

## Short Communication

# Interest of Macular OCT in Severe Myopia: About 62 Cases

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## Introduction

Myopia is the most common refractive disorder in the world and results from an excessive elongation of the axial length of the eyeball. It is characterized by refractive and biometric changes, but especially by chorioretinal changes, which make it so serious. Epidemiologically, its incidence is increasing, especially in Asian populations; its progression being influenced by genetic and environmental factors, especially by reading habits. Thanks to the current techniques of retinal exploration, in the forefront of which is the Optical Coherence Tomography (OCT), many complications could be better specified and new therapeutic possibilities were developed.

The aim of our study is to evaluate the contribution of optical coherence tomography in the diagnosis of diagnosis of maculopathy in the highly myopic patient.

## Materials and Methods

This is a prospective observational study, conducted at the ophthalmology B department in hospital of specialties Rabat, between September 2021 and August 2022. All patients had a complete ophthalmological examination. The data entry was done on Excel and the descriptive analysis was done by the Epi-info software.

## Results

In our study, we counted 62 patients (112 eyes). The average age of our patients was 44 years, with a female predominance. The average BCVA was 3/10. The average spherical equivalence was -13 dioptres; 82 Of the 112 eyes, 10% of the OCT images could not be examined because of vitreous disorder or cataract. The most common maculopathy in the high myope was:

## Abstract

Myopic maculopathies are the leading cause of visual impairment. Clinically, they are characterized by a decrease in vision, most often at close range, sometimes associated with an impression of distorted vision. Numerous advances have recently been made in the clinical and therapeutic approach to this disease. Modern imaging examinations (optical coherence tomography, digital angiography) allow earlier detection of retinal lesions in myopic patients. A better understanding of the mechanisms leading to this complication may lead to new therapeutic perspectives.

chorioretinal atrophy found in 32% of cases, followed by incomplete posterior vitreous detachment in 15.76%, choroidal neovascularization in 26.32%, bulging macula in 24.28%, epiretinal membrane in 11.76%, macular schisis in 5.95%, macular hole in 1.41%, Bruch's membrane rupture in 4.53%, lamellar hole in 1.41% and lastly, detachment of the internal limiting membrane 1.13% of cases.

## Discussion

High myopic maculopathy is characterized by changes in the macular region, including Bruch's membrane ruptures, Fuchs' patch, chorioretinal atrophy and choroidal neovessels [1]. It has been recognized as one of the leading causes of irreversible visual impairment and blindness worldwide. It was the second most common cause of low vision and blindness in the Handan Eye and Beijing Eye Study [2] in mainland China and the Shih-pai Eye Study in Taiwan, and the second most common cause of blindness and third most common cause of low vision in children. The Tajimi Study in Japan [3]. In white populations in Western countries and Western and Hispanic populations, high myopic maculopathy was the second most common cause of blindness.

Spectral-Domain Optical Coherence Tomography (SD OCT), with its longitudinal and coronal slices, has greatly facilitated the study of posterior vitreoretinal anatomy in high myopes and has allowed confocal imaging to pinpoint the exact location of lesions; however, the extreme axial length of high myopic eyes still presents challenges for imaging. Ultra-wide scans may be required to image the full extent of a high myopic eye and the entire posterior medial curvature [4-6]. The use of new gen-

erations of very high resolution OCT devices, such as the swept source with its 1080 nm wavelength or the en face OCT, will allow a better study of these abnormalities whose pathophysiology remains poorly understood.

### Conclusion

Many advances have been made recently in the clinical and therapeutic approach to this disease. Modern imaging examinations (optical coherence tomography, digital angiography) allow for earlier detection of retinal lesions in myopic patients. An understanding of the mechanisms leading to this complication may lead to new therapeutic perspectives.

### Author Statements

#### Conflicts of Interest

The authors have no conflicts of interest to declare.

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We have any financial sources.

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