v. 5, n. 30, 2025

International Journal of Health Science

ACQUIRED OCULAR TOXOPLASMOSIS IN AN ATYPICAL LOCATION: CASE REPORT

Giovana Baldan
http://lattes.cnpq.br/3919942443584344

Lucas Issamu Itinose
http://lattes.cnpq.br/5193478319264644

Luciane Bugmann Moreira de Oliveira
https://lattes.cnpq.br/1994219036378718

Carlos Augusto Moreira Neto
http://lattes.cnpq.br/7462211121032251

Acceptance date: 29/09/2025

Abstract: Ocular toxoplasmosis (OT) is an important cause of posterior uveitis, with potential severe vision impairment. This report presents an atypical case of acquired monocular OT with scarring near the optic disc. The patient reported visual loss since the age of 25, when he lived in a rural area without basic sanitation and handled raw meat—risk factors for Toxoplasma gondii infection. Examinations performed in 2024 revealed scarring chorioretinitis (CCR) with atypical localization of the lesions, which can hinder diagnosis and favor complications such as optic neuropathy. The case reinforces the importance of regular ophthalmological follow-up and complementary tests to detect early recurrence. In addition, it highlights the need to educate patients about disease prevention and the importance of seeking ophthalmological care in the event of visual symptoms or known risk factors.
Keywords: Ocular toxoplasmosis, Toxoplasma gondii, Uveitis, Retinocoroiditis, Visual loss

INTRODUCTION

Infection caused by Toxoplasma gondii is a systemic disease commonly associated with ocular manifestations and is the leading cause of infectious posterior uveitis worldwide. The disease can be congenital or acquired, and in acquired cases, the infection is associated with environmental factors such as handling and eating raw meat, lack of basic sanitation, and living in rural areas.

Ocular toxoplasmosis (OT) can be a potentially serious condition, reducing visual acuity. The most common form of the disease presents lesions in the macular region. The case presented involves a scar lesion located near the optic disc, representing an unusual presentation of the disease.

OBJECTIVE

To report an atypical case of ocular toxoplasmosis to contribute to medical practice and highlight the importance of ophthalmological follow-up, ensuring adequate treatment and preventing recurrence.

CASE REPORT:

A 56-year-old white male patient from Fazenda Rio Grande–PR, hypertensive, sought ophthalmological care in 2024 with a complaint of presbyopia.

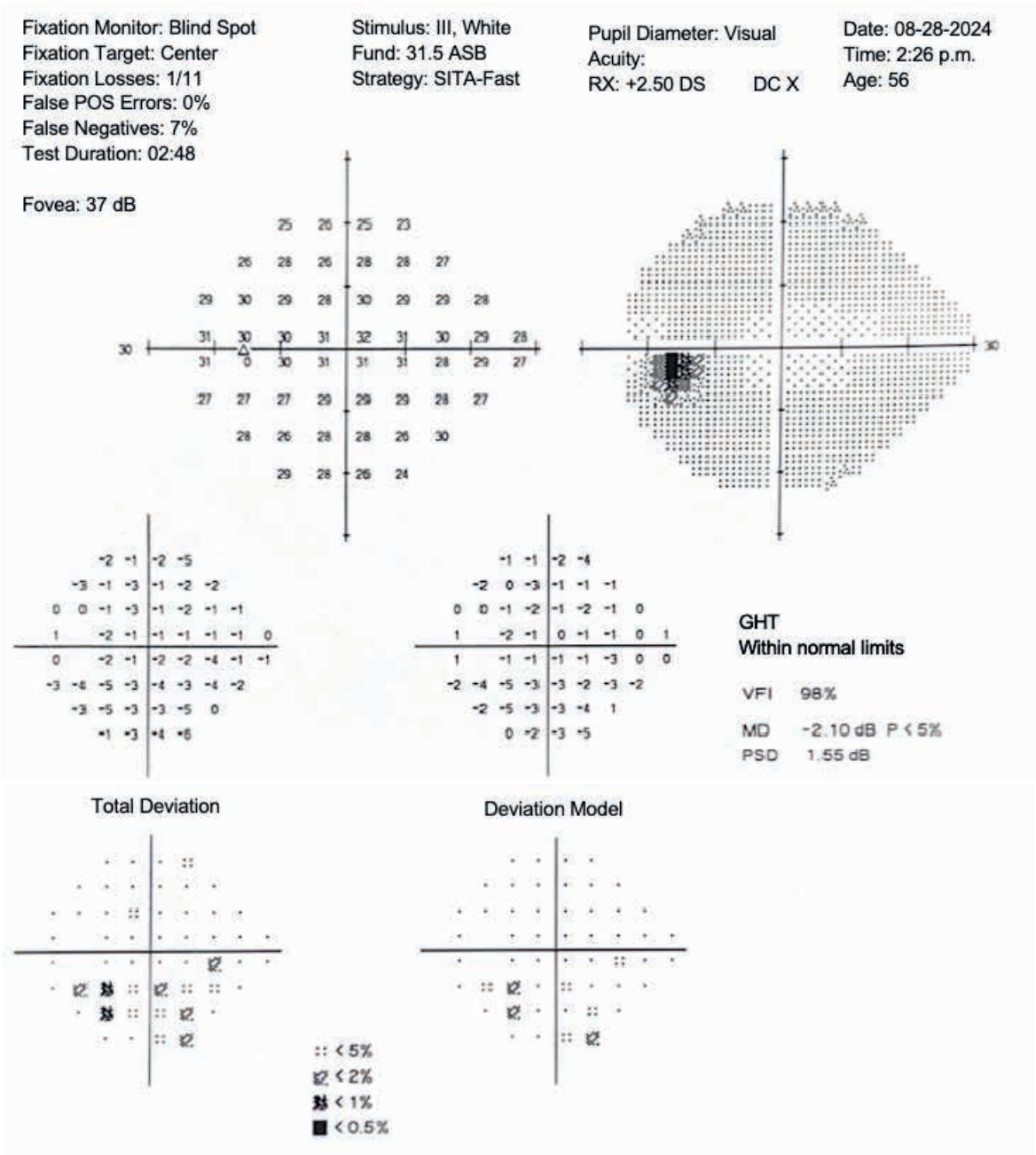
He reported that, at the age of 25, he had an episode of decreased vision in his right eye with a diagnosis of ocular toxoplasmosis confirmed by ophthalmological and serological tests. The treatment instituted at the time was clinical, with the use of oral medication and eye drops for about six months. However, the patient was left with permanent vision loss in this eye.

