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Case Study

Glaucoma and Megalopapilla: Purpose of a Case Study

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Abstract

A 65-year-old male patient, a severe smoker, came to our center for decreased vision in the left eye of more than 6 months of evolution. A complete clinical and complementary ophthalmological examination were performed where results of subcapsular cataract in the left eye and bilateral megalopapilla with clinical signs of glaucoma were obtained. Faced with these results, it is decided to start topical treatment with latanoprost and strict monitoring of it.

Keywords: *Megalopapilla Associated to Glaucoma; Megalopapilla; Glaucoma*

Introduction

Megalopapilla is defined as an optic nerve with more than 2.5 mm^2, which is the result of early axonal migration during embryogenesis. It can be congenital, which is bilateral, with increased disc cup ratio, and acquired, unilateral, associated with congenital glaucoma. When it doesn´t have associated pathologies, it is a macrodisc whose excavation is proportional to its increased size, with emergence of normal vessels and without pallor of the neuroretinal ring. The visual field may show an increase of the blind spot. The quantification of the size and its normal analysis by optical coherence tomography help to establish the diagnosis.

When we refer to a glaucomatous optic nerve in the clinical practice, we look for typical signs such as neuroretinal ring thinning, increased excavation, diffuse or focal alterations of the nerve fiber layer, bayonet vessels, peripapillary atrophies or others not so frequent such as papillary hemorrhages without concomitant edema. However, the challenge in daily practice is to understand that pathologies do not always present themselves as literally described in the literature [1-5].

Clinical Case

A 65-year-old male patient, smoker of more than 20 cigarettes per day for more than 20 years, with no relevant pathologies; he consulted for a decrease in visual acuity of more than 6 months in the left eye.

On clinical examination he presented uncorrected visual acuity in the right eye of 9/10 and in the left eye of 5/10 which improved with correction to 8/10. Biomicroscopy showed a moderate posterior subcapsular cataract in the left eye. Intraocular pressure was 24 and 28 mmHg respectively for right and left eye.

The gonioscopy showed an open and preserved angle.

The ocular fundus showed bilaterally optic discs increased in size and excavation of approximately 0.7 and 0.8 with slight nasalization of vessels, without alterations in the coloring of the nerves (Figure 1A, 1B, 2A and 2B).

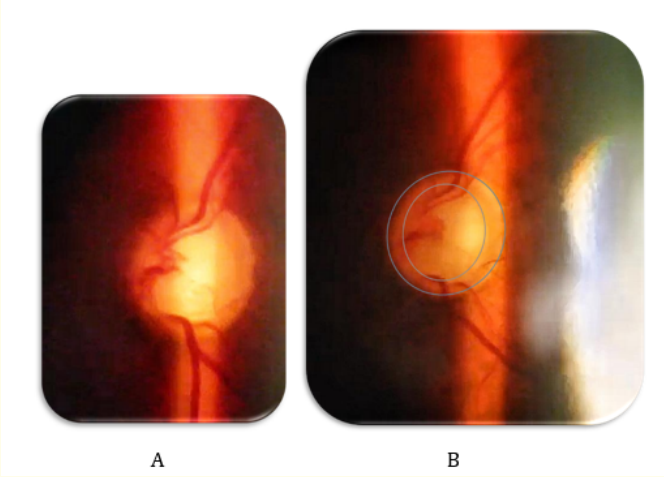

Figure 1A and 1B: *(A) Right optic nerve showing increased excavation and increased papillary diameter. (B) Papilla delimitation and altered neuroretinal ring, slight nasalization of vessels.*

