

## Pseudotumoral Form of Choroidal Tuberculosis: A Case Report

Sara Bouchriha\*, Selma Ouazzani, Sarah Belghmaidi, Ibtissam Hajji and Abdeljalil Moutaouakil

Ophthalmology Department, CHU Mohamed VI, Marrakech, Morocco

\*Corresponding Author: Sara Bouchriha, Ophthalmology Department, CHU Mohamed VI, Marrakech, Morocco.

Received: March 25, 2024

Published: May 02, 2024

© All rights are reserved by Sara Bouchriha., et al.

### Abstract

Choroidal tuberculoma is a rare form of ocular manifestation of tuberculosis; it is seen exceptionally in immunocompetent subjects. It poses both a diagnostic and therapeutic challenge. The main differential diagnosis is malignant melanoma, a diagnostic error could lead to aggressive treatment of the eye.

**Keywords:** Choroidal Tuberculoma; Eye; Ocular Tuberculosis

### Introduction

Ocular manifestations in tuberculosis are rare, occurring in only 1-2% of cases. Choroidal tuberculoma is an exceptional presentation of ocular tuberculosis, and its prognosis depends above all on the location of the tuberculoma. The problem is the differential diagnosis with melanoma, which could lead to aggressive treatment of the eye. We report here on a case of pseudo tumoral choroidal granuloma revealing the disease.

### Observation

An 18-year-old man with no specific pathological history presented with a 10-day history of decreased visual acuity in his right eye.

Initial ophthalmological examination of the right eye revealed reduced visual acuity at counts fingers closely, with normal anterior segment examination. Examination of the posterior segment revealed a yellowish choroidal mass in the macular area, associated with retinal serous detachment and discrete vitreous inflammation (Figure 1).

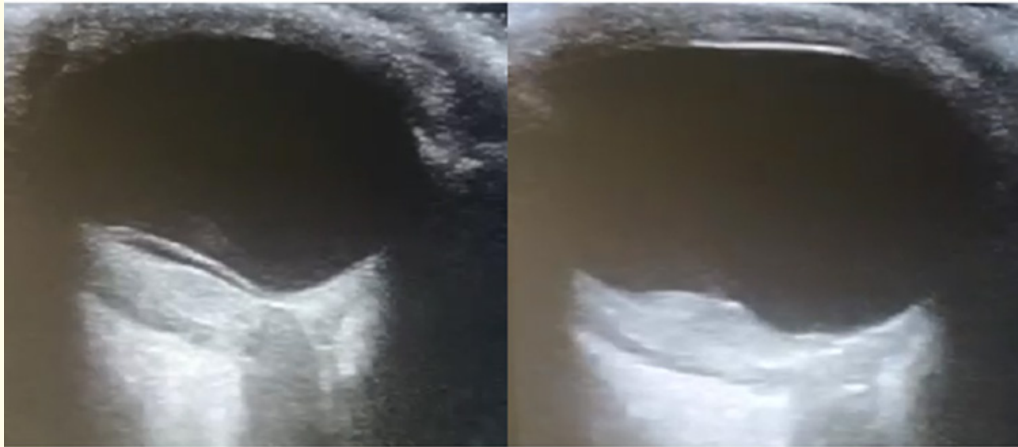
Examination of the left eye was unremarkable.



**Figure 1:** Retinography showing a choroidal mass in the macular area.

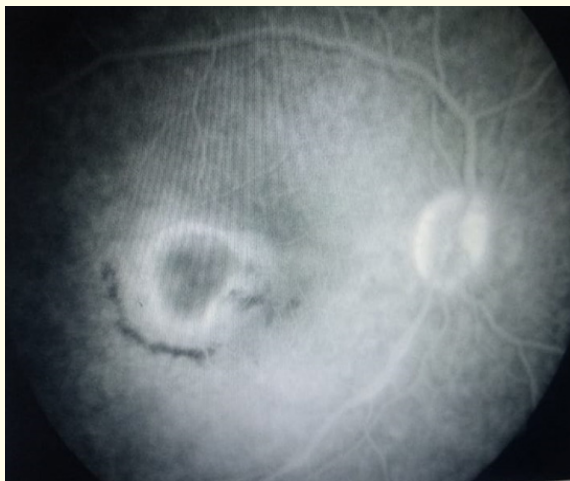
Ocular ultrasound revealed a hyperechoic choroidal mass, with retinal detachment opposite (Figure 2).

