

Acquired Arteriovenous Malformations seen with Glioblastoma Multiforme: Report of an illustrative Case
and Review of Literature

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Learning Objectives

- 1) Describe relevant features and morphology of arteriovenous malformations and how they manifest with gliomas as part of a Glioma-AVM complex.
- 2) Describe the effectiveness of current treatment methods for Glioma-AVM complex.

Introduction

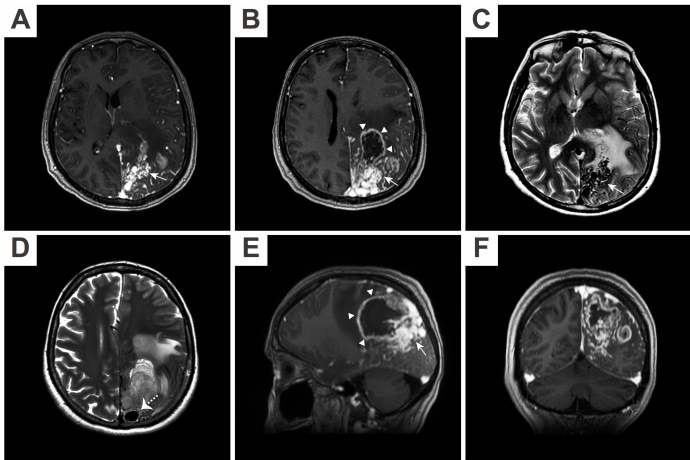
Reports of Arteriovenous malformations (AVMs) existing concurrently with gliomas as a Glioma-AVM complex are rare and there is currently a paucity of literature regarding underlying mechanisms and treatment paradigms.

Case Presentation

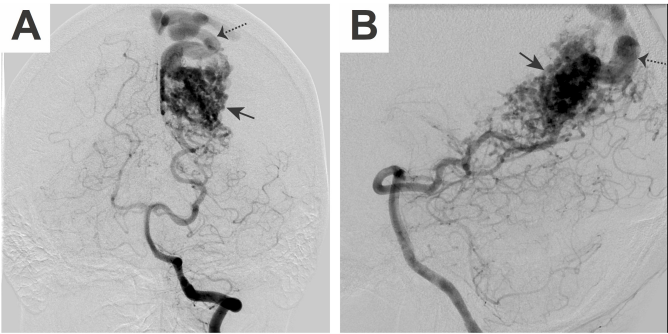
53-year-old female with no significant past medical history presented with a history of dizziness and weakness of the right arm and leg. Upon further evaluation was found to have a right homonymous hemianopia, increased motor tone in RUE and a right sided pronator drift. Treatment with Decadron improved her right sided weakness. Further diagnostic testing including MRI of the head and diagnostic cerebral angiography was performed.

Methods

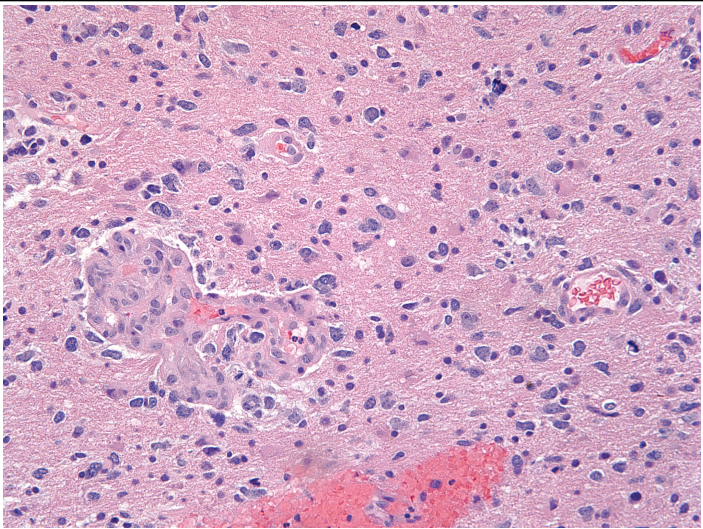
A rare and interesting case of AVM associated with glioblastoma multiforme is presented. A systematic literature review identifying all known pertinent cases along with reporting patient treatments, outcomes, and any interesting characteristics was performed.



MRI of the head revealed heterogeneous regions of enhancement and multiple vascular flow voids raising concern for an associated AVM



Diagnostic cerebral angiogram demonstrated a Spetzler-Martin grade I AVM



Stereotactic brain biopsy and subsequent pathology report confirmed the diagnosis of glioblastoma

Results

One patient with a de-novo glioma associated with an AVM was described. The patient was confirmed to have a left parieto-occipital Spetzler-Martin grade I AVM concurrently with a left parietal brain tumor confirmed to be glioblastoma. Our literature review found a total of 8 cases, with 7 occurring in adults and 1 pediatric case. Only 1 case had received prior radiation and surgery was the most common form of treatment upon diagnosis. 3 cases were confirmed deceased after diagnosis and treatment.

Conclusions

Though the vast majority of gliomas seen in combination with AVMs are SRS-induced malignancies, de-novo glioma associated AVMs do exist and represent a poorly understood phenomenon of AVM and Glioma morphology. Current standards of treatment include surgical resection and chemoradiation.