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Asymptomatic Traumatic Angle Recession Glaucoma Revealed by Multimodal Imaging

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1. Clinical Presentation

50-year-old woman presented for a routine ophthalmologic examination. During the medical interview, the patient reported no significant past medical or ophthalmologic history and denied any visual complaints. She also did not initially report any history of ocular trauma or other relevant systemic conditions.

Best-corrected visual acuity was 8/10 in the right eye (OD) and 10/10 in the left eye (OS). Slit-lamp examination of the anterior segment revealed a semi-mydriatic pupil with poor reactivity in the right eye Figure 1. While the examination of the left eye was unremarkable. Intraocular pressure measured by tonometry was 12 mmHg in both eyes.

Fundus examination and retinal imaging of the right eye revealed an inferior retinal nerve fiber layer (RNFL) defect associated with pigmented peripapillary atrophy. The RNFL defect was more clearly visualized using infrared (IR) imaging. The examination of the left eye did not reveal any abnormalities. Gonioscopic evaluation demonstrated recession of the iridocorneal angle in the right eye, whereas the angle appeared normal in the left eye. Optical coherence too.

2. Conclusion

This case highlights the importance of a comprehensive ophthalmologic examination in detecting asymptomatic glaucomatous damage.

Angle recession glaucoma may remain clinically silent for many years after ocular trauma and can be discovered incidentally during routine evaluation. Multimodal imaging, including fundus photography, infrared imaging, gonioscopy, and optical coherence tomography (OCT), plays a crucial role in identifying structural damage to the retinal nerve fiber layer and optic nerve head.

raphy (OCT) of the optic nerve head confirmed inferior thinning of the RNFL in the right eye, associated with involvement of the ganglion cell complex (GCC). OCT findings in the left eye were within normal limits.A standard automated visual field test was requested to assess potential functional impairment corresponding to the structural damage observed on imaging.

Based on the clinical findings, including the presence of angle recession and structural damage of the optic nerve head, the diagnosis of secondary traumatic glaucoma of the right eye was established. The patient was started on appropriate antiglaucoma medical therapy, and close follow-up was planned with regular monitoring of intraocular pressure, optic nerve head status, and visual field progression.

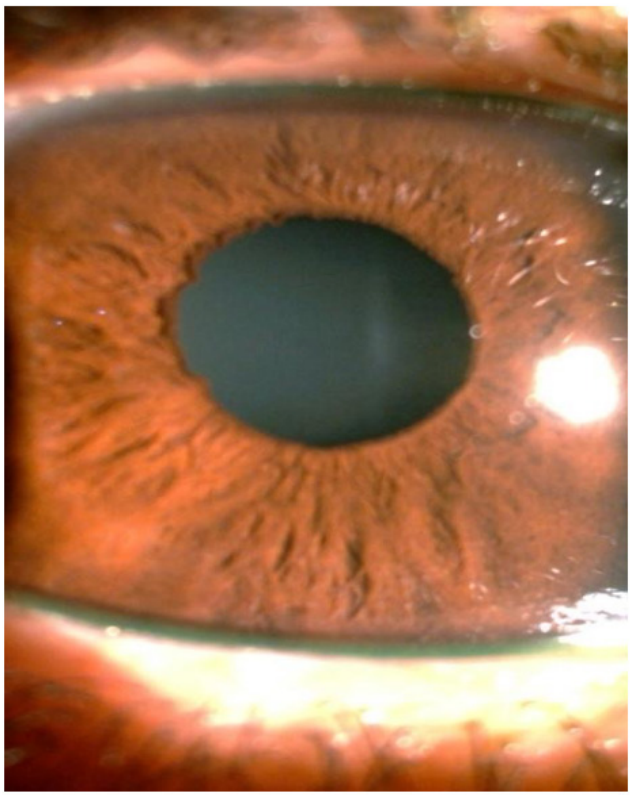

Figure 1: Slit-lamp photograph of the right eye showing a semi-mydriatic .pupil with decreased pupillary reactivity

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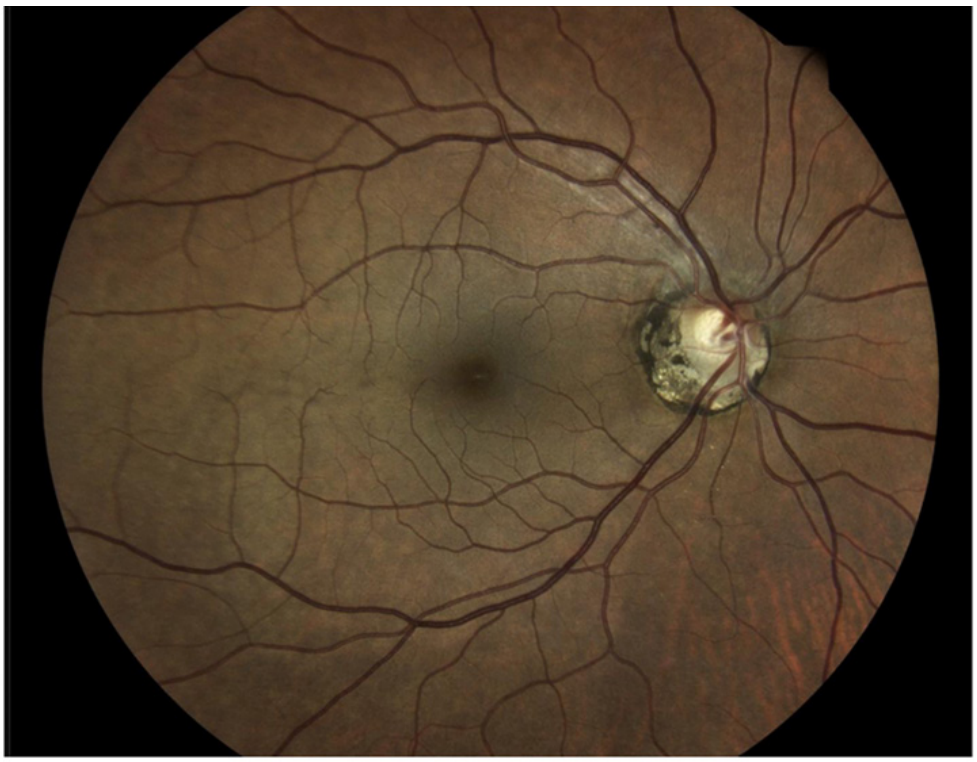

Figure 2: Fundus photograph of the right eye showing an inferior retinal nerve fiber layer (RNFL) defect associated with pigmented peripapillary atrophy surrounding the optic disc.

Figure 3: Gonioscopic image of the right eye demonstrating recession of the iridocorneal angle.

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