OCT revealed a choroidal mass with a hyper-reflective lesion between the pigment epithelium and the neurosensory retina, associated with perilesional retinal serous detachment.

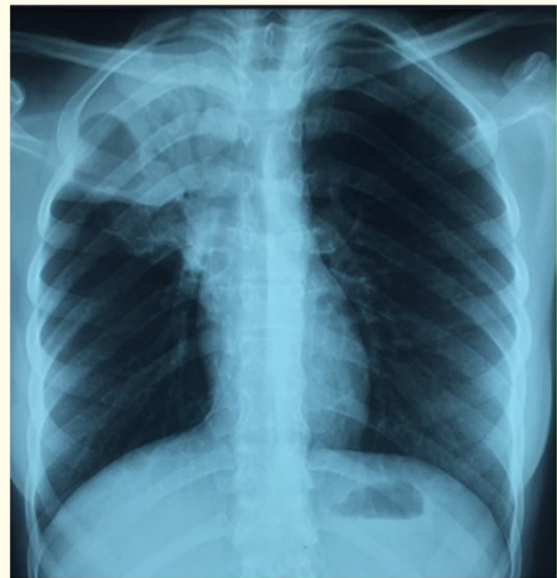


**Figure 2:** Ocular ultrasound showing a choroidal mass associated with retinal detachment.

Fluorescein angiography showed a hypofluorescent lesion with peripheral impregnation of the lesion at late times (Figure 3).



**Figure 3:** Fluorescein angiography showing a hypofluorescent lesion with peripheral impregnation at late times.



**Figure 4:** Chest X-ray showing tuberculous cavern.

The diagnosis of achromic melanoma was suspected and an extension work-up was performed. The chest X-ray showed a pulmonary cavern (Figure 4).

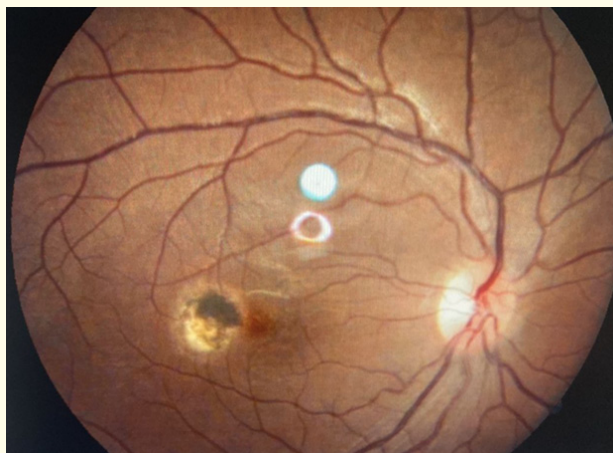
The etiological approach was completed by quantiferon, which proved positive.

HIV serology was negative.

Given the clinical context, the appearance of the focus and the results of the etiological work-up, the diagnosis of choroidal tuberculoma was accepted.

The patient was put on an antibacillary regimen of isoniazid, rifampicin, pyrazinamide and ethambutol for 9 months.

The patient's visual acuity improved to 1/10, and the choroidal lesion began to heal, with progressive regression of the serous retinal detachment (Figure 5).



**Figure 5:** Retinography showing the beginning of lesion healing.

## Discussion

Ocular tuberculosis is rare. It is mainly seen in miliary forms, and exceptionally in primary infection [1], despite its resurgence with AIDS [2].

