) or prenidial (type II).</p></div></div></div>	<div><div>Results</div><div><p>The study cohort comprised 51 AVMs, including 23 with type I (45%) and 28 with type II (55%) AAAs.</p><p>The actuarial obliteration rates of AVMs with type I AAAs at 3, 5, and 10 years were 32%, 45%, and 76%, respectively. The actuarial obliteration rates of AVMs with type II AAAs at 3, 5, and 10 years were 25%, 58%, and 66%, respectively. The actuarial obliteration rates were not significantly different between AVMs with type I vs. type II AAAs (P=0.442). All AVMs with type I AAAs which obliterated after SRS also had complete AAA occlusion.</p><p>Of the 28 AVMs with type II AAAs, angiographic follow-up was available in 18 (64%). The actuarial rates of type II AAA occlusion after SRS at 3, 5, and 10 years were 46%, 77%, and 95%, respectively. The type II AAA occlusion rate was significantly higher in obliterated AVMs (P=0.002).</p></div></div>	<div><div>Conclusions</div><div><p>Since AVMs with AAAs remain at risk for hemorrhage until both the AVM nidus and AAA are completely obliterated, long-term angiographic follow-up is crucial after SRS. The majority of type II AAAs will occlude following nidal intervention with SRS, occurring with a greater probability in the setting of AVM obliteration.</p></div><div><div>Learning Objectives</div><div><p>By the conclusion of this session, participants should be able to 1) Describe the importance of SRS in the management of AVMs with intranidal and prenidial AAAs, 2) Discuss, in small groups the outcomes after SRS for AVMs with AAAs, with respect to nidal obliteration and AAA occlusion, and 3) Identify an effective treatment for AVMs with intranidal and prenidial AAAs.</p></div></div><div><div>References</div><div><p>1. Ding D, Xu Z, Starke RM, et al. Radiosurgery for Cerebral Arteriovenous Malformations with Associated Arterial Aneurysms. World Neurosurg. Mar 2016;87:77-90.</p></div></div></div>
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