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Yag Laser Peripheral Posiridotomy Intraocular Pressure Elevation

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Abstract

The elevation of the intraocular pressure laser peripheral posiridotomy is the most frequent complication. The case of an 80-year-old female patient with a history of pseudophakia undergoing iridotomy and laser with high intraocular pressures not controlled despite maximum treatment is described.

Keywords: Complication; Yag laser peripheral iridotomy; Angle closure glaucoma; Pupil block

Abbreviations: IOP : intraocular Pressure.

Case Report

80-year-old female patient who goes to the glaucoma service of the Hospital de la Luz in order to continue her control of glaucoma and at diagnosis that presents systemic history of controlled arterial hypertension in treatment with losartan and penicillin allergy and ophthalmological history of Pterygium surgery both eyes approximately 50 years ago, cataract surgery both eyes 04 years ago and glaucoma diagnosis 04 years ago in treatment with timolol, dorzolamide, brimonidine and travaprost.

RIGHT EYE		LEFT EYE
20/60	VISUAL ACUITY	20/60
20/25	VISUAL CAPACITY	20/30
Normal	EYELIDS AND ANNEXES	Normal
Transparent cornea, reactive pupil, intraocular sac lens, wide chamber	BIOMICROSCOPY	Transparent cornea, reactive pupil, intraocular sac lens, wide chamber
25 mmHg (Goldmann)	IOP	25 mmHg (Goldamnn)
Closed without synechia	GONIOSCOPY	Closed without synechia
Generalizad pale, visible screened sheet, vessel nasalization, excavation 0.9	EYE FUND	Generalizad pale, visible screened sheet, vessel nasalization, excavation 0.9
+0.75 -2.00 75°	REFRACTION	+0.25 -1.25 75°

Table 1: Patient exploration.

It was diagnosed as chronic closed-angle glaucoma and pseudophakia of both eyes with prescription of iridotomy and laser and auxiliary examinations of optical coherence tomography and visual field Humphrey SITA-FAST 24-2 for both eyes.

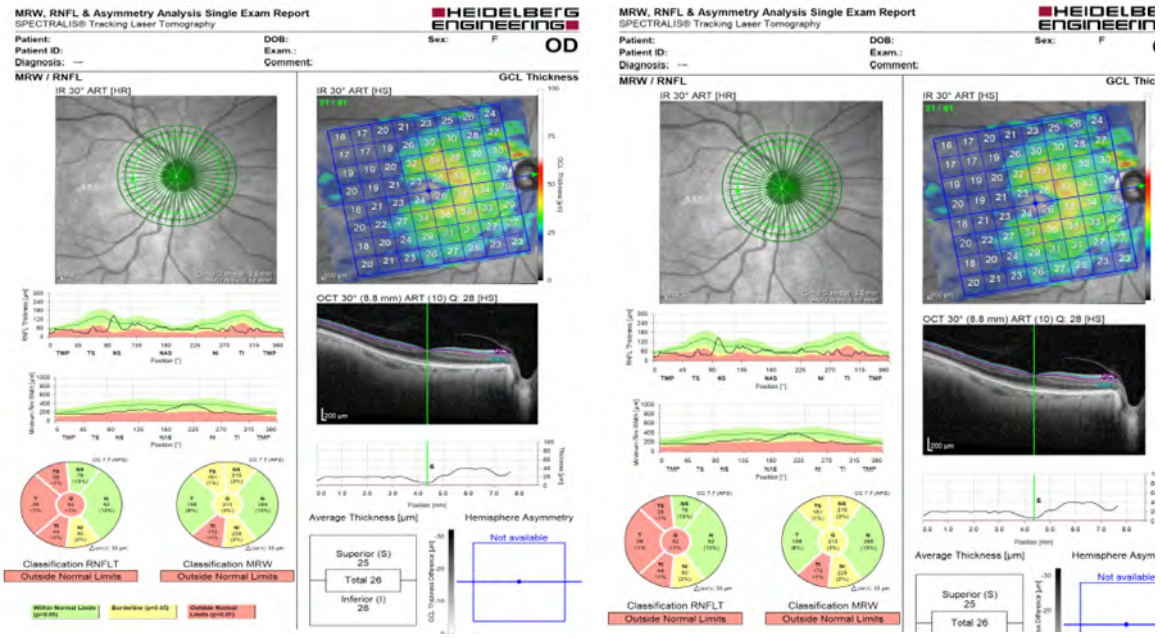

Figure 1: Optical coherence tomographs are seen with generalized decrease in the nerve fiber layer and ganglion cell layer in both eyes.

