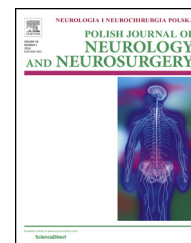


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Case report

A case of a giant intraorbital aneurysm successfully treated surgically

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1. Introduction

Intraorbital ophthalmic artery aneurysms are extremely rare and most often arise at the origin of the ophthalmic artery (OA). Aneurysms that arise from the OA stem or its branches, separate from the internal carotid artery (ICA), are called peripheral OA aneurysms (POAAs). In a recent literature review, Yanaka et al. [1] found and described only 14 case reports of POAAs: 5 involved the intracranial portion of the OA and the remainder involved the intraorbital portion of the ophthalmic artery [2,3]. The symptoms caused by POAAs depend on their size, location and spatial relationship to the neural structures. Most commonly, POAAs cause progressive visual disturbances and/or exophthalmos; some may be asymptomatic [4].

2. Clinical material and result

A 75-year-old woman presented with a rapidly progressive, extreme exophthalmos in her left eye, loss of visual acuity, visual field defects with symptoms of compression neuropathy, and ophthalmoplegia (Fig. 1).

MRI was contraindicated (cardiac grounds). CT scans showed a giant retrobulbar tumor of a diameter of over 3.0 cm in the upper medio-lateral compartment (Fig. 2).

The patient underwent surgery during which the aneurysm was clipped and totally removed via left one-piece fronto-orbital approach (Fig. 3).

The histopathological finding was: *aneurysm with partial thrombosis and recanalization*. CT angiography performed four months after surgery showed clipping and complete resection of the aneurysm of the left orbit with normal OA circulation, as well as an image of a small AVM in the apex of the right orbit (Fig. 4).

Five months of clinical follow-up demonstrated a full recovery in the left eye with good visual acuity, improved visual field, total remission of exophthalmos and ophthalmoplegia and a good cosmetic result (Fig. 5).

3. Discussion

Intraorbital segment ophthalmic artery aneurysm is an extremely rare condition. To date, only 17 cases have been reported in the literature [5,6]. The ophthalmic artery enters the orbit inferolateral to the optic nerve and then crosses it and runs on the superomedial side of the nerve. In our patient, we found a giant retrobulbar tumor in the upper mediolateral compartment. Based on the CT image, aneurysm was excluded. Only a rapidly progressive, extreme exophthalmos indirectly indicated that the tumor could be a giant aneurysm. Similar to cases described by other authors, surgery aiming to remove the lesion appeared to be the only possible method of efficient treatment of this very rare condition, because only removal of this lesion can solve the problem of exophthalmos

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Fig. 1 – Photographs showing the patient's ophthalmic condition before surgery.

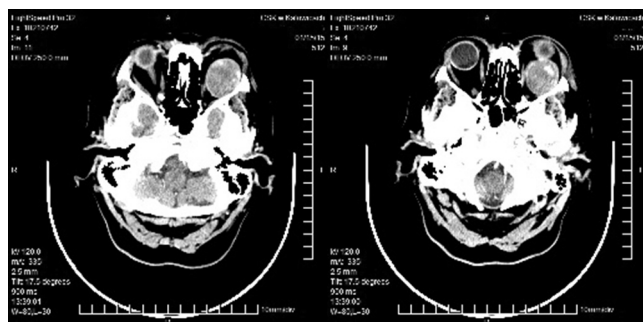


Fig. 2 – CT scans showing a giant retrobulbar tumor located in the upper medio-lateral compartment.



Fig. 3 – The orbital aneurysm immediately after complete resection via the one-piece fronto-orbital approach.

and lead to good recovery. An interesting result of CT angiography after surgery was found in our patient, showing a small AVM in the other orbit. The CT angiography proved to be an effective method of diagnosis of orbital malformations. Subsequent CT angiography exams can help to better characterize the nature of this very rare pathology.

4. Conclusions

In symptomatic patients surgery is necessary to prevent visual deterioration. CT angiography is an effective method for diagnosing orbital malformations.

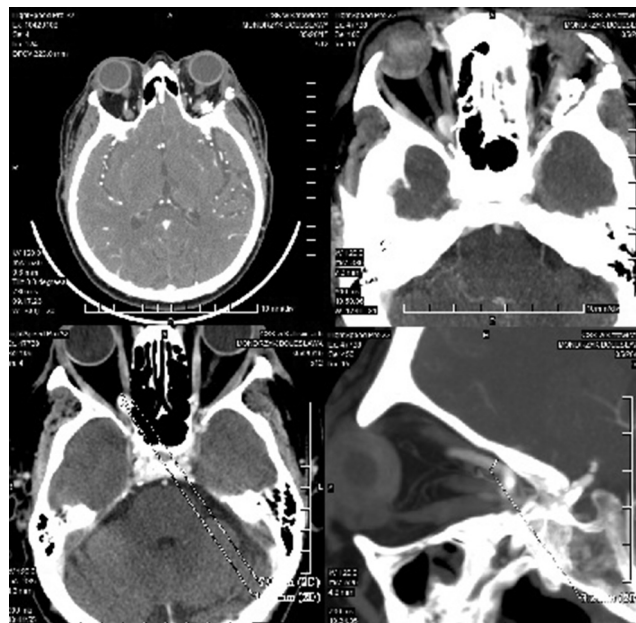


Fig. 4 – The follow-up CT angiography (four months after surgery). The top scans show clipping and complete excision of the aneurysm. The bottom scans show a small AVM in the apex of the right orbit.



Fig. 5 – The excellent ophthalmic and cosmetic results in our patient (five months after surgery).

Conflict of interest

None declared.

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None declared.

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