

VASCULAR DEMENTIA

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Felipe Padilha Vaz

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Abstract

Cerebral arteriovenous malformations (AVM) are hemodynamic lesions which must be studied as s determine the cerebral blood flow, average velocity, the Reynolds number to determine turbulent or laminar flows, to each one their risk of hemorrhage and their anatomical characteristics in this way make therapeutic decisions. In some venous hypertension or fistulous nests, they generate a high degree of hyper flow, which can cause perilesional vascular AVMs nidus, areas of hypoperfusion that can generate dementia.

Methods We did a retrospective study that included 639 patients with ruptured and un-ruptured AVMs. We proposed a classification score (1-4 points) for AVM rupture risk using three factors; feeding artery mean velocity (Vm), nidus size and type of venous drainage. We employed descriptive statistics and logistic regression analysis. We analyzed the different types of each AVM (plexiform, mixed and fistulous), angiopathy data were determined by recruitment in some lesions and their repercussion. The patient's clinic was determined as well as the study of superior mental functions with a mini-mental

Results A total of 639 patients with cerebral AVMs, 388 (60%) had un-ruptured AVMs and 251 (40%) had ruptured. Logistic regression analysis revealed a significant effect of Vm (mean velocity), nidus size and venous drainage type in for the variability of rupture odds ($P=0.0001$, $R^2=0.437$), for patients with AVMs. Based in the odds ratios, grades proposed classification were corresponded to low risk of hemorrhage, while grades 3 and 4 were associated with high risk. 1 point OR=0.10795% CI; 0.061-0.188, 2 point OR=0.227 95%, CI; 0.153-0.338, 3 point OR=3.292 95%, CI; 2.325-4.608, 4 point OR=23.304 95%, CI; 11.077-49.027. We catalog different types of venous drainage, type 1, the anterograde (downstream flow); type 2 the retrograde (upstream or reverse flow) and type 3, retrograde (upstream or reverse flow)+facial venous

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