

# Ophthalmic Artery Occlusion as Sign of Left Atrial Myxoma: A Case Report.

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## Abstract:

Ophthalmic artery occlusion (AOA) is an ophthalmic emergency and the ocular analogue of cerebral stroke. Atrial myxomas can lead to a triad of complications. We report a case of left atrial myxoma with cerebral infarctus and ophthalmic artery occlusion as the first manifestation. Atrial myxomas are benign tumours, but secondary complications due to their position and the possibility of embolization can be devastating. Our report will enable ophthalmologists to be attentive and to carry out a complete cardiovascular assessment as a matter of urgency.

**Key Word:** occlusion ; ophthalmic artery; emergency.

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## I. Introduction:

Ophthalmic artery occlusion (AOA) is an ophthalmic emergency and the ocular analogue of cerebral stroke. Atrial myxomas can lead to a triad of complications. The most common symptoms are associated with obstruction due to the size and location of the tumor. We report a case of left atrial myxoma with cerebral infarctus and ophthalmic artery occlusion as the manifestation. Our report will enable ophthalmologists to be attentive and to carry out a complete cardiovascular assessment as a matter of urgency.

## II. Patient And Case Report:

A 40-year-old woman presented right hemiparesis and sudden vision loss in her left eye. The patient only consulted the ophthalmic department 6 months later. The visual acuity in her left eye was negative light perception. The left pupil was dilated and a pupil deficit was detected. The patient had no medical history. Intraocular pressure in the right eye was 17 mmHg and in the left eye was 15 mmHg. The examination of the fundus to the left eye revealed a fibro-vascular membrane spreading on the posterior pole and hiding the optic disc and the macula (Figure 1), a severe attenuation of the retinal vessels (arteries and veins), a clouding diffuses the retina with a "featureless" appearance. Retinographs showed retinal pigment changes and hyperplasia (Figure 2). Fluoresceine angiography showed triangular zones of choroidal infarctions and increased hyperfluorescence at the triangular patches in the late frames (Figure 3). It was also noted delayed a minimal filling of the proximal arteriovenous trunk, but the major part of the retina remained nonperfused (Figure 4). The right eye showed a normal fluorescence picture (Figure 5).

Brain imaging objectified a left ischemic brain accident in the territory of the middle cerebral artery. Transthoracic cardiac ultrasound found an irregular heterogeneous left atrium mass measuring 44mm/27mm prolapsed in the left ventricle (Figure 6). Histological analysis confirmed the diagnosis of myxoma after surgical excision. An exeresis of myxoma has been carried out (Figure 7). The evolution was marked by the total recovery of the hemiparesis.

## III. Discussion:

An OAO is a partial or complete obstruction of the ophthalmic artery and may lead to severe ischemia of the affected globe and associated ocular tissues [1]. Acute occlusion of the ophthalmic artery is a rare event. Several causes may be responsible, including carotid artery disease, atrial fibrillation, orbital mucormycosis, external compression of the globe and orbit, and atrial myxoma[2]. Atrial myxomas cause more frequently retinal embolism [3]. It's a real ophthalmic emergency. It is often associated with cerebrovascular and cardiovascular damage, which can be life-threatening and require systemic treatment [4]. Funduscopy shows retinal clouding resulting from ischemia of retinal layers [3]. Choroidal infarctions damage the retinal pigment and cause metaplasia [4]. The peripheral areas of triangular ischemia reflect the distribution

of choroidal vascular flow[5]. Doppler ultrasound of the ophthalmic artery could locate the site of the occlusion [4].

Embolized tumor fragments induce traumatic endotheliopathy of retinal and choroid arteries [6]. Cardiological examination is obligatory in order to search for the source of emboli. Embolism is considered a warning of cardiovascular disease[3]. Sudden loss of vision may be the first and only symptom of the disease as is the case of our patient.