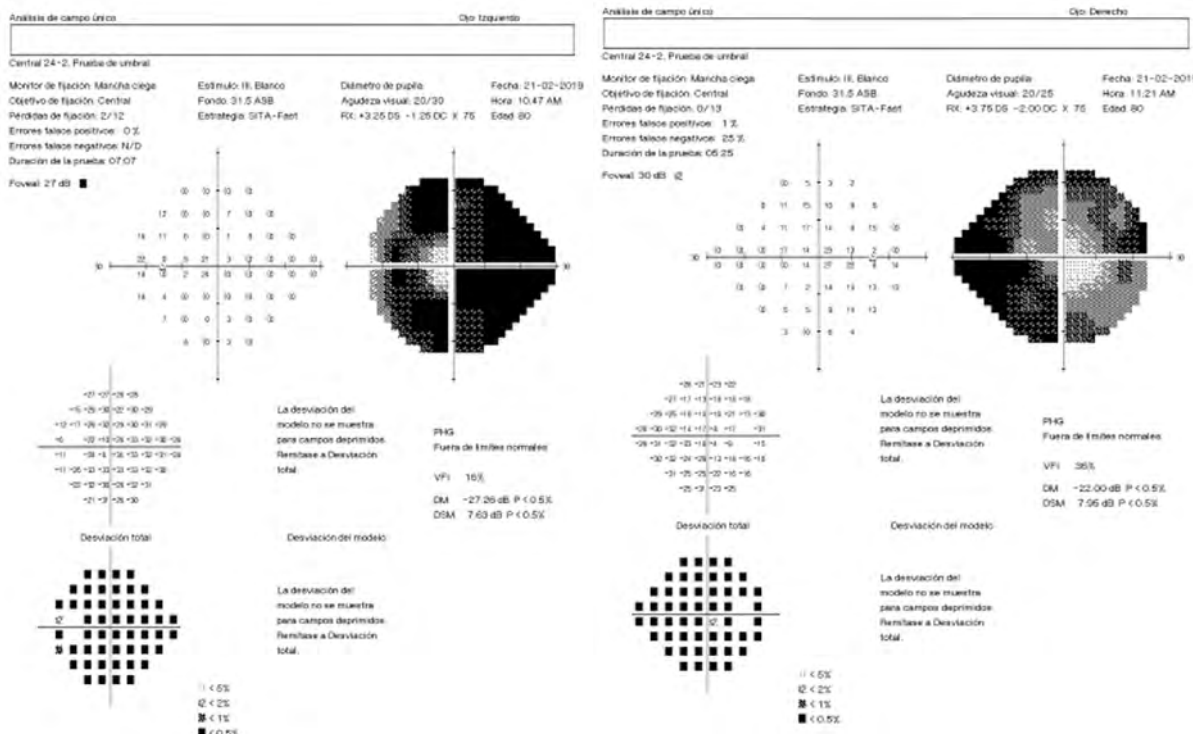

Figure 2: Humphrey SITA FAST 24-2 visual fields of both eyes can be seen in advanced stage.

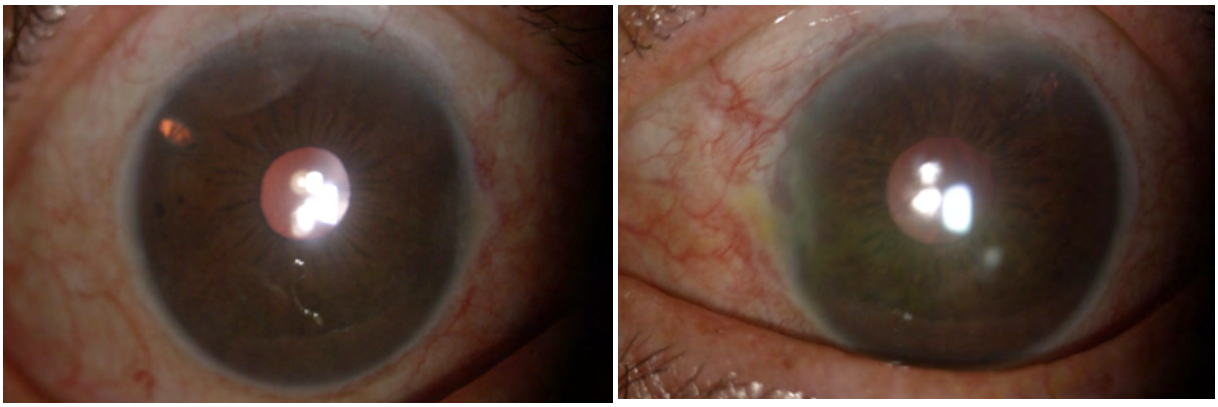

Figure 3: Images of the anterior segment of both eyes with greater permeable iridotomies in the right posterior eye are observed topical glycerin to eliminate epithelial edema.

