



Onchocerca ocular about one case

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ABSTRACT

In this work, the Authors reported the medical case of a 24 years old patient who is originally from Cameroon. He was diagnosed onchocerciasis disease and treated at the age of 15 years in homeland. Currently, he is followed in the service of Ophthalmology B-Hospital of Specialist, bilateral chorioretinitis for onchocerciasis, asymmetric. The patient is equally treated from a complete eye examination including measurement of visual acuity, examination of interior segment and the bottom eye. Beside this, we have performed fluorescein angiography, optical coherence tomométrie of the electroretinogram were performed. The laboratory test that we performed was negative. The patient was given a treatment of doxycycline and Ivermectine. Our medical case is rare in its nature which has given the development of ocular manifestations of onchocerciasis outside the endemic areas of Morocco.

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Introduction

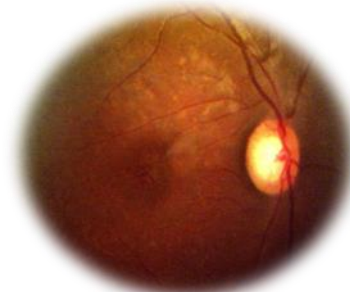
After trachoma, Onchocerciasis is classified as the second leading infectious cause of blindness in the world. It is a parasitic disease which is caused by the filarial nematode specific rights. A female fly which is identified with the scientific name "simulie" is responsible for the transmission of Onchocerca Volvulus and it can be found easily in the places close to fast flowing water. Due to its complications, it is serious ocular and analogically we name it "river blindness". According to the World Health Organization (WHO) 120 million peoples are affected by onchocerciasis. About 18 million peoples are infected with more than 99% who lives in tropical region of Africa and among them 350,000 are blind. Mostly the clinical picture is dominated by onchocerciasis skin syndrome and cutaneous (pruritus, scabies of filarial, atrophy and depigmentation), kystic syndrome, lymphatic syndrome and ocular syndrome (keratitis, chorioretinitis, optical atrophy). In this paper, we have discussed the medical observations regarding the case of a 24 years old patient followed in our hospital named as "Hopital des specialist-Rabat" department of ophthalmology B.

Patient and Method

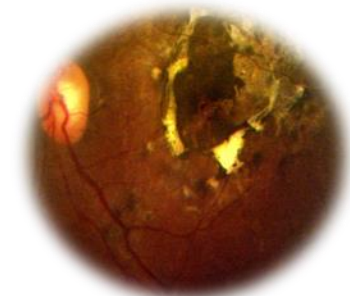
The patient under observation is a native of Cameroon with an age factor 24 years, single, who consulted us for decreased visual acuity. In its history there's a notion of filariasis diagnosed and treated from the age of 15 years in Cameroon, and pruritus repeatedly. The beginning of his affection was three years ago, by a gradual decline of left eye visual acuity, followed some time later at the right eye. The eye exam objective a visual acuity reduced to 3/10 (OD), 1/10 (OG) inaméliorable after correcting. The Annexes and anterior segments were normal at both eyes with strain eye bilateral 12mmHg. The eye background objective at the right eye papillary excavation 6/10 whitish lesions pinhead more

pronounced in the superior temporal area and macular reshuffle, in the left eye, the optic nerve is normal excavation. We note the presence of a deep scar chorioretinal lesion dominating over the entire macular region, extended above with whitish areas and other pigmented.

