

# CONGENITAL OCULAR TOXOPLASMOSIS: A CASE SERIES

Samuel Montenegro Pereira<sup>2,3</sup>, Karlos Ítalo Souza Viana<sup>4</sup>, Maria Carolina Rocha Muniz<sup>1</sup>, Rian Vilar Lima<sup>1</sup>, Ana Daniele Andrade Vitoriano<sup>3</sup>, Rivianny Arraes Nobre, Cristianne Melo de Mendonça<sup>3</sup>, Daniel da Rocha Lucena<sup>5</sup>

<sup>1</sup>Discente da Universidade de Fortaleza, <sup>2</sup>Hospital e Maternidade Dra Zilda Arns Neumann, <sup>3</sup>Hospital Geral Dr. Cesar Cals, <sup>4</sup>Hospital Geral de Fortaleza, <sup>5</sup>Escola Cearense de Oftalmologia

## PURPOSE

To present the clinical features of five case reports of congenital ocular toxoplasmosis.

## METHODS

Five babies were examined and had their medical record reviewed from January to June 2022 in two different hospitals in Fortaleza, Brazil. Toxoplasmosis infection was confirmed in all mothers and infants based on the presence of serum anti-T. gondii immunoglobulin G (IgG) and immunoglobulin M (IgM) antibodies.

Ocular abnormalities were documented using a wide-field digital imaging system.

## RESULTS

Three male and two female newborns were included in the study. Six out of ten eyes presented atrophic scars on the first exam (less than 1 month old), and just one child presented a bilateral lesion (in two eyes) only after 7 months of age.

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Nevertheless, this baby was born with microphthalmia, bilateral leukocoria and difficulties in making eye contact, and mother admitted an irregular treatment during pregnancy and of the child after birth. Within all those lesions, two affected the macula. The children's funduscopy images are shown next and the laboratorial exams in mothers and newborns are summarized in Table 1.

**Figure 1:** Retinography of newborn 1 revealing acute lesion on macula (right eye)



**Figure 2:** Retinography of baby 2 identifying bilateral chorioretinal scars (typical wagon-wheel lesions)

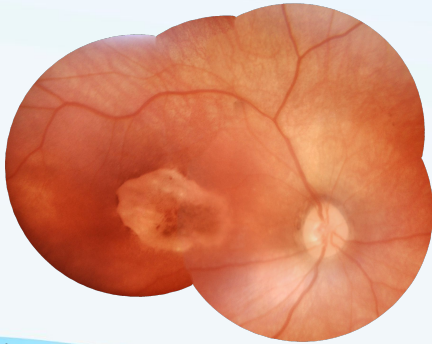


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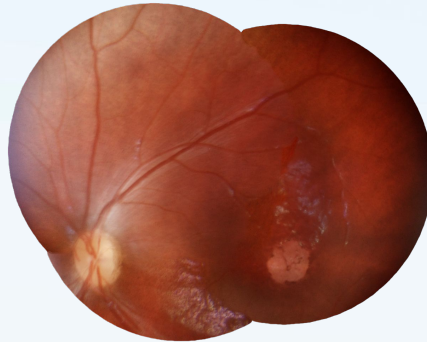
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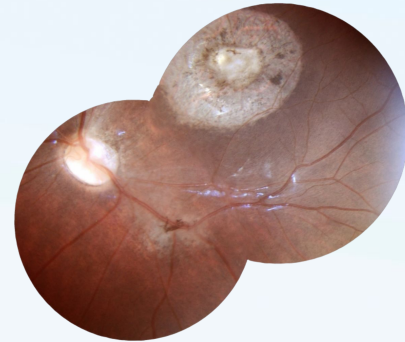
**Figure 3:** Fundoscopy of newborn 3 showing lesion in atypical activity format (right eye)



**Figure 4:** Retinography of baby 4 displaying atrophic macular scars (left eye)



**Figure 5:** Fundoscopy of baby 5 showing atypical scar lesion with calcifications (left eye)



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		IgG anti-T gondii (IU/ml)	IgM anti-T. gondii (IU/ml)
Case 1	Mother	>400 (Avidity 20%)	60,8
	Baby	>400	12,4
Case 2	Mother	18,3	0,17
	Baby	>250	1,09
Case 3	Mother	Negative	Positive
	Baby	>400	110
Case 4	Mother	41,8	1,8
	Baby	199,6	19,75
Case 5	Mother	Positive (Low Avidity)	Positive
	Baby	138	84,6

**Table 1:** Serological Status of the Patients

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## DISCUSSION

Without treatment, most fetuses infected in early stages of pregnancy die in utero or in the neonatal period, or develop severe neurological and ophthalmological sequelae. The high avidity anti-T. gondii IgG in our patient's mothers and the severe ophthalmological sequelae in the child suggest that maternal infection developed in the early stages of pregnancy. Our study wants to show the importance of strict serological follow-up to confirm the diagnosis

in cases with suspected congenital toxoplasmosis.

## REFERENCES

1. Parasites - Toxoplasmosis. Centers for Disease Control and Prevention. 2022.
2. J.P. Dubey; F.H.A Murata; C.K. Cerqueira; O.C.H. Kwok; I. Villena. Congenital Toxoplasmosis in Humans: An Update of Worldwide Rate of Congenital Infections. Parasitology, 2021.