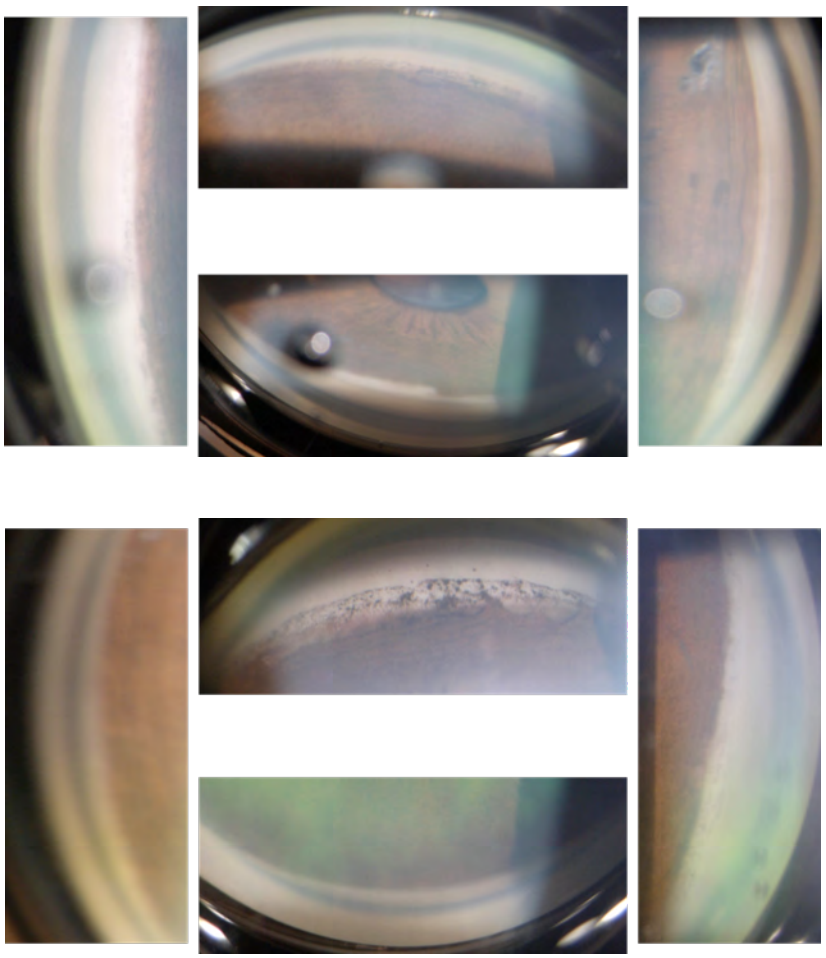

Figure 4: the gonioscopy of both eyes with closed angles and presence of synechia can be seen despite indentation.

Yag laser peripheral iridotomy was performed (no power or number of shots is described) with indication of the same hypotensive medications except travaprost and also 1% prednisolone acetate every 04 hours in both eyes, which comes to control consultation 1 week later with intraocular pressure 55 and 53 mmHg respectively.

Topical timolol, dorzolamide, brimonidine, pilocarpine and 250 mg acetazolamide are prescribed every 8 hours, arriving with intraocular pressures not at the goal of 16 and 21 mm Hg respectively and by appointment as the first surgery placing Ahmed valve in the left eye.

Discussion

The most frequent complication laser posiridotomy is the elevation of intraocular pressure with an incidence that varies from 5.7 to 40% that usually occurs within 1 hour [1]. In angle closure glaucoma undergoing cataract surgery, the pupillary block component is practically eliminated unless there are other components that do not allow opening the chamber angle such as the presence of peripheral anterior synechiae and iris plateau configuration [2]. The indication of iridotomy in our patient with a diagnosis of chronic angle closure glaucoma and a history of pseudophakia is controversial because the intraocular lens widens the angle, but probably has the other components mentioned. Despite the controversy of the efficacy of iridotomy in these situations, in our patient we found a high peak of intraocular pressure as described in a study with a 7.2% incidence of posiridotomy intraocular pressure elevation greater than 30 mmHg in primary angular closure. and suspected angular closure [3]. Factors associated with elevation of posiridotomy IOP have been described, a high basal intraocular pressure (> 19 mm Hg), intense energy use during the procedure, presence of synechial closure, greater extension of iridotrabecular contact and advanced stages of glaucoma are described [4]. In the case of our patient, it presents as factors high basal intraocular pressure in both eyes, probably greater use of energy but not described, iridotrabecular contact and advanced stage of glaucoma that could explain the very high elevation of intraocular pressure. The surgical plan was chosen, in spite of uncontrolled intraocular pressures to maximum topical and oral treatment, to valve placement due to the history of pterygium surgery.

Conclusions

The peripheral iridotomy Yag laser is a useful tool to eliminate the pupil block component at narrow angles, but also the factors associated with elevation of posterior intraocular pressure mentioned above should be taken into account, since it is the most frequent complication when performing it, such a way can be controlled through the use of immediate hypotensors and close monitoring.

References

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