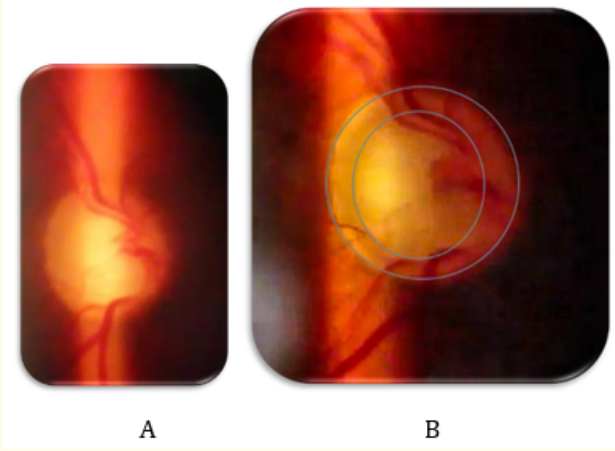

Figure 2A and 2B: *(A) Left optic nerve increased excavation and papillary diameter. (B) Delimited neuroretinal ring. mild to moderate papillary color alteration.*

Imaging studies were performed, such as visual field where there was evidence of generalized loss of sensibility with arciform defects in the right eye superior and inferior and in the left eye with superior predominance with respect of the middle raphe and alteration of the linear graph (Figure 3A and 3B).

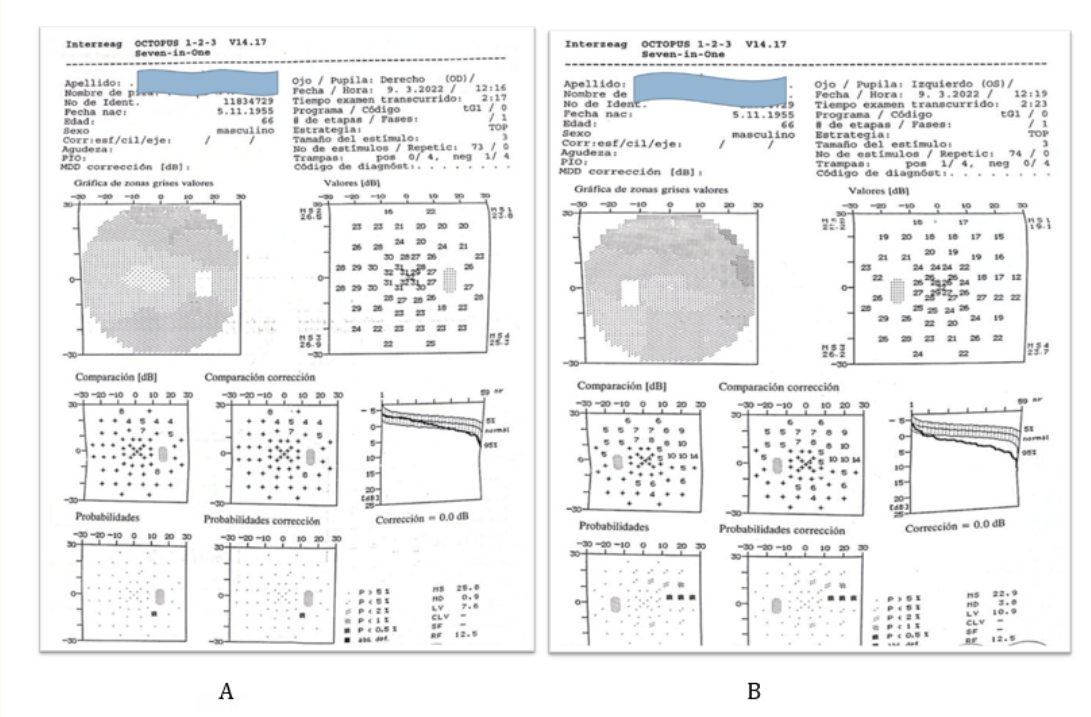

Figure 3: *Both visual fields with generalized loss of sensibility. (A) Right with superior and inferior arciform defect. (B) Predominantly superior arciform defect greater than in OD with respect to the median raphe. altered linear curve.*

As for the optical coherence tomography in the retinal thickness map there is evidence of a generalized decrease in thickness, but still preserving its normal morphology (Figure 4A); as for the nerve fiber layer there is a defect in both eyes. In the right eye at temporal level and in the left eye in temporal and inferior sectors (Figure 4B). The tomographic analysis of the optic nerve shows in the right eye a disc area (disc area) of 4043 mm^2 and in the left eye 4466 mm^2, both well above the ranges considered normal; in addition to increase in the excavation 0.9 and 0.8 respectively (Figure 4C1 and 4C2).

