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Case illustrated

Toxocariasis of the eye

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A 29-year-old woman presented with a 3-month history of superior shadowing and 1-week decreasing central vision in her right eye. Her visual acuity was 6/15 in the right eye and 6/6 in the left. Funduscopy revealed vitreous opacities and a white nodule in the nasal inferior peripheral retina (Fig. 1A). Ultrasonography showed this intraretinal nodule to be 5 mm in diameter (Fig. 1B). The patient underwent vitrectomy, and the vitreous was found to be *Toxocara* IgG antibody positive (65.33 U/mL), with an increased Goldmann-Witmer coefficient (165.91). Goldmann-Witmer coefficient is calculated to assess the intraocular production of antibodies against *Toxocara*. The calculation formula is:

$$\frac{anti-ToxocaraIgG\ titer\,(\mathrm{IU/ml})in intraocular fluid}{anti-ToxocaraIgG\ titer\,(\mathrm{IU/ml})in serum}\times\frac{serum totalIgG\,(\mathrm{g/l})}{intraocular fluid totalIgG\,(\mathrm{g/l})}.$$

Greater than 3.0 is considered suggestive of ocular toxocariasis [1]. After the surgery, she took prednisone and mebendazole for 3 weeks. However, 2 months later, retinal vasculitis still developed (Fig. 1C). This was successfully treated with retrobulbar injection of triamcinolone acetonide, and her vision recovered to 6/9.5.

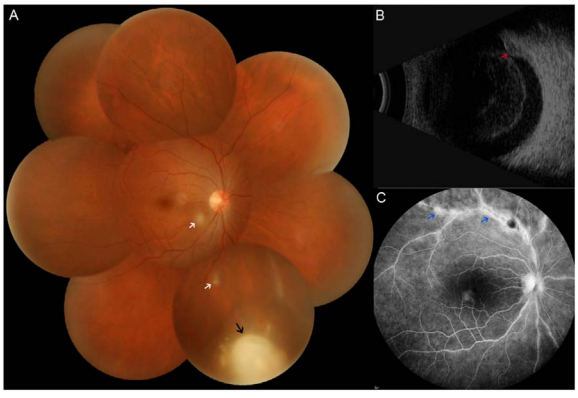

Fig. 1. (a) Fundus photograph showed vitreous opacities (white arrows) and a white granuloma in the nasal inferior peripheral retina (black arrow) before surgery. (B) Ultrasonography showed the intraretinal granuloma (red arrow) before surgery. (C) Fundus fluorescein angiography showed the retinal vasculitis occurred 2 months after surgery (blue arrows).

Ocular toxocariasis is a zoonosis caused by *Toxocara canis* or *Toxocara cati*. Humans can be infected by ingesting the ova from contaminated by dog or cat feces. The morbidity is wide range in different geographic areas and countries. It caused blindness mostly due to secondary serious uveitis [2]. Such white peripheral intraretinal granuloma is a prominent feature of ocular toxocariasis [3]. Retinal vasculitis can present near or remote from the active lesion [4]. While in our patient, retinal vasculitis still occurred after surgery and medication use. This is not previously reported and might be result to sustained antigen release of the dead Toxocara body. Therefore, retinal vasculitis can be noticed even after systemic treatment.

Contributors

All authors cared for the patient and contributed to writing of the manuscript. Written consent to publication was obtained.

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Appendix A. Supplementary data

Supplementary data associated with this article can be found, in the online version, at http://dx.doi.org/10.1016/j.idcr.2017.05.009.

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