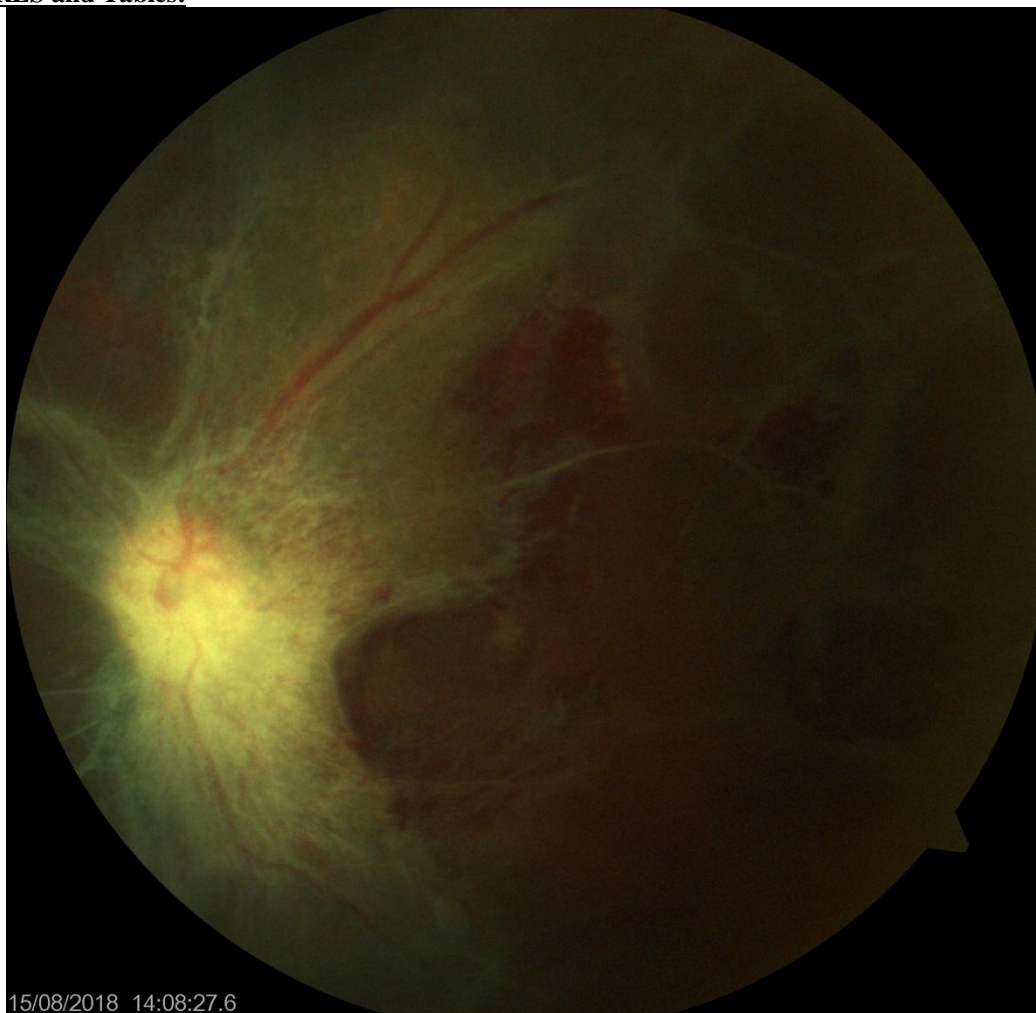
#### **IV. Conclusion:**

Atrial myxomas are benign tumours, but secondary complications due to their position and the possibility of embolization can be devastating. OAO is an ophthalmic emergency in which cause and consequences can be fatal and require cardio vascular examination and systemic treatment.

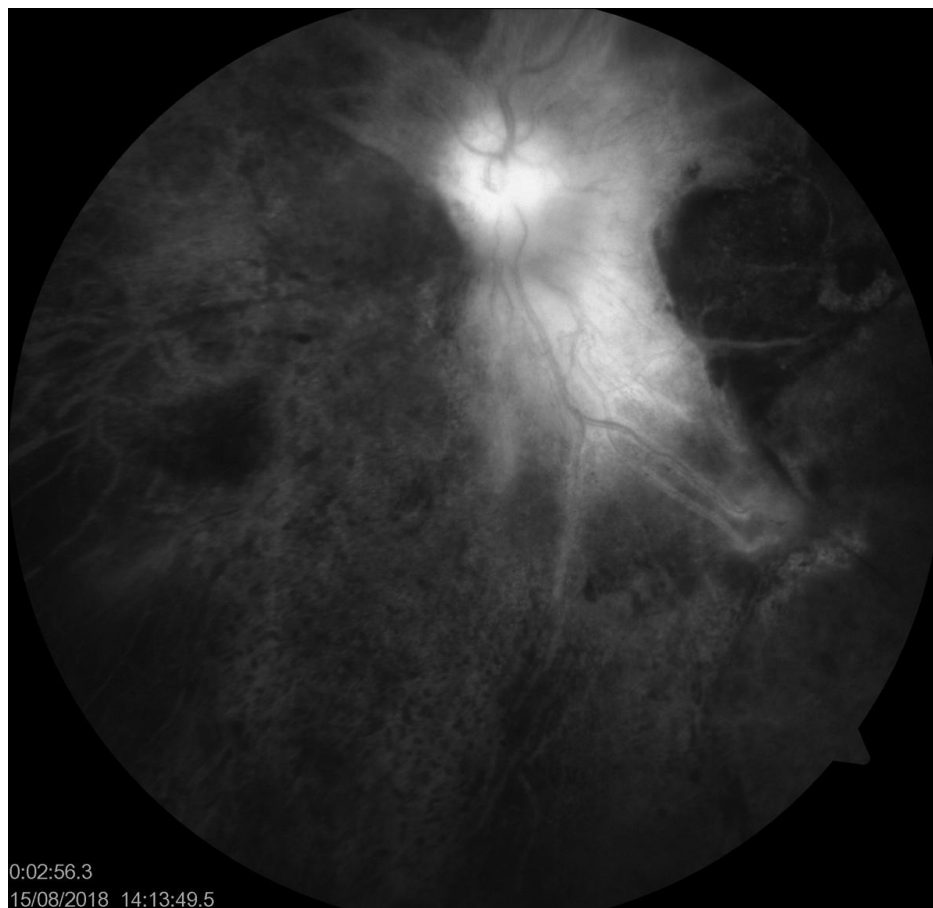
**COMPETING INTEREST:** No potential conflict of interest relevant to this article was reported.

