Anterior communicating artery aneurysm clinical features

- Non-Saccular Aneurysm Shape as a Poor Prognostic Factor in Younger Patients with Spontaneous Subarachnoid Hemorrhage
- Risk Factors for Unfavorable Angiographic Outcomes after Reconstructive Endovascular Treatments of Unruptured Vertebral Artery Dissecting Aneurysms
- Impact of Clinical Variables and Aneurysm Morphology on Hemorrhage Volume and Clinical Outcomes
- Influence of Fetal-Type Posterior Cerebral Artery on Morphological Characteristics and Rupture Risk of Posterior Communicating Artery Aneurysms: A Radiomics Approach
- DWI-based deep learning radiomics nomogram for predicting the impaired quality of life in patients with unruptured intracranial aneurysm developing new iatrogenic cerebral infarcts following stent placement: a multicenter cohort study
- The Lattice flow diverter for the treatment of intracranial aneurysms: a single center experience in 117 consecutive aneurysms
- Minimizing human-induced variability in quantitative angiography for a robust and explainable AI-based occlusion prediction in flow diverter-treated aneurysms
- Machine Learning-Assisted Prediction of Persistent Incomplete Occlusion in Intracranial Aneurysms From Angiographic Parametric Imaging-Derived Features

Anterior communicating artery aneurysms are usually silent until they rupture.

Suprachiasmatic pressure may cause altitudinal visual field deficits, abulia or akinetic mutism, amnesia, or hypothalamic dysfunction.

Neurologic deficits in aneurysmal rupture may reflect intraventricular hemorrhage (79%), brain hemorrhage (63%), acute hydrocephalus (25%), or frontal lobe signs (20%).

May also present with diabetes insipidus (DI) or other hypothalamic dysfunction.

Visual symptoms

see Anterior Communicating Artery Aneurysm Visual Symptoms

Hyponatremia

Sayama et al. studied the incidence and timing of hyponatremia (Na < 135 mEq l-1) after subarachnoid hemorrhage (SAH) with special reference to ruptured anterior communicating artery (A-com) aneurysms. Hunt and Kosnik (HK) grading, symptomatic vasospasm in A-com aneurysm, and hydrocephalus were analyzed for connections to hyponatremia in 55 patients with ruptured A-com aneurysms, 65 with ruptured internal cerebral artery (ICA) aneurysms, and 49 with ruptured middle cerebral artery (MCA) aneurysms. Hyponatremia occurred in 28 (51%) of 55 patients with A-com aneurysms and in nine (18%) of 49 patients with MCA aneurysms. Severe hyponatremia (Na < 130 mEq l-1) occurred in 16 patients (29%) in the A-com group, four patients (6%) in the ICA group, and

three patients (6%) in the MCA group. The A-com aneurysm group had a significantly higher incidence of mild hyponatremia ($p < 0.01$) and severe hyponatremia ($p < 0.001$) than other groups. Among A-com cases, hyponatremia occurred significantly more often in HK grade III and IV cases ($p < 0.05$), in cases with vasospasm ($p < 0.001$), and in cases with hydrocephalus ($p < 0.01$). Respective days of onset for symptomatic vasospasm and for hyponatremia were day 7.6 +/- 4.4 and day 10.6 +/- 5.8 following SAH, representing a 3-day delay for hyponatremia ($p < 0.05$). In most patients hyponatremia resolved within 28 days following SAH. Hyponatremia occurred more often with A-com aneurysms, possibly because of vasospasm around the A-com or hydrocephalus causing hypothalamic dysfunction. Since hypervolemic therapy can cause hyponatremia, particularly careful observation is required during such therapy in patients with A-com aneurysm [1)].

Amnesia

Talland et al reported in 1967 a amnesic syndrome with anterior communicating artery aneurysm [2)].

References

1)
Sayama T, Inamura T, Matsushima T, Inoha S, Inoue T, Fukui M. High incidence of hyponatremia in patients with ruptured anterior communicating artery aneurysms. Neurol Res. 2000 Mar;22(2):151-5. PubMed PMID: 10763501.
2)
Talland GA, Sweet WH, Ballantine HT Jr. Amnesic syndrome with anterior communicating artery aneurysm. J Nerv Ment Dis. 1967 Sep;145(3):179-92. PubMed PMID: 6066072.