

Case	(354) First episode of seizures in a patient with a giant arteriovenous malformation
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CASE PRESENTATION

A 34-years-old man with a history of two weeks of headaches was brought to the Emergency system by family members after a first episode of seizures. There was no neurological focal deficits at the explorations.

Cranial computer tomography (CT) revealed a slightly hyperdense lesion in left frontal lobe that didn't cause a significant mass effect. Cranial CT angiogram (CTA) showed a large arterio-venous malformation with a compact nidus, feeding vessels from branches of MCA and ACA, and dilated veins.

No hemorrhages were observed. An angiography performed after the acute moment confirmed the diagnosis.

DISCUSSION

Cerebral arteriovenous malformations (AVMs), also known as pial arteriovenous malformation, are abnormal vascular connections within the brain. They are composed of one or more feeding arteries, a nidus of vessels, and one or more draining veins, resulting in arteriovenous shunting.

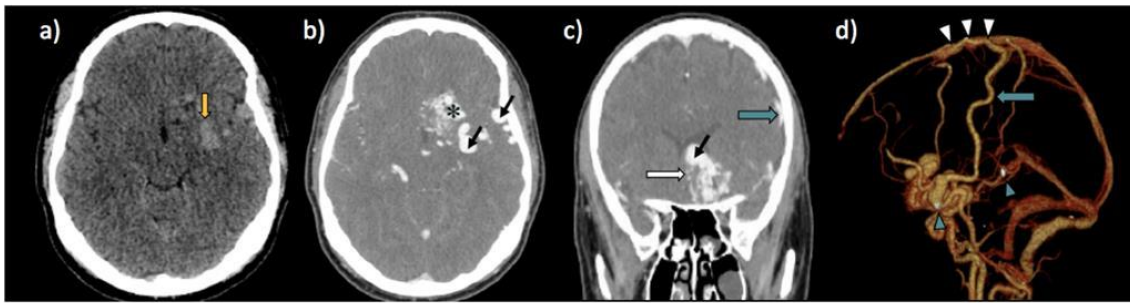
Although they are thought to be congenital lesions, their origin remains uncertain and patients tend to present later in life. AVMs are the most common symptomatic vascular malformations with a wide spectrum of clinical presentation that include seizures, headaches, ischemic events or, more often, hemorrhages (65%). In a 15% of patients, they are incidental findings.

The radiologist plays an important role in the diagnosis of the AVMs, since the imaging findings may determinate the management of the patient.

CT scan, and specially CT angiogram, can provide usefull information, but the angiography remains the gold standard because of its greater definition of the lesion and the pattern of drainage.

CONCLUSION

Arteriovenous malformation are abnormal vascular connections within the brain than can manifest in multiple ways, usually with brain hemorrhages. The imaging findings are important not only for the initial diagnosis, but also to guide the patient's management.



Axial non-contrast CT (a) show a slightly hyperdense lesion in left frontal lobe. Axial CT angiogram (b), coronal reformation (c) and VR reformation (d) reveal a large AVM with a compact nidus (*) predominantly fed through arteries from the left ACA and ACM (white arrow) and drained for enlarged vein (blue arrows) into the superior longitudinal sinus (arrow head). Dilated venous aneurysm (black arrows) and calcifications (blue arrow heads) are also present.

BIBLIOGRAPHY

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