

count of 4/high-power field and demonstrated prominent vascularity and rosette-like areas (Fig. 1A). The neoplastic cells had a Ki-67 index of 50% and stained positively for synaptophysin, chromogranin, thyroid transcription factor 1, and CAM5.2 (perinuclear) (Fig. 1B). They stained negatively for S-100, melan A, and HMB45. The histologic features confirmed diagnosis of a large-cell neuroendocrine carcinoma of pulmonary origin. The patient is currently undergoing chemotherapy with carboplatin and etoposide.

Intraocular metastases are common between 40 and 70 years of age. Metastases to the eye and orbit develop in approximately 0.7% to 21% of patients with lung cancer. The majority of these metastases are from epithelial malignancies.³ Among the neuroendocrine tumours, endobronchial carcinoids are known to produce choroidal metastases.⁴ There are, however, no known reports of choroidal metastasis from a pulmonary large-cell neuroendocrine carcinoma in the literature, but, as the present case indicates, awareness of such rare possibilities is necessary.

REFERENCES

1. D'Abbadie I, Arriagada R, Spielman M, Le MG. Choroid metastases: clinical features and treatments in 123 patients. *Cancer* 2003;98:1232–8.
2. Shields JA, Shields CL, Dross NE, Schwartz GP, Lally SE. Survey of 520 eyes with uveal metastases. *Ophthalmology* 1997;104:1265–86.
3. Abundo RE, Orenic CJ, Anderson SF, Townsend JC. Choroidal metastases resulting from carcinoma of the lung. *J Am Optom Assoc* 1997;68:95–108.
4. Eagle RC Jr, Ehya H, Shields JA, Shields JL. Choroidal metastasis as the initial manifestation of a pigmented neuroendocrine tumor. *Arch Ophthalmol* 2000;118:841–5.

B. Moussa, P. Hooper, S. Chakrabarti
London Health Sciences Centre
London, Ontario
Subrata.Chakrabarti@lhsc.on.ca

Can J Ophthalmol 2007;42:757–8
doi: 10.3129/can.j.ophtalmol.i07-119

Vasoproliferative tumors of the retina secondary to ocular toxocariasis

Vasoproliferative tumors of the retina (VPTR) are relatively rare ocular tumors characterized by a pink appearance, which are highly vascularized gliovascular proliferations accompanied by retinal exudates and hemorrhages. The pathogenesis of VPTR remains to be clarified.^{1,2}

A 64-year-old man suffering from decreased left vision, which began a few weeks after he had eaten raw venison, was referred to our hospital. His corrected vision was 20/10 OD and 20/500 OS, which had gradually deteriorated for a year.

Ophthalmoscopic observations revealed a thick epiretinal membrane (ERM) in the left macular area. A pink tumor surrounded by hard exudates was vaguely observed in the inferotemporal periphery of the retina through vitreous haze. Enzyme-linked immunosorbent assay (ELISA) utilizing the patient's serum and vitreous samples demonstrated a moderately elevated IgG level against *Toxocara canis*, suggesting chronic infection. Since oral steroid administration did not improve the vitreous haze, the patient underwent a vitrectomy in order to excise the opaque vitreous and ERM. The tumor displayed a pink appearance with tortuous vessels on its surface and surrounding hard exudates (Fig. 1).

We performed a cryopexy to treat this highly vascularized tumor. Two months after the operation, the left posterior fundus appeared largely normal, and the exudates surrounding the tumor had resolved. His best corrected vision recovered to 20/100 OS.

Ophthalmoscopic findings and ELISA indicated *Toxocara* infection. ELISA is currently one of the most reliable laboratory tests for the diagnosis of toxocariasis.³ The typical appearance of the *Toxocara* granuloma is a white mass without retinal exudates or hemorrhages,⁴ while the tumor in this case showed a pink appearance with retinal exudates. In addition, the excised ERM lacked granuloma or eosinophilic infiltration, which is essential for *Toxocara* granuloma. Consequently, we diagnosed this pink tumor as VPTR secondary to toxocariasis. Shields et al.¹ reported that 14 of 29 eyes with secondary VPTR were associated with pre-existing ocular inflammation. We considered that chronic inflammation caused by toxocariasis led to VPTR formation in this case.

Treatment methods of VPTR include cryotherapy, laser photocoagulation, plaque radiotherapy, vitrectomy, and enucleation.¹ In the present case, cryotherapy effectively induced a resolution of the exudative changes around the tumor.

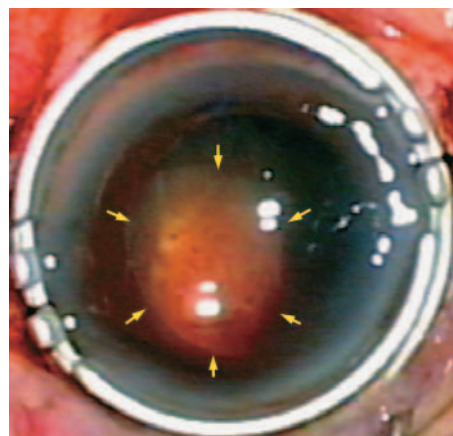


Fig. 1—A vascular-rich tumor observed under the scleral indentation in the inferotemporal retina (arrows).