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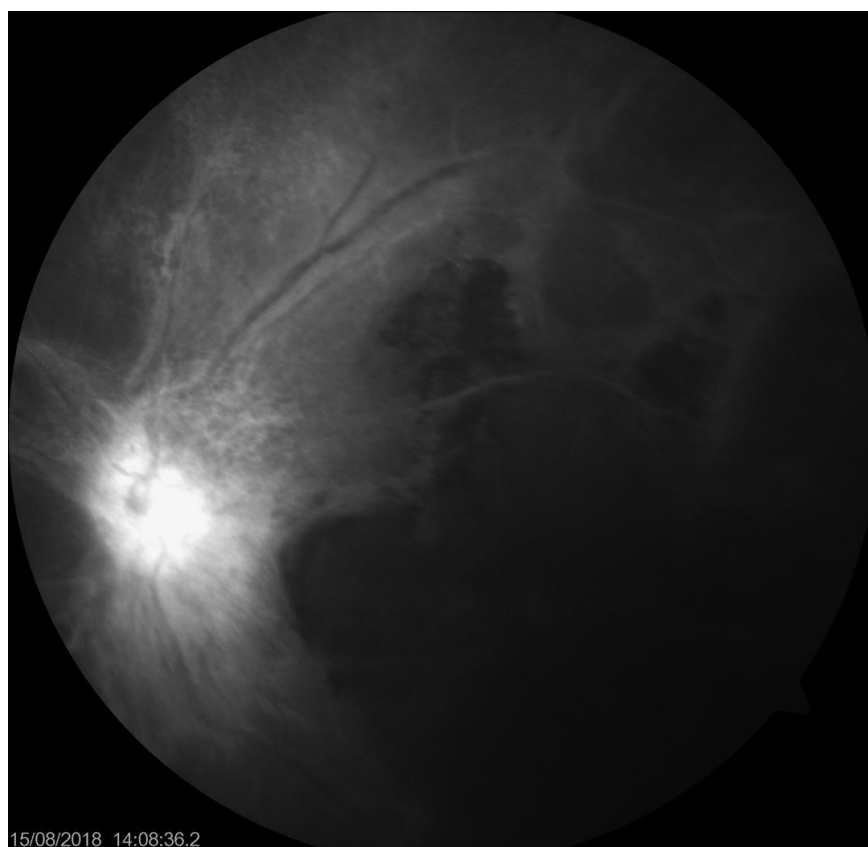
#### **FIGURES and Tables:**



