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Case Report

A Rare Case of Ring Macular Dystrophy

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Abstract

Ocular manifestations in tuberculosis are rare. Choroidal tuberculoma is an exceptional presentation of ocular tuberculosis, and its prognosis depends mainly on its localization.

We report the case of a choroidal tuberculoma revealing the disease. An 18-year-old male presented with a 10-day history of decreased visual acuity in the right eye. Ophthalmological examination of the right eye revealed a yellowish choroidal mass in the macular area associated with a serous retinal detachment. Ocular ultrasound and OCT revealed a choroidal mass with retinal serous detachment. The diagnosis of achromatic melanoma was suspected and an extension work-up was performed. Chest X-ray revealed a pulmonary cavern and 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 and the subject was treated with antibacillary agents for 9 months with good progression.

Choroidal involvement in tuberculosis is exceptional and atypical, occurring mainly in miliary and severe forms of the disease. Our case reports an unusual case of choroidal involvement in an immunocompetent patient. The diagnosis of choroidal tuberculoma remains a challenge, as it is usually presumptive, based on a combination of systemic and ocular evidence. Treatment must be initiated as soon as possible, as delays in diagnosis or treatment can result in serious irreversible sequelae.

Keywords: Choroidal tuberculoma; X-ray

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.

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

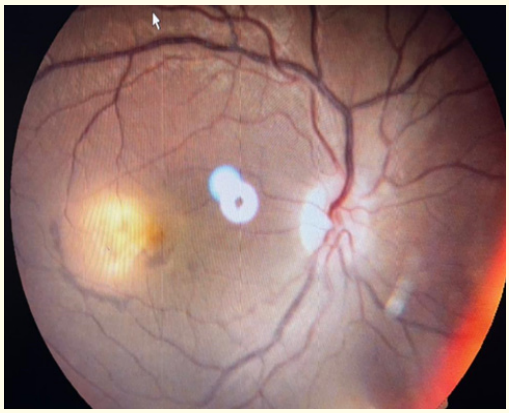

Figure 1: Retinography showing a choroidal mass in the macular area.

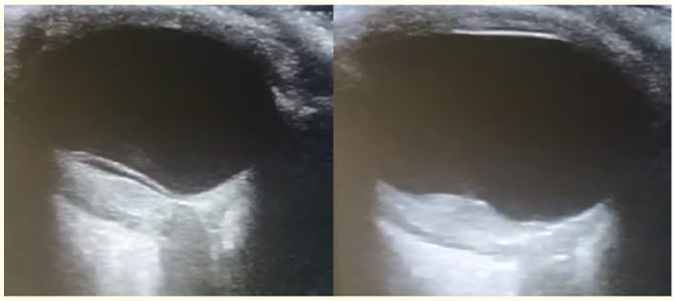

Figure 2: Ocular ultrasound showing a choroidal mass associated with retinal detachment.

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

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

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.

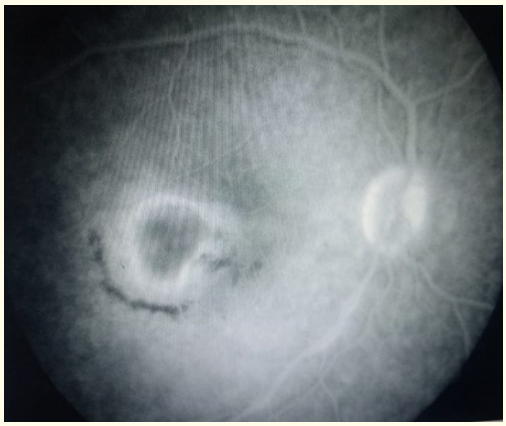

Figure 3: Fluorescein angiography showing a hypofluorescent lesion with peripheral impregnation at late times.

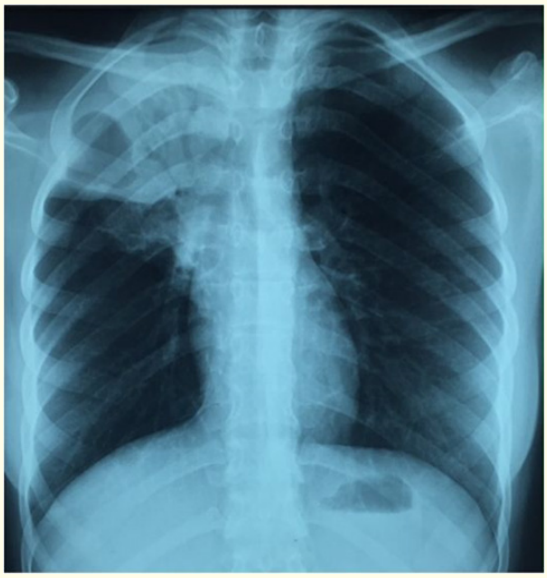

Figure 4: Chest X-ray showing tuberculous cavern.

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).

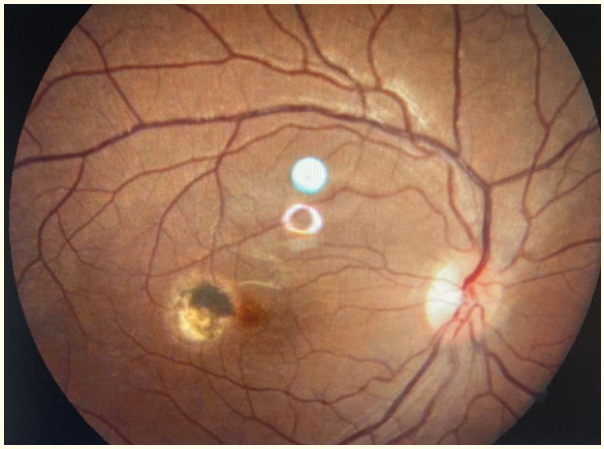

Figure 5: Retinography showing the beginning of lesion healing.

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.

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