Pachymetry: Corneal thickness in both eyes is 549 um (Figure 5A and 5B).

Discussion and Conclusion

In this particular case we found an elderly patient, a chronic smoker and with the ischemic damage generated by vascular pathologies in the eyes and at a general level. Currently our patient is under topical treatment with latanoprost, achieving controlled pressures of 14 mmHg; and interdisciplinary management with medical clinic and cardiology.

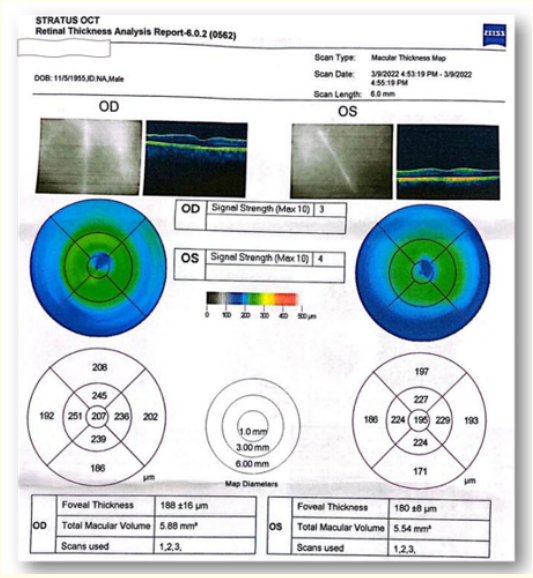

Figure 4A: *Retinal thickness analysis. generalized decrease in retinal thickness, but morphology still preserved.*

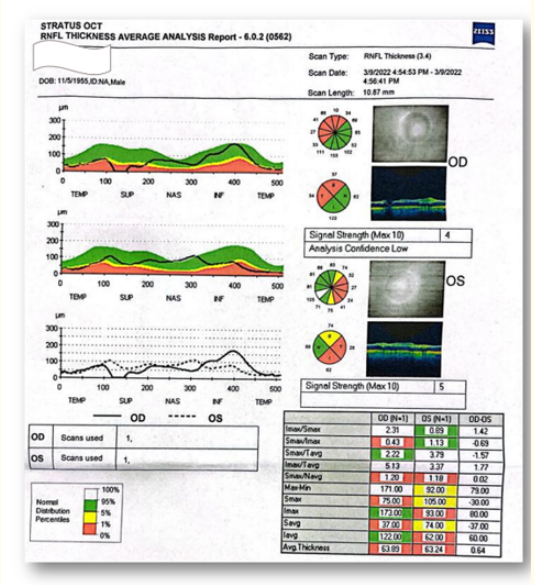

Figure 4B: *Nerve fiber layer thickness analysis. Nerve fiber layer defect in both eyes. Right eye decreased at temporal area. artifact in sup. Left eye decreased in inferior temporal area.*

