Scripta Scientifica Medica, 2010; vol. 42 (3), pp 173-176

OPTIC DISC MELANOCYTOMA ASSOCIATED WITH MACULAR CYST

Tzoukeva A.[1], A. Kaprelyan[1], D. Georgiev[2], D. Georgiev[2], S. Kardalev[2], N. Deleva[1]

[1]Department of Neurology, University St. Marina Hospital, Varna, Bulgaria
[2]Assoc. Prof. Dobrin Georgiev Eye Hospital, Varna, Bulgaria

Reviewed by: assoc. prof. E. Kontrova

SUMMARY

BACKGROUND: Optic disc melanocytoma (ODM) is a benign tumor, most often asymptomatic and stationary. However occasionally it can grow slowly, cause visual loss or extremely rarely undergoes into malignant melanoma. Here lies the importance of periodic ocular examination and reliable documentation. AIM: to report a rare case of growing ODM, associated with macular cyst with related visual loss, 25-years follow-up, and documentation by color photography, optical coherence tomography (OCT) and fluorescein angiography (FAG). METHODS: Full ophthalmic examination, fundus color photography, FAG and OCT. CASE REPORT: An asymptomatic 40-year-old Caucasian female with normal visual acuity at routine ocular examination had a pigmented elevated lesion on the left optic disc, occupying the inferotemporal half. The diagnosis of ODM was based on clinical assessment, FAG, fundus photographies, and observation was recommended. Ten years later she complained of gradually decreasing visual acuity in the left eye. Dilated ophthalmoscopy showed an evidence of slow growth of ODM and initial macular degeneration. After 25 years fundus color photography, FAG, and OCT documented mild progressive growth of ODM and macular cyst in the same eye. CONCLUSION: According to the literature, optic disc melanocytoma is generally recognized to be a stationary lesion with excellent prognosis and no treatment is usually necessary. In our case fundus color photography, FAG and OCT data reveal persisting ODM. Despite the progressive growth of ODM and moderate to significant visual loss, the malignant transformation is not proved. We suggest that loss of vision is related with macular lesion. To our knowledge we report a rare case of 25 years follow-up of growing ODM with visual loss, associated with macula degeneration/cyst.

Key words: benign tumor, melanocytoma, optic disc, macula

BACKGROUND

Optic disc melanocytoma (ODM) is a benign tumor, most often asymptomatic and stationary. However occasionally it can grow slowly, cause visual loss or extremely rarely undergoes into malignant melanoma (4,9,10). Severe visual loss in ODM does not necessarily imply malignant transformation. It may also result either from central retinal vascular occlusion, rarely from its assosiation with post venous stasis retinopathy, neuroretinitis, papillitis, glaucoma, macular star (2,3,5,7,8). Here lies the importance of periodic ocular examination and reliable documentation (1,6). We report a rare case of growing ODM, associated with macular cyst with related visual loss, 25-years follow-up, and documentation by color photography, optical coherence tomography (OCT) and fluorescein angiography (FAG).

Address for correspondence:
A. Tzoukeva, Department of Neurology,
University St. Marina Hospital, Varna, Bulgaria
e-mail: al_tz@abv.bg

METHODS

Full ophthalmic examination, fundus color photography, FAG and OCT.

CASE REPORT

An asymptomatic 40-year-old Caucasian female with normal visual acuity at routine ocular examination had a pigmented elevated lesion on the left optic disc, occupying the inferotemporal half. On examination her distant visual acuity was 20/20 OD and 20/20 OS. The pupils were symmetrical with no afferent pupillary defect. Intraocular presures were 17mmHg OD and 18mmHg OS. The right fundus appeared normal. FAG demonstrated hypofluorescence in the area of the lesion of the left optic disc. The diagnosis of ODM was based on clinical assessment, FAG, fundus photographies, and observation was recommended.
Ten years later she complained of gradually decreasing visual acuity in the left eye. The distant visual acuity was

50/100 in her left eye and 20/20 in her right eye. Dilated ophthalmoscopy showed an evidence of slow growth of ODM and initial macular degeneration. Laser coagulation arround the macula was performed. At the age 65-years distant visual acuity was 20/100 in her left eye, and 20/20 in her right eye. Dilated fundoscopy revealed enlargement of optic nerve head lesion; macular cyst surrounded by drusen in her left eye, and multiple drusen in her right macula. After 25 years fundus color photography, FAG, and OCT documented mild progressive growth of ODM and macular cyst in the same eye (fig.1,2,3).

