

Anterior Chiasmal Syndrome Owing to a Pituitary Macroadenoma

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BACKGROUND

The overall prevalence of pituitary adenoma is about 16-17%. Often, the first signs of the condition are related to the patient's visual function and up to 92% report visual blur. Other clinical signs and symptoms include see-saw nystagmus, photophobia, loss of depth perception and dyschromatopsia. Pituitary adenomas can be classified based on their size as microadenomas (less than 10mm) or macroadenoma (greater than or equal to 10mm). They can also be classified as functioning (secrete hormones, commonly prolactin) or non-functioning. The majority of the non-functioning tumors (~96%) are macroadenomas and about 68% of patients will present with visual field defects. Other associated findings are loss of central visual acuity and optic disc pallor.

CASE PRESENTATION

79-year-old African American male presented with blurry vision and progressive vision loss in the left eye for about 6 years. Patient medical and ocular history was unremarkable, though last medical exam was more than 20 years ago.

	OD	OS
BCVA Distance:	20/25-2	20/400 PH NI
EOMs:	FROM	FROM
Pupils:	PERRL, (-) APD	2+APD
CVF:	FTFC	Abnormal field temporally
Anterior Segment unremarkable except:	Lens: 1+NS, 1+Cortical	Lens: 1+NS, 1+Cortical

FIGURE 1 Fundus examination was positive for subtle temporal pallor of the left optic nerve.



FIGURE 2 Optical Coherence tomography (OCT) of the ganglion cell layer reveals binasal thinning greater in the left eye than the right eye.