The photographic observations regarding disease of the patient during the first observation are as following:



The right eye (OD)

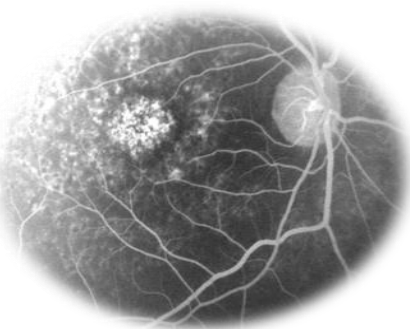


The left eye (OG)

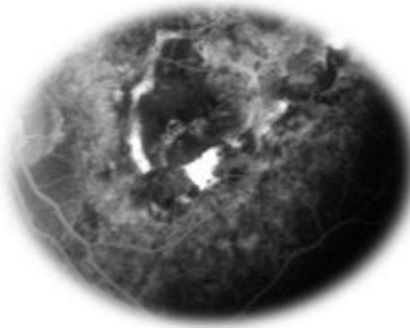
The Fluorescein Angiography

At the right eye (OD), there is a hyper early fluorescense of these lesions, more pronounced in superior temporal while at the Left Eye (OG), this scar chorioretinal lesion does not

fluorescein, there are a hyper fluorescence around the lesions with whitish membrane.

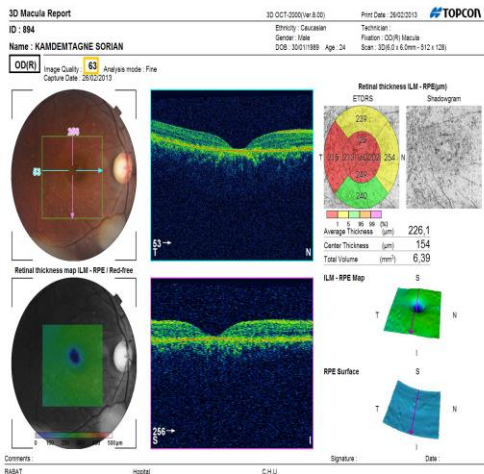


Right Eye - Fluorescein Angiography (Zoomed image)

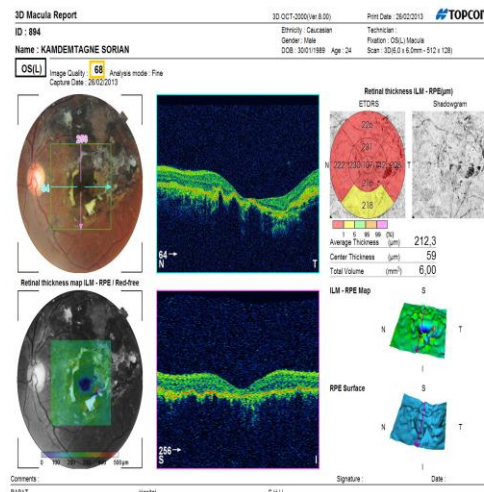


Left Eye - Fluorescein Angiography (Zoomed image)

The Optical Coherence Tomography (OCT)



OCT of the right eye (OD)



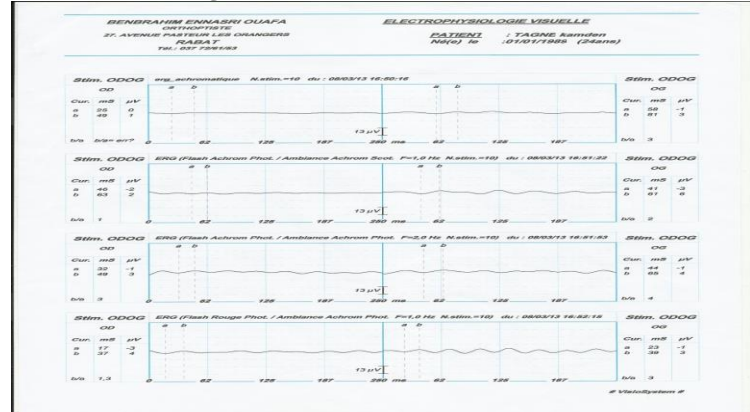
OCT of the left eye (OG)

The remarks relating to the OCT test are given as:

OCT right eye is found to be having a small enlargement of the funnel foveal and a retinal thinning.

October of the left eye is found to have an enlargement of the funnel fovea, retinal thinning and irregular pigment epithelium showing the retraction retro foveal.

