# ARTERIOVENOUS MALFORMATION: CASE STUDY

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**Introduction:** Arteriovenous malformations (AVM's) represent abnormal connections between arteries and veins, consisting of a cluster of blood vessels though which arterial blood flows under high-pressure, draining directly into veins, bypassing the normal capillary bed and thus, conditioning a high risk of hemorrhage. Although AVMs may develop in various regions of the body, the cerebral ones can have severe consequences and become symptomatic when the lesion reaches a critical level. Our aim was to present a case study of a right frontoparietal cerebral arteriovenous malformation, of grade II according to Spetzler-Martin grading scale.
**Materials and Methods:** A 32-year-old male patient complaining on headache and seizure episodes was hospitalized in October 2025 to the Institute of Neurology and Neurosurgery *Diomid Gherman* Chisinau, Republic of Moldova. The diagnosis of AVM's was confirmed by CT, MRI, and cerebral angiography. The medical history revealed that the onset of that condition occurred in 2020 and was marked by generalized tonic-clonic seizure.
**Results:** Brain CT revealed a hyperdense intraparenchymal focus (hematoma) with mass effect on the right lateral ventricle. Brain MRI identified a serpiginous paramedian vascular nidus on the right, surrounded by a heterogeneous area, with involvement of deep venous drainage. Angiographically a right paramedian frontoparietal cerebral AVM with rapid blood flow was determined. Venous drainage occurred through the cortical veins into the frontal part of the superior sagittal sinus, two of which were dilated and tortuous (paranidal aneurysm). A combined interventional strategy was applied. Initially, intranidal and adjacent branch endovascular embolization was performed using detachable coils, which obliterated the fistula and corrected the abnormal blood flow. This was followed by surgical resection of the central portion of the AVM. Postoperative MRI with angiographic sequence confirmed complete removal of the nidus with preservation of the normal brain parenchyma. No abnormal blood vessels were identified adjacent to the malformation site. The patient was discharged from the hospital with ongoing anticonvulsant therapy.
**Conclusion:** Rupture and hemorrhage of cerebral AVM's represent a medical emergency requiring prompt intervention. A combined interventional strategy (embolization and resection) is an appropriate method to prevent hemorrhage and long-term complications associated with this pathology.
**Keywords:** Arteriovenous malformation, nidus, embolization, resection.