Choroidal involvement is exceptional and atypical [3], occurring mainly in miliary and severe forms of the disease, and is most common in immunocompromised subjects [4], where the infection is hematogenous. Our case reports an unusual form of the disease, occurring in an immunocompetent patient and inaugurating the disease. Most publications report cases in patients with AIDS [5].

Clinically, choroidal tuberculoma appears as a large, yellowish, sub-retinal mass ranging in size from 4mm to 14mm, most often unilateral at the posterior pole, and may be associated with exudative retinal detachment [6].

Tuberculomas close to the macula may be responsible for a profound and irreversible drop in visual acuity [7].

The diagnosis of choroidal tuberculoma is always a challenge, and is most often presumptive, based on a combination of systemic and ocular findings [8,9].

This diagnostic difficulty is explained by the pauci bacillary aspect of the ocular involvement; the involvement is often secondary to an immune system reaction without the presence of a germ, which is why the detection of intraocular *Mycobacterium tuberculosis* is very rare, and sometimes the diagnosis depends on a trial of antituberculosis treatment.

A favorable response to treatment is a sign in favor of the diagnosis, whereas a poor response to treatment should call the diagnosis into question [5].

Treatment must be initiated as soon as possible, as delays in diagnosis or treatment can result in serious irreversible sequelae [1].

Treatment is based on systemic quadritherapy of isoniazid, rifampicin, pyrazinamide and ethambutol for two months, followed by dual therapy (isoniazid and rifampicin) [10].

Corticosteroid therapy will be indicated in cases of macular edema, associated retinal vasculitis or in patients with severe inflammation [11].

Any patient undergoing anti-bacillary treatment should be monitored regularly for ocular complications of treatment, notably optic neuritis [11].

## Conclusion

Tuberculosis-related ophthalmological disorders are rare, non-specific and polymorphous.

Choroidal tuberculoma is an unusual form of ocular tuberculosis, and its diagnosis is based on a combination of clinical, biological and radiological evidence.

## Bibliography

1. Muccioli C and Belfort R. "Presumed ocular and central nervous system tuberculosis in a patient with the acquired immunodeficiency syndrome". *American Journal of Ophthalmology* 121 (1996): 217-219.
2. Helm CJ and Holland GN. "Ocular tuberculosis". *Survey on Ophthalmology* 38 (1993): 229-251.

3. Centers for disease control. "Update: tuberculosis elimination- United States". *MMWR* 39 (1990): 153-156.
4. David A., *et al.* "Solitary non reactive choroidal tuberculoma in patient with acquired immune deficiency syndrome". *American Journal of Ophthalmology* 131 (2001): 138-140.
5. Mason JO. "Treatment of large macular choroidal tubercle improves vision". *Archives of Ophthalmology* 118 (2000): 1136-1137.
6. Fernandez CC., *et al.* "Choroidal tubercles in miliary tuberculosis". *Archivos de la Sociedad Española de Oftalmología* 75 (2000): 355-358.
7. Shimakawa M. "Choroidal tuberculoma in a patient with acquired immunodeficiency syndrome". *Jpn Journal of Ophthalmology* 44 (2001): 697.
8. Shimakawa M. "Choroidal tuberculoma in a patient with acquired immunodeficiency syndrome". *Nippon Ganka Gakkai Zasshi* 104 (2001): 437-441.
9. Benchekroun S., *et al.* "Granulome choroidien pseudotumoral au cours de la tuberculose miliaire". *Journal Français d'Ophtalmologie* 22 (1999): 771-775.
10. Wolfensberger TJ., *et al.* "Indocyanine green angiographic features in tuberculous chorioretinitis". *American Journal of Ophthalmology* 127 (1999): 350-353.
11. Cangemi FE., *et al.* "Tuberculoma of choroid". *Ophthalmology* 87 (1980): 253-256.