The Electroretinogram (ERG)



Electroretinogram is hypo flip at both eyes, more marked on the left than right.

Laboratory tests:

The Performed observation regarding the laboratory tests were negative (NFS, VS-CRP, VDRL, TPHA, HIV serology, Toxoplasma serology, serology Toxocarose, CMV serology, Herpes Simplex Serology) and intra-dermal reaction (IDR).

Treatment:

- 1) The patient received treatment with Doxycycline 200mg daily for 6 weeks.
- 2) The Ivermectin was given a dose of 150 à 200ug / kg per year for 15 years.

Discussion

Onchocerciasis (river blindness) is a major blinding disease in Africa, Central & South America and the Middle East (Yemen). Microfilariae O. Volvulus can invade all membranes or ocular structures but the extent of damage produced varies depending on which organs are affected. In cornea there are two main types of lesions, punctate keratitis, which is an early manifestation and self-limiting and the later and more severe sclerosing keratitis, changing to complete opacification of the cornea.

The presence of microfilariae in the uvea is the cause of iridocyclitis. This is a serious complication because it can lead to secondary glaucoma and also more rarely in the eye phthisis.

Chorioretinitis is another serious complication which also leads to blindness. The chorioretinitis lesions can be classified into three groups: irregular pigmentation, and visibility of pigment migration and multiple sclerosis.

- The irregular pigmentation, or "dappled" aspect is a choroidal pigment dispersion due to early atrophy of the pigment epithelium.
- Migration and visibility of pigment, the aspect "tigroïde" could be considered an advanced form of "dappled" marked by the following features: pigment epithelium atrophy with possible choroidal vascular plexus of the visibility which is a most advanced phase at least of sclerosis.
- Multiple advanced chorioretinal known as "chorioretinitis Ridley," the choroidal vasculature is highly sclerotic and orange contrasts sharply with the retinal background, giving an appearance of "dry and cracked mud" at this stage there is a dispersion of the pigment epithelium.

Work on the pathogenic cause of chorioretinal damage mechanisms have been the subject of a recent review. The process is initiated by a local inflammatory reaction caused by the death and destruction of microfilariae in the retina and choroid. Eosinophils present in abundance in the retina and choroid due to inflammation would release toxic molecules that result in an alteration of the pigment epithelium. The continuation of the process would not require the presence of microfilariae and would involve phenomena of autoimmunity. These phenomena are due to a similarity between a parasite antigen called Ov39, and antigens hr44 retina. Of antibodies specifically directed against Ov39 directly would cause lesions in the retinal pigment epithelium.

The optic nerve gives a papillitis may be unilateral or bilateral with regression of reflexes photomoteurs and papilledema appearance. Untreated it progresses to optic atrophy.

The certainty diagnosis is made by the detection of the parasite or embryos. The adult worms are sought in the nodules or they are easy to recognize by histopathological analysis. The microfilariae are easy to detect, either by scarification and dermal juice examination, the better the bloodless skin biopsy. The presumptive diagnosis is made by the hyper eosinophilia, reactions and immunity test Mazzoti.

The diagnosis of chorioretinitis onchocerciasis was chosen because the patient comes from an endemic area (Cameroon), history of onchocerciasis diagnosed and treated at the age of 15 years, the concept of pruritus repeatedly, the appearance of chorioretinitis of this Tapeto-retinal appearance and negativity etiological.

Conclusion

Chorioretinopathy and optic atrophy are the main causes of blindness in ocular onchocerciasis. The diagnosis is based primarily on clinical examination (cutaneous syndromes, nodular or kystic syndromes, eye syndromes and syndromes

nodes) and paraclinical (stardom and/or ex blood transplant) in search of microfilariae. Treatment of onchocerciasis enjoys the support of Ivermectin that paralyzes and kills the microfilariae, and Doxycycline interrupts the embryogenesis of the parasite.

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