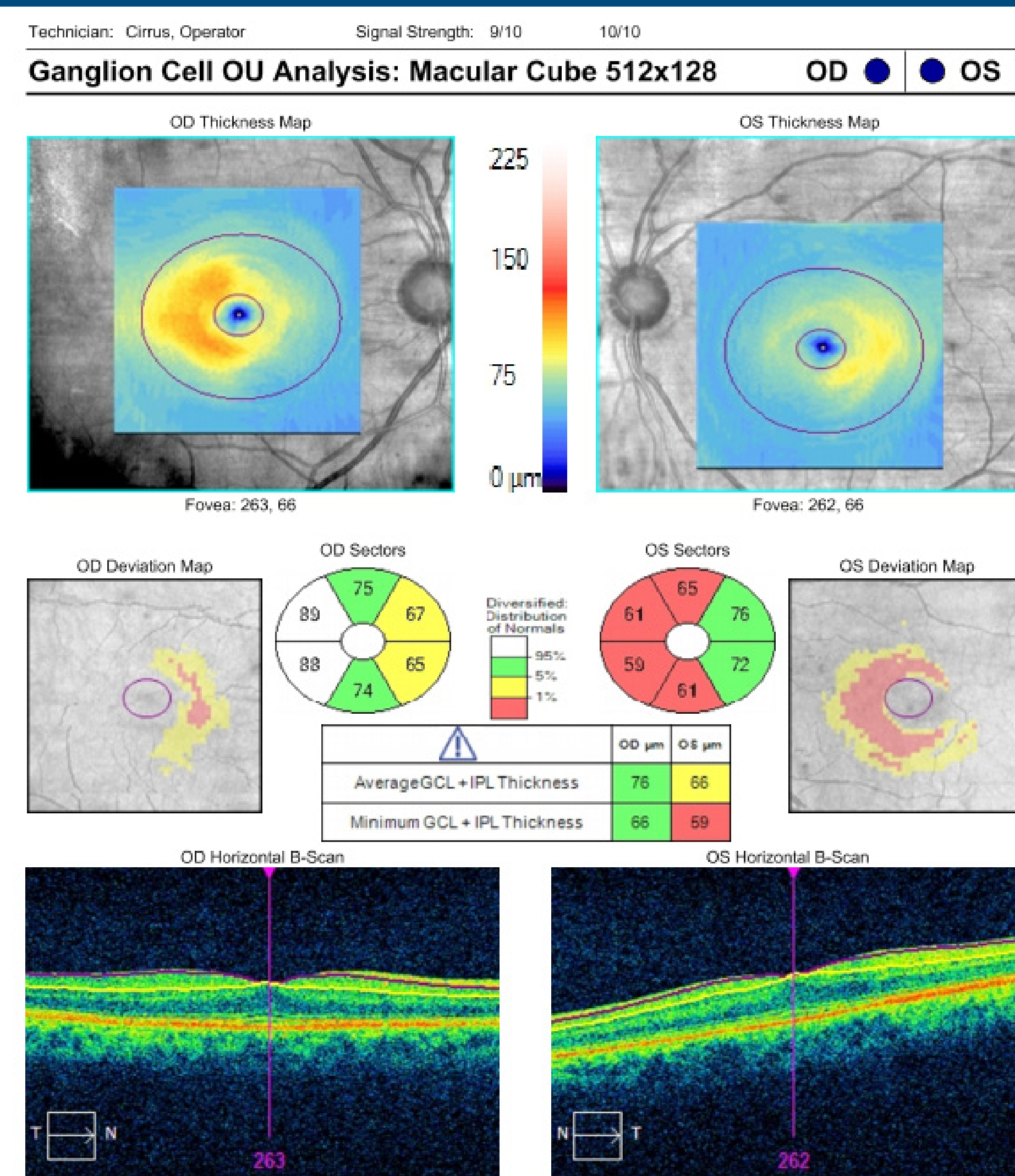


FIGURE 4 MRI with contrast reveals 4.1x3.7x2.7cm enhancing soft tissue mass suggestive of a pituitary macroadenoma with involvement of the optic chiasm [circled in red on coronal (left) and sagittal view (right)]

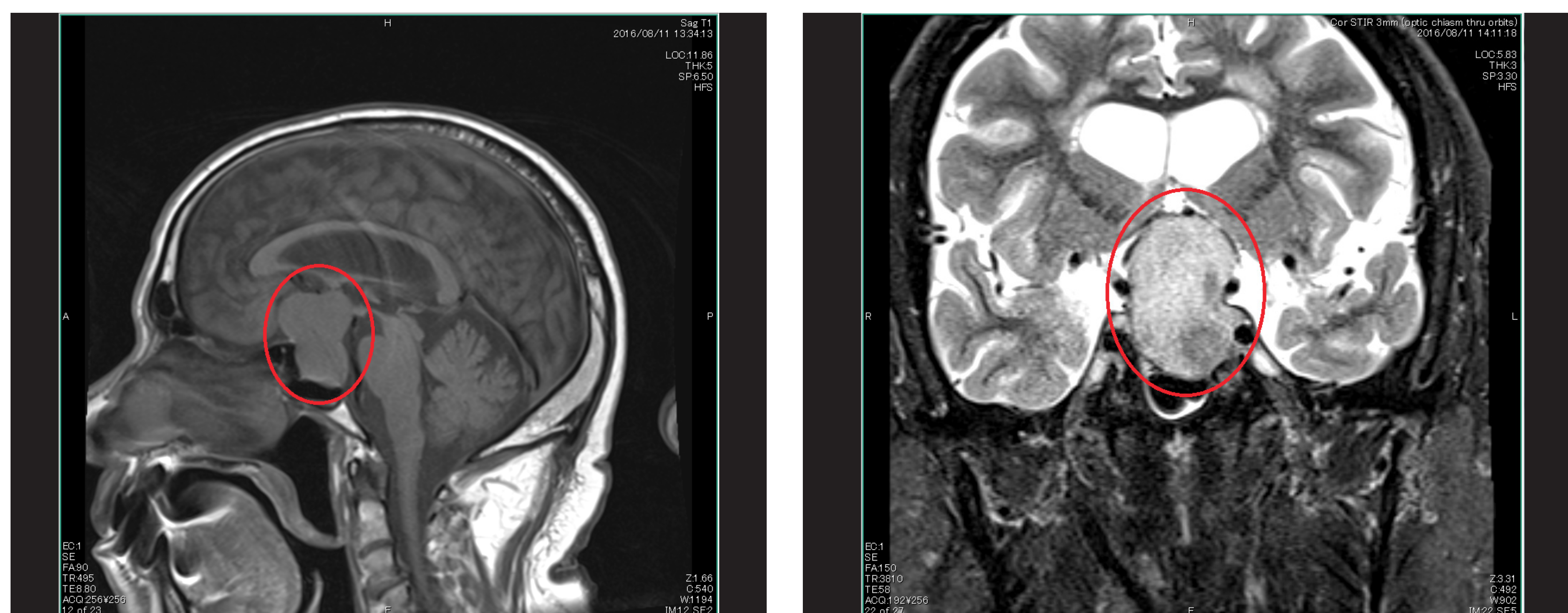
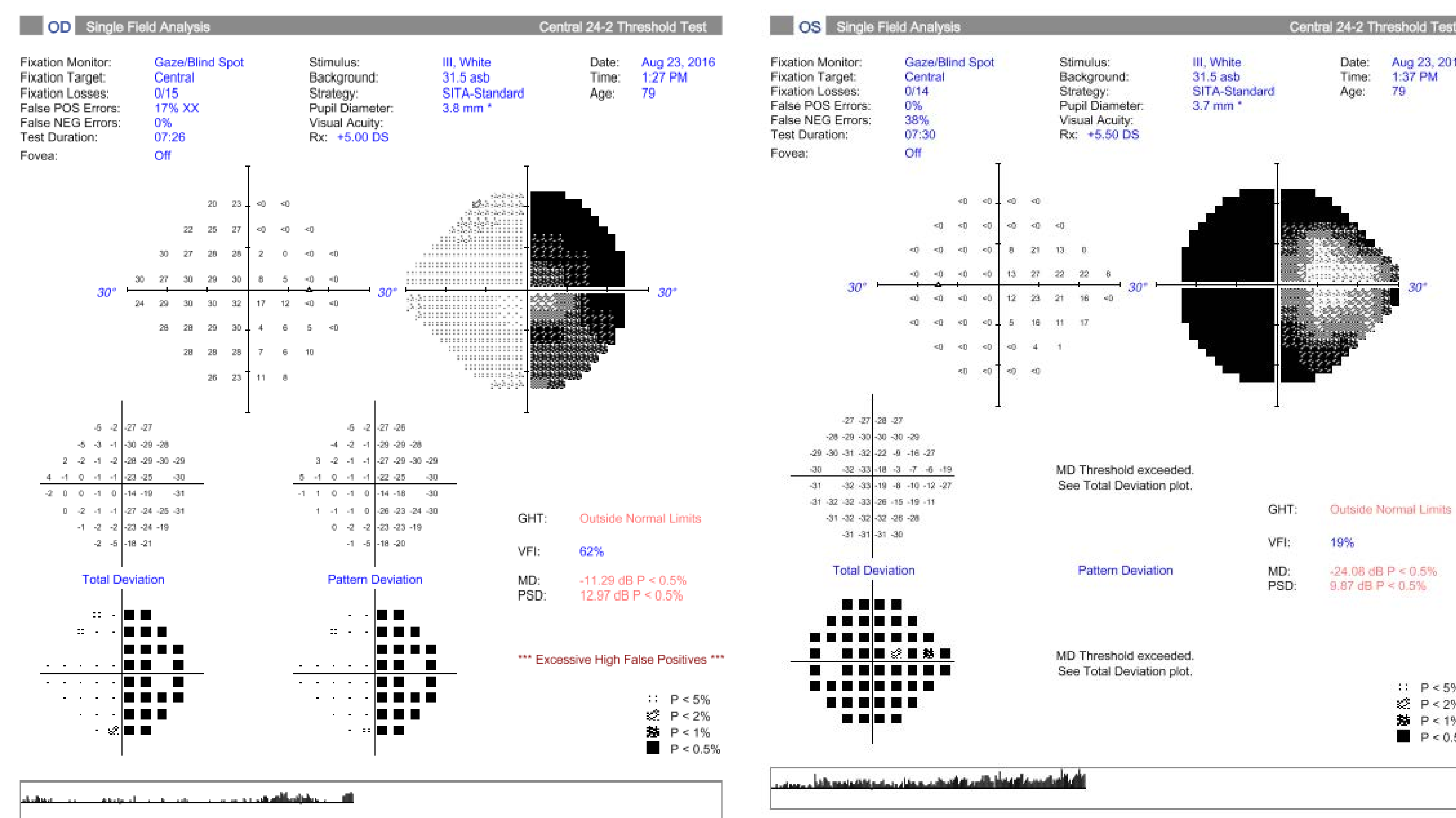


FIGURE 3 Humphrey Visual Field 24-2 shows generalized visual field loss in left eye and complete temporal field loss respecting the vertical midline in right eye.



PLAN

Once compressive lesion was confirmed with MRI, patient was referred for neurosurgery consultation and a physical exam with primary care doctor.

TREATMENT

Multidisciplinary approach with main focus to preserve and restore visual and pituitary function. Surgical resection is the preferred primary intervention for symptomatic non-functioning pituitary macroadenomas. The goal of surgery is to remove the lesion and decompress the optical pathways, preserve the adjacent tissues and restore the visual and pituitary function. Usually results in visual improvement within the first few days and improved visual function in 75 to 91% of the patients.

DISCUSSION

Unique case presenting with complete loss of visual field in left eye and temporal field loss in the right eye rather than the classic bitemporal field loss characteristic for pituitary adenoma. The only presenting symptom was progressive unilateral vision loss without any systemic manifestations.

CONCLUSION

Compressive lesion should always be a differential diagnosis with findings of optic atrophy and progressive vision loss. Visual field should be performed in the presence of unexplained vision loss and is often helpful in determining the next step in the management plan.

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