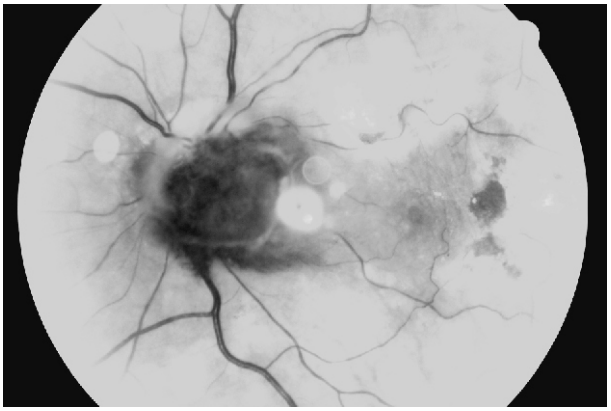


Fig. 1. Fundus photographs of the left eye show a darkly pigmented lesion on the left optic nerve head, covering 8/10 of the optic disc inferotemporally extending into the adjacent retinal tissue.Old laser scars are visible temporally round the macular region and a cyst is observed in the centre, surrounded by drusen.

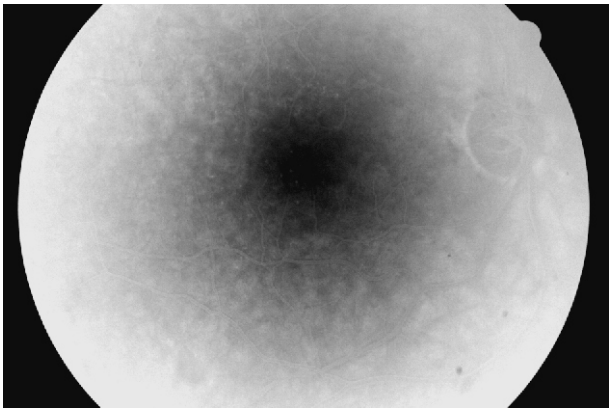


*Fig. 2.**Right eye**: FAG showed normal appearance of the optic nerve head.Multiple drusen in the macular zone.*

DISCUSSION

According to the literature, optic disc melanocytoma is generally recognized to be a stationary lesion with excellent prognosis and no treatment is usually necessary.
The lesion is most often asymptomatic and detected on routine eye examination (9,10). This pigmented tumor with benign characteristics always needs a periodical examination and reliable documentation with fundus color photography, FAG, and OCT (1,6). These examinations can serve as a baseline for future comparison. In our case fundus color photography, FAG and OCT data reveal persisting ODM. Despite the progressive growth of ODM and moderate to significant visual loss the malignant transformation is not proved. We suggest that loss of vision is related with macular lesion. We discuss a coexistence of two separate diseases (ODM and macular cyst) or compression of the optic nerve head by ODM growth and retrograde degeneration.

CONCLUSION

To our knowledge we report a rare case of 25 years follow-up of growing ODM with visual loss, associated with macula degeneration/cyst.

REFERENCES

1. Finger P., Natesh S., Milman T. Optical coherence tomography: pathology correlation of optic disc melanocytoma. *Ophthalmology*, 2010; **117**(1):114-119.
2. Kaliaperumal S., Gupta A., Nongrum B., Rao VA., Srinivasan R. Case reports of three patients showing optic nerve head melanocytoma an hypertension. *Ophthalmologica*. 2007;**221**(1):62-64
3. Kim I., Dryja T., Lessell S., Gradoudas E. Melanocytoma of the Optic Nerve Associated With Sound-Induced Phosphenes. *Arch Ophthalmol.* 2006;**124**(2):273-277.
4. Mansour A, Zimmerman L., La Piana F., Beauchamp G. Clinicopathological findings in a growing optic nerve melanocytoma. *Br J Ophthalmol*. 1989;**73**:410-415.
5. Panigrahi D., Barazi M., Sanders R., Phillips W. Optic Disc Melanocytoma Associated With Optic Nerve Head Edema, Macular Star, and Venous Stasis Retinopathy. *Invest Ophthalmol Vis Sci.* 2004;**45**: E-Abstract 5207.

