Concurrent Resection of a Sylvian Arteriovenous Malformation and Clipping of Flow-Related Middle Cerebral Artery Aneurysms: Technical Nuances

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Disclosures

• None
Introduction

- Approximately 10-13% of brain AVMs have associated arterial aneurysms (AAA)

- Management of AVMs with AAAs can be challenging
Methods

- We describe the microsurgical treatment of an unruptured, Spetzler-Martin grade I AVM in the distal Sylvian fissure with two AAAs arising proximally from the inferior M2 trunk immediately distal to the middle cerebral artery bifurcation.
Results

• Technical nuances considered in the management of this case:
  1. Order of AVM and AAA treatment
  2. Sylvian fissure dissection
  3. AVM resection
  4. AAA clipping.

• The video can be found at this link: https://vimeo.com/206190543
Discussion

- In the present case, the AVM’s venous drainage affected the approach to the AAAs.

- We resected the AVM first because of its superficial location and to avoid inadvertent occlusion of the Sylvian vein, which drained the AVM nidus, during Sylvian fissure dissection.

- We noted significant atherosclerosis within the neck of the larger AAA, and therefore under-clipped it.
Summary Points

• Patient, AVM, and AAA factors must be considered in the management of AVMs with AAAs

• For appropriately selected AVMs with AAAs, surgical intervention can concurrently afford nidal obliteration and aneurysm occlusion in the same procedure