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Case Report

A RARE CASE OF VASCULAR MALFORMATION IN THE ORBIT

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Summary

We present the case of an 87-year-old female with a one-week history of redness, swelling, and pain in the left eye, accompanied by headache and neck pain. Computed tomography (CT) scan demonstrated extreme enlargement of the supraorbital artery, engaging the superior rectus muscle of the left eye. We could not find similar articles in well-recognized scientific networks. Conservative treatment was conducted, with no improvement. The patient refused surgery.

Keywords: vascular malformation, orbit, supraorbital artery.

Introduction

We failed to find reports published during the last 47 years on cases of supraorbital artery malformation occurring without any fistula. That explains why vascular malformations of the orbit are rarely presented in clinical practice. These lesions may derive from the arterial, venous, and lymphatic systems or be associated with two or all three sources. These lesions account for 7% of all orbital diseases [1]. The clinical signs and symptoms can have an acute onset or be chronic. As a result, changes in orbital blood supply appear and lead to vision loss [2-5]. The appropriate diagnosis is based on exhaustive history, thorough examination, and mainly on cross-sectional imaging [6]. We report a case of extreme dilatation of a. supraorbitalis with an engagement of the superior rectus muscle.

Case presentation

An 87-year-old female presented with a history of one-week redness, swelling, pain in the left eye, and headache and neck pain. The patient complained of low vision in the left eye. She had previously received cataract treatment on the same eye. After the operation, her vision was good for a week and then worsened. A slit lamp examination of the left eye revealed

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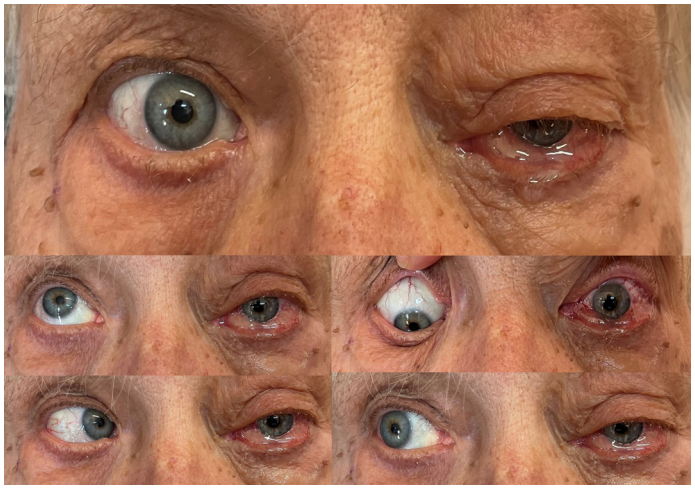

Figure 1. Exophthalmos in the left eye, ptosis, severely limited mobility of the extraocular muscles, particularly upward gaze.

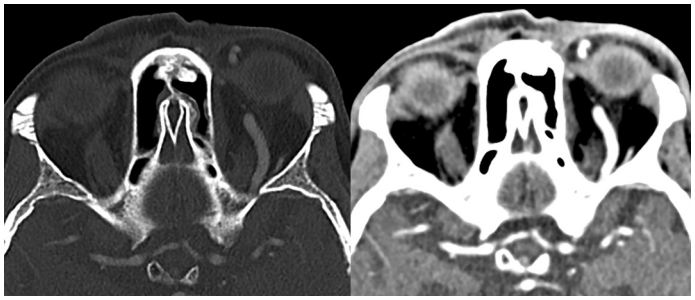

Figure 2. Enhanced and non-enhanced CT-Scan demonstrated abnormal supraorbital artery.

exophthalmos, ptosis, severely limited mobility of the extraocular muscles, and particularly limited upward gaze. The conjunctiva presented with chemosis and mucosal secretion (Figure 1).

Fundoscopy revealed a normal papilla, a macula without reflex, and non-pathological findings of the vessels. Visual acuity of the left eye was 0.3, and the intraocular pressure was 17mm Hg. Results from Hertel exophthalmometry were as follows: right eye = 13mm, left eye=17mm, on base=94.

The CT scan demonstrated extreme enlargement of the supraorbital artery with an engagement of the superior rectus muscle of the left eye (Figure 2).

The administered conservative treatment with Mannitol 10% i.v. and corticosteroids proved ineffective. The patient refused surgical treatment.

The study was conducted per principles for human experimentation defined in the Declaration of Helsinki, local Good Clinical Practice guidelines, and local Medical University Pleven institution guidelines. Written informed consent was obtained.

Discussion

Despite the significant progress of medicine, diagnosing and treating vascular malformations of the orbit presents a true challenge and often ends with serious complications.

Many diseases could be considered a differential diagnosis, including ones of nonvascular origin. Granulomatous processes such as sarcoidosis, pseudotumor, thyroid ophthalmopathy, and others should be considered, but the absence of improvement after administering corticosteroids and standard blood testing dismisses those theories. In these cases, diagnosis is possible only after contrast imaging.

Treatment of vascular malformations of the orbit requires an individual and multidisciplinary approach. It should be carried out by a team of a neurosurgeon, a neurologist, a vascular surgeon, an ENT surgeon and other specialists. With mild cases, one could wait and observe the patient because spontaneous regress could also happen. When encountering cases with more pronounced symptoms and the risk of loss of sight, we should

proceed to surgical treatment – excision with or without preceding embolization [7-9]. In our case, the patient refused surgical intervention.

Our research failed to find similar articles in well-recognized scientific networks. We believe this is a rare publication among the first on the topic.

Conclusion

Vascular malformations of the orbit are extremely rare, and the presenting symptoms are nonspecific. Imaging plays a crucial role in the diagnostic process.

Ethics approval

Ethics approval and consent to participate. (Human, Animals, Plants and Source)-The study was conducted in accordance with principles for human experimentation as defined in the Declaration of Helsinki, local Good Clinical Practice guidelines and local Medical University – Pleven institution guidelines. Written informed consent was obtained from all patients available at corresponding author on request

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