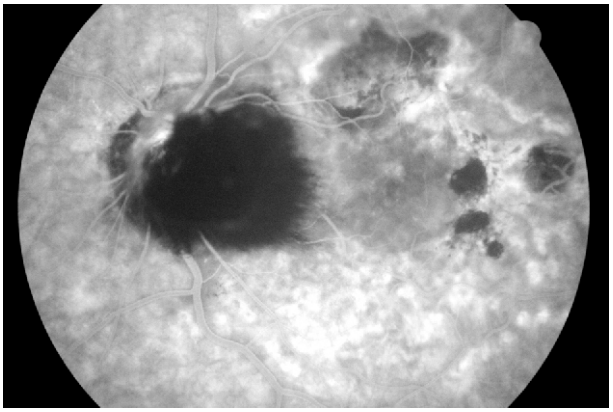
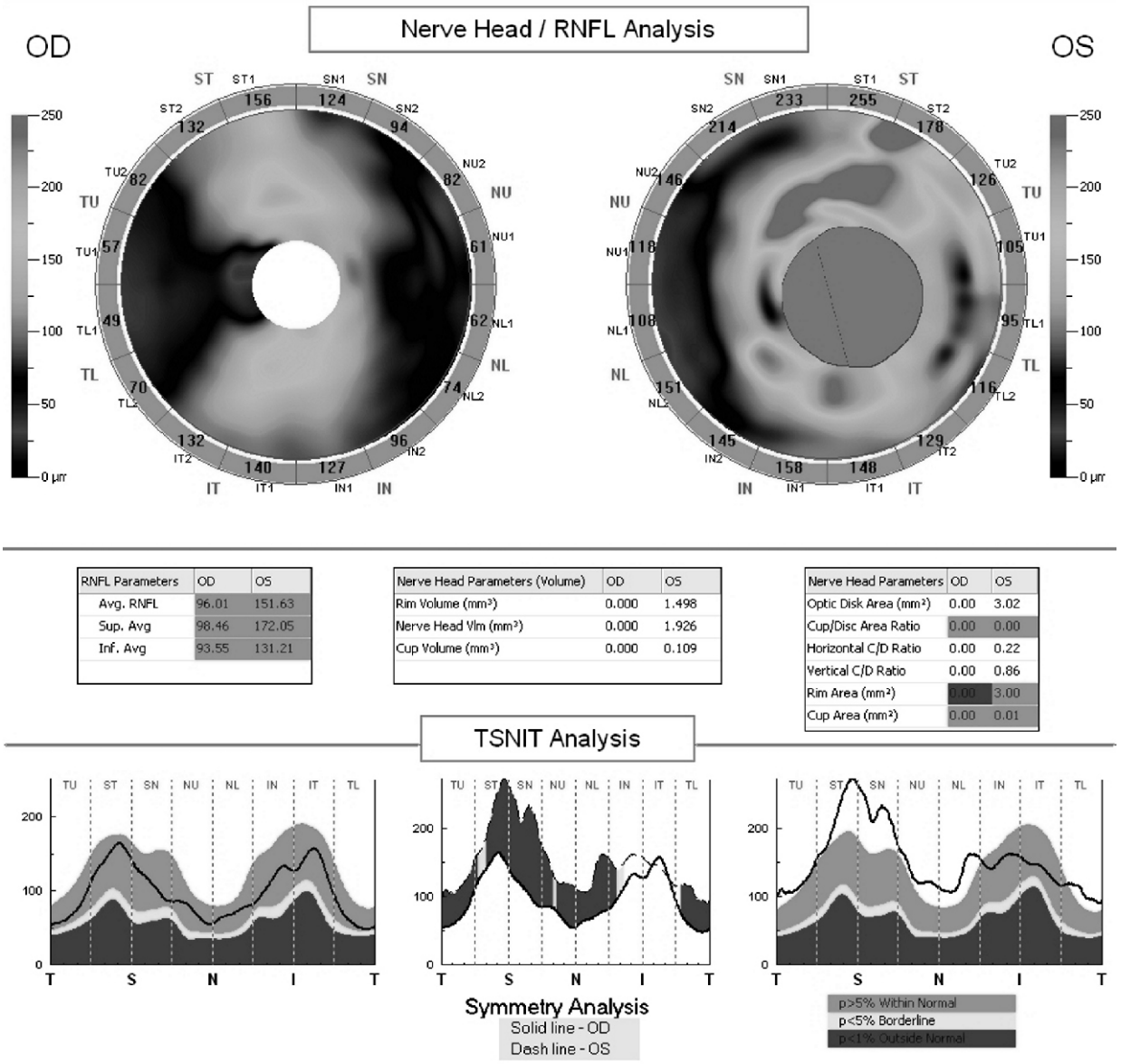
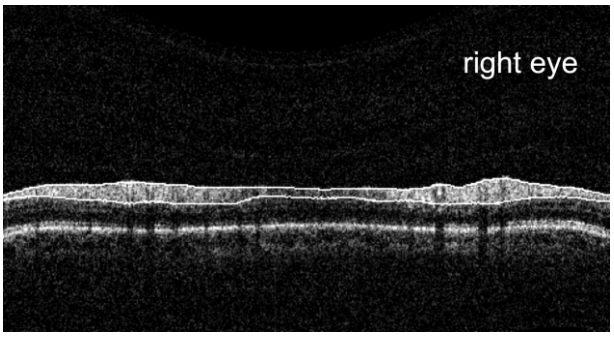