REFERENCES

1. Shields CL, Shields JA, Barrett J, De Potter P. Vasoproliferative tumors of the ocular fundus. Classification and clinical manifestations in 103 patients. *Arch Ophthalmol* 1995;113:615–23.
2. Heimann H, Bornfeld N, Vij O, et al. Vasoproliferative tumours of the retina. *Br J Ophthalmol* 2000;84:1162–9.
3. Shields JA. Ocular toxocariasis. A review. *Surv Ophthalmol* 1984;28:361–81.
4. Wilkinson CP, Welch RB. Intraocular toxocara. *Am J Ophthalmol* 1971;71:921–30.

Kiwako Mori, Kouichi Ohta, Toshinori Murata

Department of Ophthalmology
Shinshu University School of Medicine
Nagano, Japan
shunasu@yahoo.co.jp

Can J Ophthalmol 2007;42:758–9

doi: 10.3129/can.j.ophtalmol.i07-137

Near vision as predictor of visual acuity in patients with nuclear cataracts

Patients presenting with nuclear cataracts may present a challenge if a proper view of the fundus is unobtainable and the underlying state of the retina is unknown. The nuclear cataract is believed to act as a magnifier, allowing for good vision at short distances and decreased vision at long distances. The near vision test, developed by Jaeger,¹ may be used to provide some information about the underlying retina and to help in determining whether to proceed with surgery.

In this study, patients with nuclear cataracts, even if they showed macular lesions, were given the near vision eye chart and asked to read the lowest line visible under good illumination with correction. The patients' preoperative near vision score and predicted distance vision was examined in relation to their 2 months' postoperative visual acuity, as tested by the Snellen eye chart (Fig. 1).

The information from 53 eyes of the study patients displayed a mean difference in visual acuity between the predicted visual acuity scores from the preoperative near vision and the measured postsurgery visual acuity test scores of 9.6 (SD 16.8). The median difference was 5.0 points. Points were considered to be the difference in the denominator of the distance vision in the Snellen chart. For example, 20/30 was 10 points different than 20/40. In 84.9% of the patients, the predicted visual acuity was within ± 20 points. For example, a near vision of J2, predictive of 20/30 vision, was observed in 84.9% of cases to be followed by a postsurgery visual acuity score within ± 2 lines. Overprediction of the visual acuity occurred in the majority of the rest of the patients (15.1% of the total). A highly significant relation was

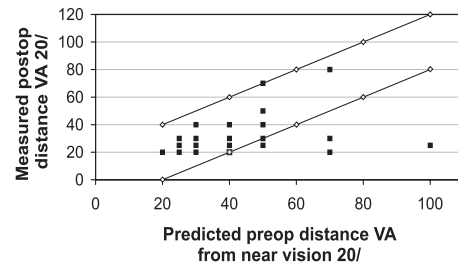


Fig. 1—The graph compares preoperative predicted distance vision and measured postoperative distance vision from 53 eyes. A point falling within the 2 lines demonstrates a postoperative distance vision within 2 lines on the Snellen eye chart of what was predicted preoperatively. (Postop, postoperative; preop, preoperative; VA, visual acuity.)

observed between presurgery near vision scores and postsurgery visual acuity test scores (Kendall's τ_b coefficient = 0.283, $p = 0.006$).

The near vision eye chart is a rapid and inexpensive test that can be used to help predict visual acuity outcomes in patients with nuclear cataracts. The results can help both physicians and patients decide whether the risks and benefits of proceeding with surgery are worth accepting.

REFERENCE

1. Runge PE. Eduard Jaeger's Test-Types (Schrift–Scalen) and the historical development of vision. *Trans Am Ophthalmol Soc* 2000;98:375–438.

Kelly D. Schweitzer, Raúl García

Pasqua Hospital Eye Centre
Regina, Saskatchewan
rgarcia@accesscomm.ca

Can J Ophthalmol 2007;42:759

doi: 10.3129/can.j.ophtalmol.i07-127

Bilateral central retinal artery occlusion associated with leukemic optic neuropathy

A 6-year-old boy was given a diagnosis of acute lymphoblastic leukemia in September 2003. A central nervous system (CNS) relapse developed during the course of his 76th week of continuous chemotherapy in July 2005. Thereafter, he received systemic reinduction chemotherapy with intrathecal chemotherapy and CNS irradiation. In March 2006, during the course of chemotherapy for CNS relapse, he experienced painless, progressive loss of all vision in his left eye and was referred for ophthalmologic assessment.

On presentation, examination revealed a visual acuity of 20/20 in the right eye and no light perception in the left eye with a left afferent pupillary defect. Fundus examination revealed a pale retina, interruption of retinal arterial blood