A relevant fact for the case is that, according to the patient's description, he lived in a rural area without basic sanitation and frequently handled raw meat at the time of the diagnosis- . These factors are known to increase the risk of infection by Toxoplasma gondii.

At the ophthalmological consultation in 2024, the patient presented with uncorrected visual acuity of 20/150 in the right eye (RE) and 20/20 in the left eye (LE). Refraction was flat for distance in both eyes, with an addition of +2.00 for near vision. No changes were observed on biomicroscopy. Intraocular pressure was within normal limits. Extrinsic eye movements were preserved, with orthotropia in the primary gaze position. On examination of the right fundus, healed lesions were observed near the optic disc, with characteristics compatible with scarring chorioretinitis (SCR). This is a case of SCR with atypical presentation of ocular toxoplasmosis, with lesions near the optic disc.

The following complementary examinations were performed:

- Computerized campimetry (Figure 1) showed significant visual deficit in the right eye, evidenced by areas of absolute scotoma (shown in black), indicative of lack of perception of peripheral light stimuli. The left eye showed a normal pattern, with preservation of the visual field throughout its entire extent.
- Retinography (Figure 2), which revealed scarred retinocoroidal lesions in an atypical location near the optic disc, unlike the more common presentation near the macular region.
- Retinal optical coherence tomography (OCT) showed no significant changes in either eye.