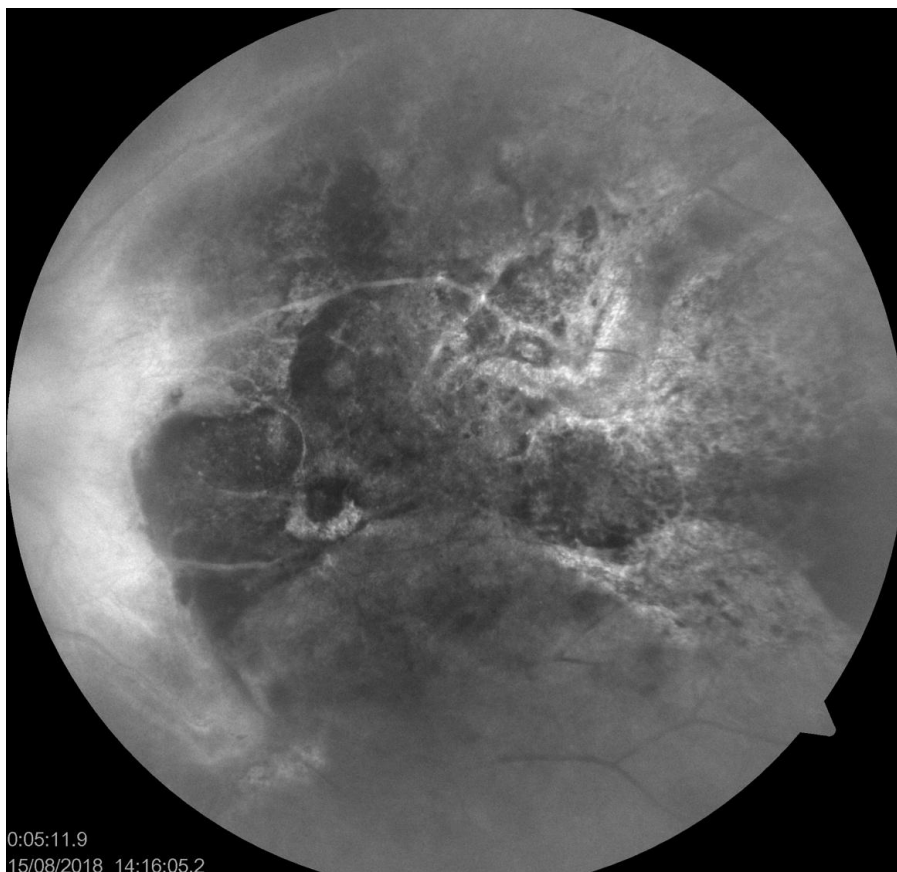
**Figure 1:** Fibro-vascular membrane spreading on the posterior pole and hiding the optic disc and the macula.



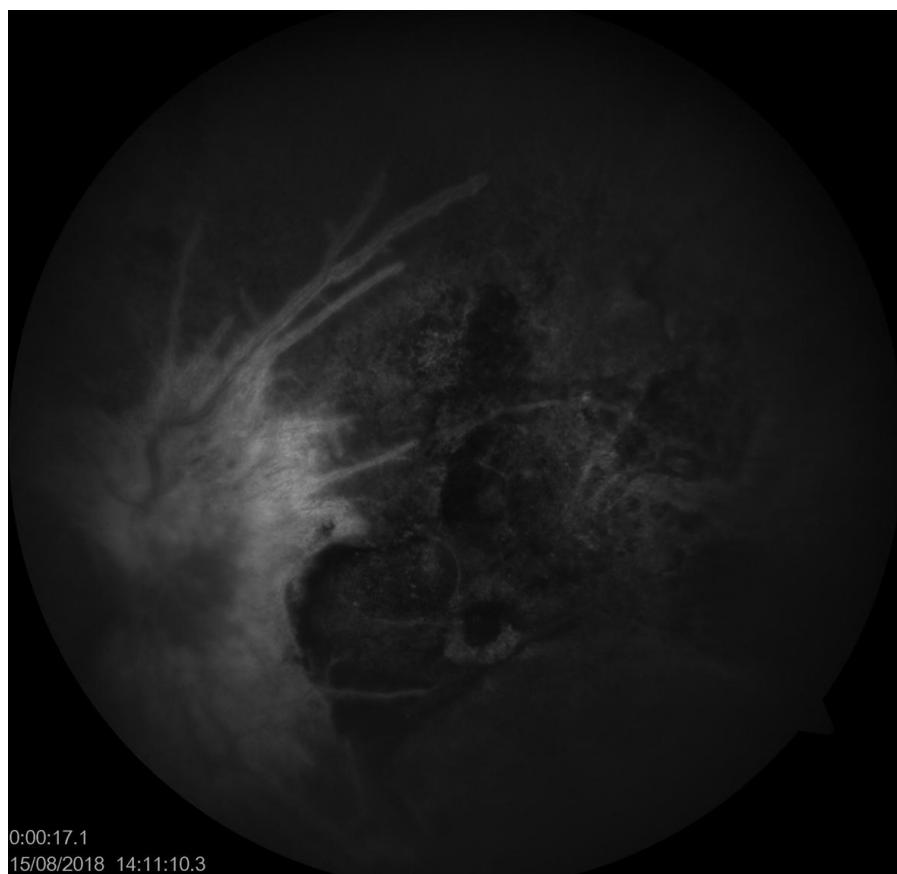
**Figure 2:** Retinal pigment changes and hyperplasia.



**Figure 3:** Fluorescein angiography showing triangular zones of choroidal infarctions.



**Figure 4:** Fluorescein angiography showing a minimal filling of the proximal arteriovenous trunk.



**Figure 5:** The right eye showed a normal fluorescence picture.



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**Figure 6:** Transthoracic cardiac ultrasound founding an irregular heterogeneous left atrium mass measuring 44mm/27mm prolapsing in the left ventricle.



**Figure 7:** Macroscopic aspect of myxoma after surgical exeresis

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