

## Ocular toxoplasmosis: A Clinical Case from Gaza, Palestine

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### Abstract

A 21 years-old male was complaining from; decrease in vision, fever, blurring and inability to open the eyes in the sun. The patient attended the Eye hospital in Gaza where Fundus photo and serological tests were carried out in the eye hospital and Islamic University-Gaza laboratories. The patient complains from blurring and retinochoroiditis. The ophthalmological examination revealed hypertensive non-granulomatous panuveitis, retinal vasculitis with focus of retinochoroiditis with lesioned central area suggestive of ocular toxoplasmosis. The serological tests proved that IgG was high in the patient serum and recorded 54.50 while IgM was negative. The fundus photo showed a clear lesion. Ocular toxoplasmosis is present among patients attending Eye hospital. The clinical cases could be detected among patients complaining from retinochoroiditis. Ocular toxoplasmosis should be considered, and more investigations are needed.

**Keywords:** Ocular; toxoplasmosis; fundus; eye; Gaza; infection.

### Introduction

Ocular toxoplasmosis is caused by the protozoa parasite *Toxoplasma gondii*, and can be acquired congenitally or by ingesting uncooked meat infected with cysts or vegetables and water contaminated by oocysts shed by cats [1]. *T. gondii* infects up to a third of the world's population and is the most frequent etiology of infectious intraocular inflammation (uveitis) [2]. In some countries, up to 50% of all cases of posterior uveitis in a given population can be attributed to toxoplasmosis [3-4]. Toxoplasmic retinochoroiditis can be seen in the setting of congenital or postnatally acquired disease as a result of acute infection or recurrence [5-6]. This disease typically affects the posterior pole of one eye, and the lesions can be solitary, multiple or satellite to a pigmented retinal scar. The retina is the primary site of *T. gondii* infection in the eye but the choroid, vitreous and anterior chamber are also involved by inflammation. The choroid is secondarily affected, but choroidal lesions do not occur in the absence of retinal infection. An intense, secondary iridocyclitis may also be present [6-7]. The optic nerve head can also be involved in ocular toxoplasmosis [8]. Ocular complications include choroidal neovascularization, cataract, glaucoma, optic nerve atrophy and retinal detachment, more frequently in children [9]. The appearance of toxoplasmic retinochoroiditis lesions vary. Their duration and intensity may be related to host, parasite, or environ-

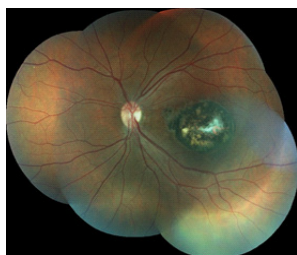
mental factors. Genotyping of the infecting parasite appears to be an important determinant of disease severity in immunocompetent patients [7]. Retinal vasculitis and associated inflammatory reactions may be the only ophthalmic sign during the early stages of a newly acquired *T. gondii* infection. Later development of retinitis or scars consistent with toxoplasmic retinochoroiditis in the same eye suggests that the initial, isolated inflammation may have been caused by the parasites [10]. Transplacental transmission of *T. gondii* to the fetus during pregnancy is another important source of infection. The mother can transmit toxoplasmosis to the fetus if infected by *T. gondii* during pregnancy or a few months before conception [11]. The infection can result in visual and hearing loss, mental and psychomotor retardation, seizures, hematological abnormalities, hepatosplenomegaly, or death [12]. Retinochoroidal scars are the most characteristic eye manifestation of a congenital or prenatal infection [13].

### Case report

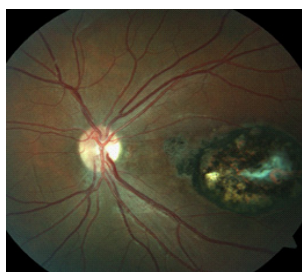
We present a clinical case of ocular toxoplasmosis, an ethical approval was obtained from the Ministry of Health in addition to the patient consent form. The medical history of the patient was obtained through face to-face interview. A 21 years-old male was attending the Eye Hospital, Gaza. In 2011 the patient was complaining from; decrease in vision, fever, blurring and

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inability to open the eyes in the sun. Then the patient was followed by his physician. In 2012, the same symptoms appeared again, the same eye management protocol was done for 10 days. Until, 2015, the patient has no complains and he was well. In 2016, the right eye of the patient was found affected with chorioretinitis with normal intraocular pressure. The patient complains from blurring and retinochoroiditis. The patient is a single with secondary education, is living within a family, no cats breeding in the house, but birds is being. Sometimes he reported that he is eating –un-washed vegetables. The patient was photographed for “Fundus photo” Ungeography using VISUCAM 500, (Manufacturer, Zeiss) in the Eye Hospital. Optometric measurements were carried out: For the left eye before complaining: 6/60 after the complain 1/60. For the right eye before complaining: 6/6 after the complain 6/18. Serological examination for both IgG and IgM antibodies were carried out in the Islamic University-Gaza laboratories. The serological tests proved that IgG was high in the patient serum and recorded 54.50 while IgM was negative. The fundus photo showed a clear lesion.



**Figure 1:** Inferior area of retinochoroiditis.



**Figure 2:** Retinal scar.

## Discussion

This is the first case of ocular toxoplasmosis to be recorded as a result of clinical and lab diagnosis from Gaza. The retina in the left eye is appearing to be ulcerated (**Figure 1**). Inferior area of retinochoroiditis). The right eye was found to have parafoveal small scar (**Figure 2**). Retinal scar). While the left eye showed macular scar. The serological tests proved that IgG was high in the patient serum and recorded 54.50 while IgM was negative. The fundus photo showed a clear lesion. The situation of toxoplasmosis in Gaza Strip is not so clear but its existence cannot be excluded. A few literatures on this subject has been published [14-16]. They used ELISA the *Toxoplasma gondii* among pregnant and aborted women attending hospitals in Gaza Strip. They had different prevalence’s of Anti-Toxoplasma IgG and IgM. It was obvious that the risky still standing for the damage of the right eye of the patient.

## Conclusions

Ocular toxoplasmosis is present among patients attending Eye hospital. The clinical cases could be detected among patients complaining from retinochoroiditis.

**Recommendations:** Ocular toxoplasmosis should be considered, and more investigations are needed.

**Conflict of interests:** The authors declared that there is no conflict of interest.

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