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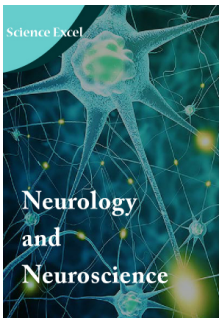
Original Article



Basilar Heart-Shaped Aneurysm: Case Illustration

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Case Report

A 56-year-old female hospitalized in an emergency department with a acute decreased level of consciousness, after a sudden and severe intensity headache. The initial head CT shows a Fisher IV subarachnoid hemorrhage. The cerebral angiography demonstrated a heart-shaped saccular aneurysm originating from the basilar artery (Figure 1). We opted for endovascular treatment with aneurysm embolization, which was then coiled uneventfully (Figure 2). Unfortunately, the patient died in the 15th postoperative day due to infectious complications.

The presentation of heart-shaped cerebral aneurysms is rarely reported in the medical literature. According to our literature review, there are only 2 reported cases. Vajkoczy et al published in the New England Journal of Medicine a case of 49-year-old woman underwent a diagnostic workup for recurrent headaches. The cerebral angiography demonstrated a heart-shaped saccular aneurysm originating from ophthalmic segment of carotid artery, which was successfully clipped without complications [1].

In another case of Feng et al a heart-shaped aneurysm arising from the junction of the basilar artery and the left upper cerebellar artery, which was treated with endovascular procedure [2].

The pathophysiology that explains the formation of this type of aneurysm remains undefined, however it is believed that it results from the degeneration of the arterial wall as a consequence of hemodynamic stress [1]. Surgical treatment of these aneurysms is challenging. This is due to the vascular fragility and the unusual anatomical conformation. In the present case, treatment with an endovascular procedure was chosen, due to the group's experience and because it is an effective option in basilar artery aneurysms [3].

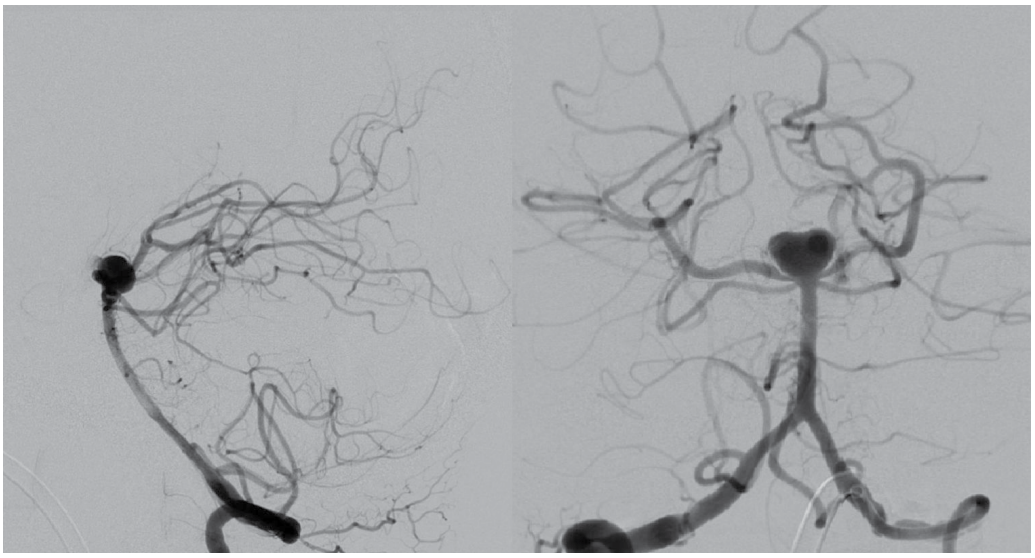

Figure 1. *Heart-shaped saccular aneurysm*

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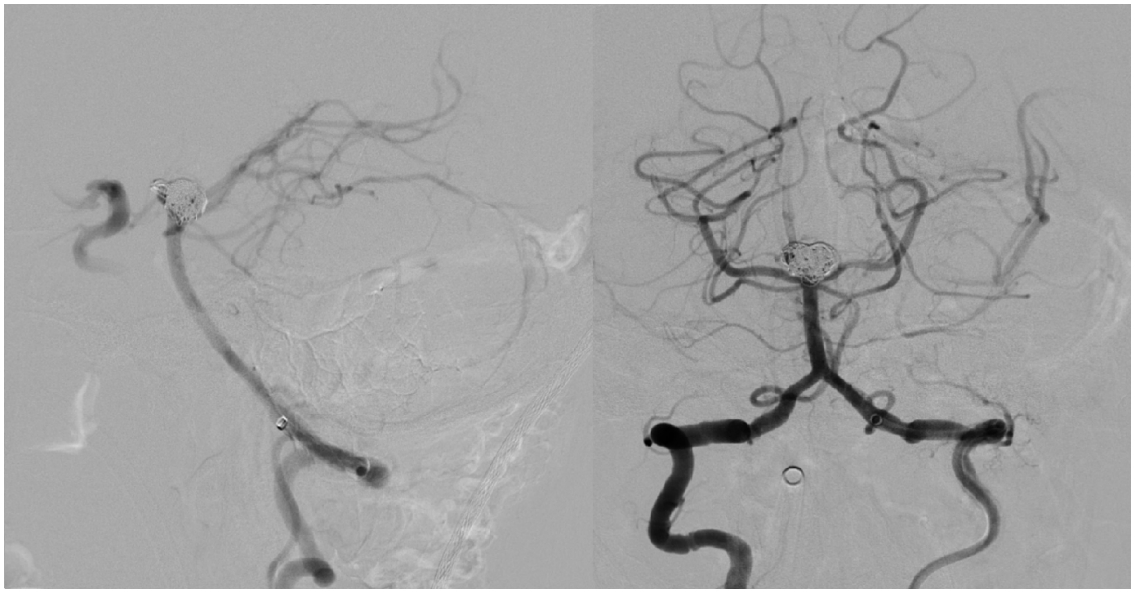

Figure 2. *XXXXXX*

Disclosures

The authors report no conflict of interest concerning the materials or methods used in this study or the findings specified in this paper.

Author Contributions

Conception and design: all authors. **Acquisition of data:** Cavalcante-Filho, Miniello.

Analysis and interpretation of data: Silva, Resende.

Drafting the article all authors: All authors.

Critically revising the article: all authors.

Reviewed submitted version of manuscript: all authors.

Administrative/technical/material support: All authors.

Study supervision: Rotta.

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