

Management of Arteriovenous Malformations involving the Corpus Callosum Aqueel Pabaney MD; Rushna Ali; Ghaus M. Malik MD Henry Ford Health System



Introduction

Corpus callosum AVMs (CC-AVMs) are one of the more uncommon vascular pathologies that present a treatment challenge for neurosurgeons. Only anecdotal reports exist regarding management of CC-AVMS with no available guidelines or meta-analysis. Authors have attempted to perform a pooled analysis of literature regarding presentation and management of CC-AVMs.

Methods

Exhaustive literature review was performed. PubMed was queried using terms Corpus callosum Arteriovenous Malformations, microsrurgery, stereotactic radiosurgery, embolization. Data was gathered regarding patient demographics, AVM angioarchitecture, management modality, outcomes and complications. Data was tabulated and analyzed.

Conclusions

Corpus Callosum AVMs are challenging vascular malformations that mostly present with intracranial hemorrhage, hence necessitating treatment. Our pooled analysis of the literature reveals that these lesions can be treated safely using multimodal therapy and acceptable patient outcomes can be expected.

Results

Our search yielded 45 reports with 260 patients harboring corpus callosum AVMs. Average age at presentation was 27 years (std dev = 12.74 years; range 2-61 years). There was slight male predominance (54%). 55% of patients presented with hemorrhage. AVMs were most commonly located in the Splenium (39%). 21 patients had Holocallosal AVMs. Most common Spetzler-Martin grade was Grade 3 (38.4%). 37% of patients underwent microsurgical excision of AVM, whereas 41% underwent preoperative or standalone embolization. 22% underwent SRS. 32 patients developed immediate postoperative complications; complications resolved in 6 patients. Mean pre-treatment modified Rankin score was 1.6 and mean post-treatment mRS

Learning Objectives

By the conclusion of this session, participants should be able to: 1) identify and characterize Corpus callosum AVMs 2) devise a treatment plan for these vascular lesions in a safe and effective manner



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