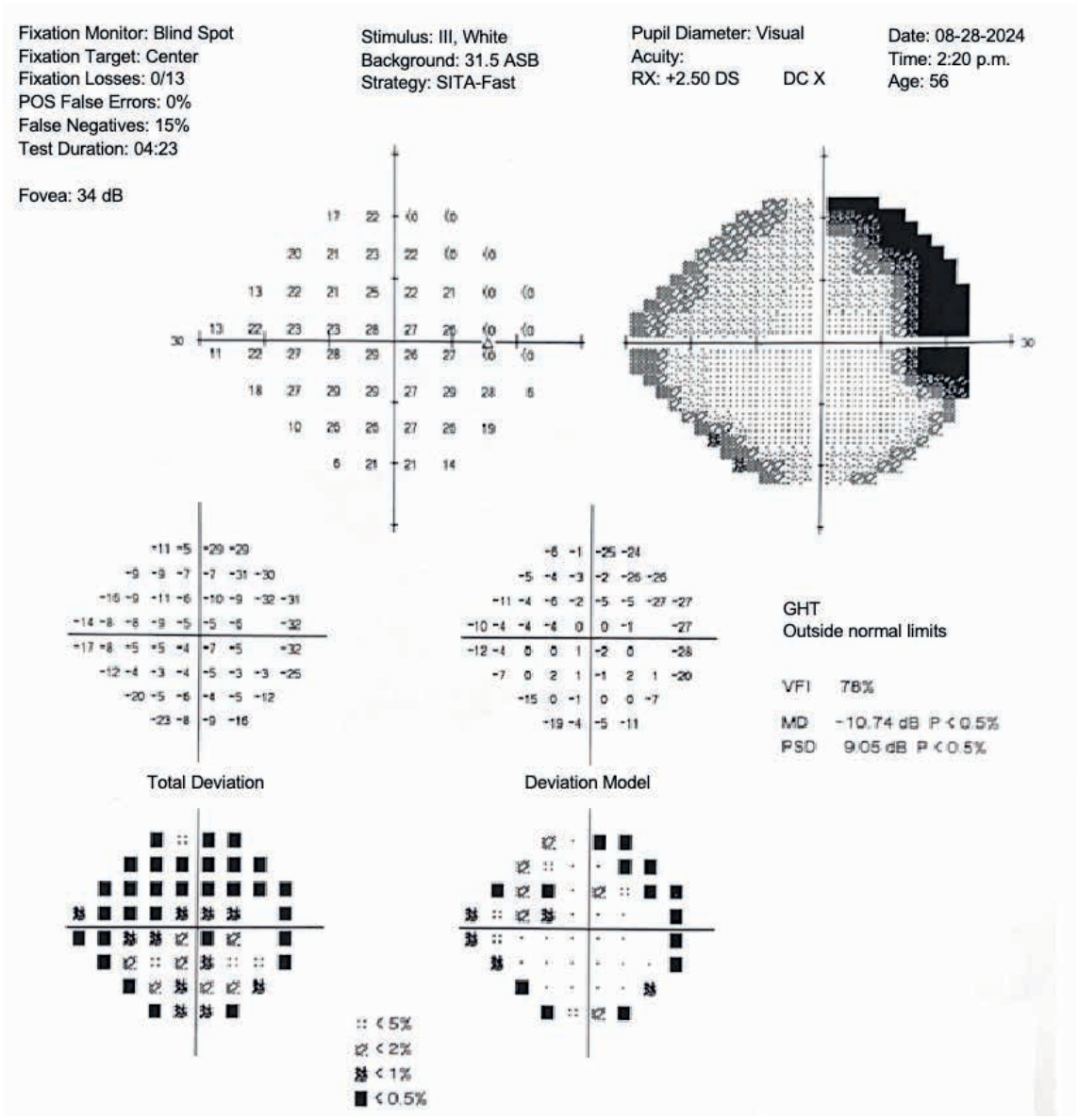


Figure 1: Campimetry exam showing significant vision loss in the right eye.

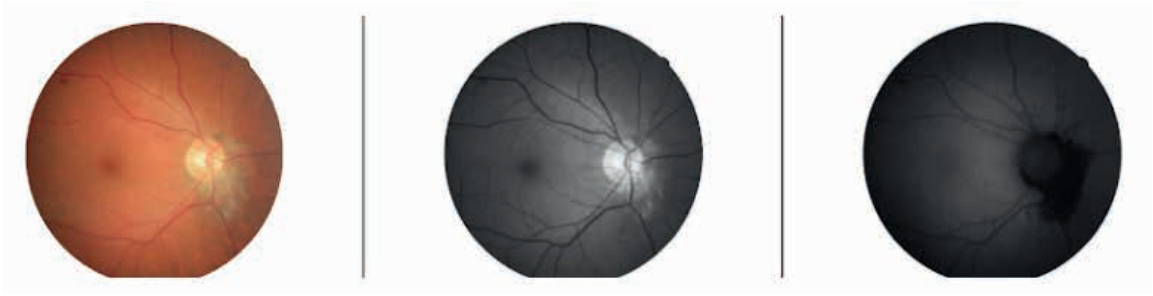


Figure 2: Retinography of the right eye showing the scarred area.

DISCUSSION

Congenital toxoplasmosis is transmitted transplacentally and usually presents bilaterally. Acquired toxoplasmosis occurs after birth, when the individual comes into contact with the protozoan, and may be monocular. The risk of infection increases with certain environmental factors, such as living in rural areas, lack of basic sanitation, eating and handling raw meat, and eating fruits and vegetables that have not been properly washed. In the case presented, the patient has all the risk factors mentioned, which indicates primary infection. In addition, the fact that it is monocular corroborates acquired ocular toxoplasmosis, since studies show that congenital infection has a higher prevalence of binocular involvement.