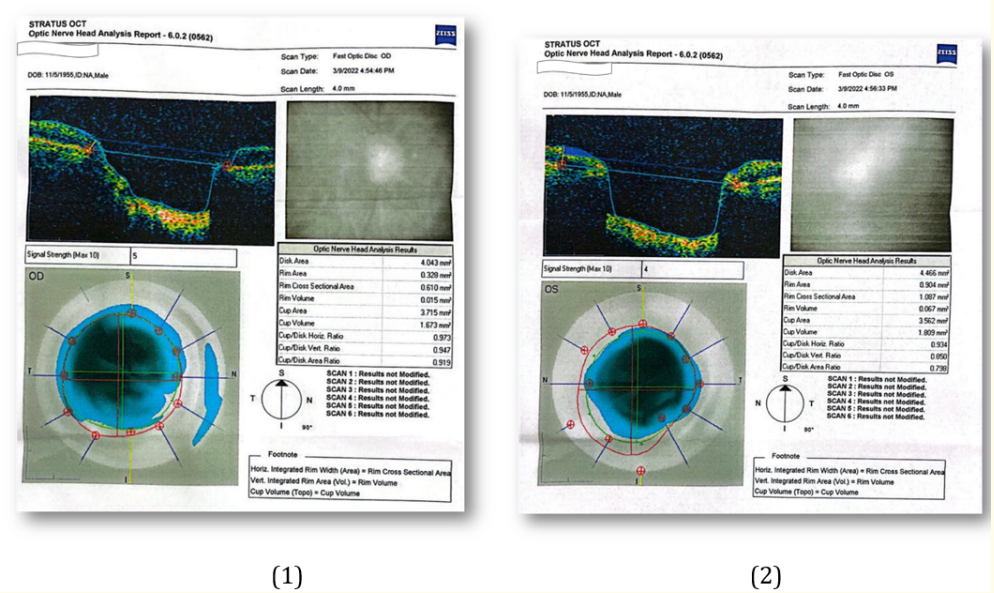

Figure 4C: *Optical nerve head analysis. (1) Right 4043 mm2 of surface area. Excavation 0.9. (2) Left 4466 mm2 of surface area. Excavation 0.8.*

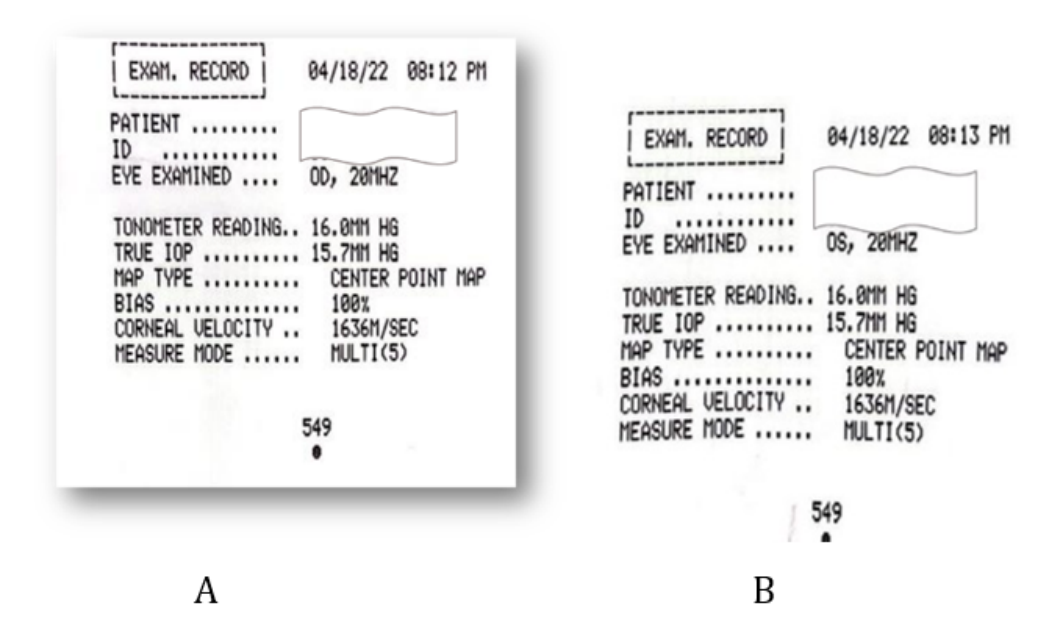

Figure 5A and 5B: *Both corneal thickness 549 um.*

The fact that there is not much literature describing both pathologies together, the confusion and the difficulty to reach the diagnosis and interpretation of glaucoma that a bilateral macrodisc can generate, forces us to a particular follow-up based on the particular changes observed from the diagnosis. The idea of studying and diagnosing both pathologies separately is proposed; seeking at the same time the correlation between the clinical examination and the results obtained from the studies.

In conclusion, do not underestimate any sign that could lead to a final diagnosis.

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