*Fig. 2. **Left eye**: FAG demonstrated hypofluorescence in the area of the OND.The cyst revealed sharp contours of a small region of hypofluorescence in the macula.*

6. Shah V., Vincent R., Desai K., Gallimore G. Rupani M. Documentation of optic disc melanocytoma by spectral and time domain optical coherence tomography. *Can J Ophthalmol.* 2009; **44**(5):603-604.

7. Shastri M., Singhal D., Desai R., Desai S., Saxena D. Melanocytoma of the optic disc with Neuroretinitis. *The Internet Journal of Ophthalmology and Visual Science.* 2009;**7**(1).





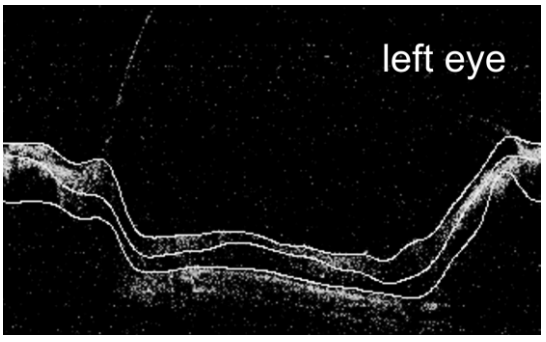


Fig. 3. OCT of the malanocytoma: the lesion displayed a gradual sloping transition from normal retina into the mass and demonstrated hyperreflectivity at its anterior surface with thickening of the retina.

8. Shields J., Shields C., Eagle R., Singh A., Berrocal M., Berrocal J. Central Retinal Vascular Obstruction Secondary to Melanocytoma of the Optic Disc. *Arch Ophthalmol.* 2001;**119**:129-133.
9. Shields J., Demirci H., Mashayekhi A., Shields C. Melanocytoma of the optic disc in 115 cases: the 2004 Samuel Johnson Memorial Lecture, part 1. *Ophthalmology*. 2004;**111**(9):1739-1746.
10. Zimmerman LE, Garron LK. Melanocytoma of the optic disc. *Int Ophthalmol Clin.* 1962;**2**:431-440.