Used to obtain images of the fundus and its structures, retinography is an essential exam for obtaining information about the scars left by toxoplasmosis, as well as an important tool for observing satellite lesions in cases of disease recurrence, in which it would show different stages of healing. In the reported case, retinography revealed only an atypical location of the retinocoroidal lesions.

The atypical location of the lesion near the optic disc is concerning because it can cause secondary optic neuropathy, neovascularization of the optic disc, and severe inflammatory complications, which can lead to irreversible damage to central and peripheral vision. In addition, it can hinder the differential diagnosis with other neuro-ophthalmological diseases, delaying appropriate treatment. Furthermore, there is an increased possibility of recurrence, requiring more rigorous follow-up.

The patient's retinography did not show satellite CCR, characterized by the formation of lesions near the primary scar. Despite this, such lesions are considered a common finding in cases of OT, which would indicate recurrence of disease activity in more peripheral areas of vision. Regular ophthalmological follow-up is essential to determine disease recurrence and diagnose it, thus determining parasite activity and providing the required care. Studies report that recurrence of toxoplasmosis retinocoroiditis occurs because the protozoa remain dormant in the inner layers of the retina until a condition of low immunity allows them to manifest. Any change in the immune system can trigger disease reactivation and new retinal lesions.

Computerized campimetry is an important tool for quantifying the extent of functional visual loss, demonstrating areas of scotomas in the affected eye. This finding not only helps to demonstrate the visual problem to the patient, but also in planning visual rehabilitation strategies and guiding the patient about the impacts on their daily performance and risks of accidents.

In this context, it is emphasized that ophthalmological follow-up with complementary examinations is essential for early detection of any reactivation of the disease and to allow for appropriate intervention when necessary. Complementary examinations, such as campimetry, can help the patient understand their visual difficulty, and OCT is recommended to check for involvement of more internal structures of the retina.

In addition, it is essential to make patients aware of risk factors, especially diseases that greatly lower immunity. Prophylactic treatment was not instituted because the lesion is not macular and, considering the risks and benefits, the hepatic and renal toxicity of the drugs is very high.

CONCLUSION

This case report highlights the importance of early diagnosis, regular follow-up, and awareness among healthcare professionals about atypical presentations of ocular toxoplasmosis.

Recurrence of ocular toxoplasmosis can lead to severe retinal lesions and vision loss, reinforcing the importance of regular follow--up and the need for complementary tests.

In addition, public awareness of preventive measures, such as proper food hygiene and control of risk factors, can reduce the incidence of ocular toxoplasmosis. It is also important to disseminate preventive measures and warning signs for the disease and the need to seek ophthalmological care.

REFERENCES

1. . Garweg JG. Ocular toxoplasmosis: an update. Klin Monbl Augenheilkd. 2016 Apr;233(4):534-9. doi: 10.1055/s-0041-111821. Epub 2016 Apr 26. PMID: 27116531. Disponível em: https://pubmed.ncbi.nlm.nih.gov/27116531/.

2. Espinoza-Rojas J, López-Mora E, Dabanch-Peña J, Cruz-Choappa R. Recomendaciones para el diagnóstico y tratamiento de la infección por Toxoplasma gondii [Recommendations for the diagnosis and treatment of infection by Toxoplasma gondii]. Rev Chilena Infectol. 2022 Apr;39(2):132-137. doi: 10.4067/S0716-10182022000200132. PMID: 35856985. Disponível em: https://pubmed.ncbi.nlm.nih.gov/35856985/.

3. Sociedade Brasileira de Uveítes e Inflamações Intra-Oculares. Toxoplasmose ocular [Internet]. [s.l.: s.n.]; [acesso em 2025 mar 31]. Disponível em: https://uveitesbrasil.com.br/wordpress/wp-content/uploads/01-E-bookTOXOPLASMOSEOCULAR.pdf.

4. Park YH, Nam HW. Clinical features and treatment of ocular toxoplasmosis. Korean J Parasitol. 2013;51(4):393–399. doi:10.3347/kjp.2013.51.4.393. Disponível em: https://pmc.ncbi.nlm.nih.gov/articles/PMC3770869/.

5. Kabedi NN, Mwanza JC. Neuroretinitis and juxtapapillary retinochoroiditis as atypical presentations of ocular toxoplasmosis. Int Med Case Rep J. 2021;14:657–661. doi:10.2147/IMCRJ.S332147. Disponível em: https://pmc.ncbi.nlm.nih.gov/articles/PMC8473713/.