

Case Report

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Pachychoroid and detachment of the pigment epithelium: Case report

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Abstract

The article discusses a case report of a 49-year-old patient who presented with an isolated pigment epithelium detachment. Multimodal imaging revealed the presence of a pachychoroid, leading to the diagnosis of a pachychoroid pigment epitheliopathy. Pachychoroidopathies are a recent description that includes choroidal thickening, choroidal hyperpermeability, and pigment epithelium alterations without a retinal serous detachment. The major risk associated with pachychoroid is the development of choroidal neovascularization, which requires close monitoring and treatment if necessary. In conclusion, when encountering isolated pigment epithelium detachment associated with pachychoroid in a young subject, it is necessary to consider the possibility of pachychoroid pigment epitheliopathy and closely monitor the patient for potential complications.

Keywords: Pachychoroid; Detachment of the pigment epithelium; Multimodal imaging.

Introduction

The detachment of the pigment epithelium corresponds to a separation between the pigment epithelium and the Bruch's membrane. It can be associated with other clinical signs or isolated. The pachychoroid associates choroidal thickening and hyperpermeability with alterations of the pigment epithelium without the presence of a retinal serous detachment. We report the case of a 49-year-old patient presenting with an isolated pigment epithelium detachment, whose multimodal imaging led to the discovery of a pachychoroid, leading to the diagnosis of a pachychoroid pigment epitheliopathy.

Clinical case

We report the case of a 49-year-old patient with no particular medical history who presented to an ophthalmology consultation for presbyopia optical correction. The ophthalmologic

examination revealed visual acuity (with correction) of 10/10, P3 in the right eye and 10/10, P2 in the left eye. The anterior segment examination was unremarkable, while the fundus examination of the right eye revealed the presence of a bubble in the inferotemporal region of the fovea (Figure 1).

We decided to perform an OCT, which revealed the presence of a round hyporeflective homogenous content pigment epithelium detachment, without signs of exudation, located in the temporomacular region with a respected foveal depression. EDI mode allowed us to find a thickened choroid with dilated choroidal vessels. The presence of this pigment epithelium detachment prompted us to perform an OCT-A, which allowed us to rule out the presence of choroidal neovascularization. Given the isolated and harmless nature of the pigment epithelium detachment, without any signs of gravity identified by multimodal imaging, surveillance was recommended for the patient.

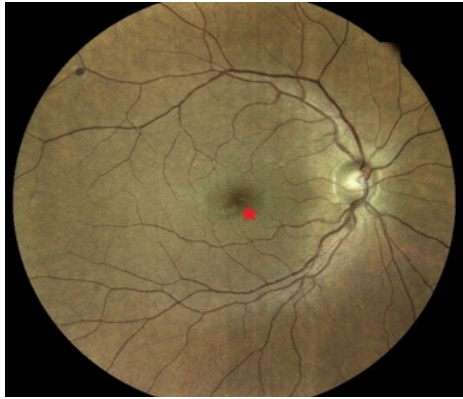


Figure 1: Retino-photography of the right eye in “true color” mode, presence of an infero-temporal bulla of the fovea.

The diagnosis of a pachychoroid pigment epitheliopathy was made based on the association of an isolated pigment epithelium detachment with a pachychoroid in a young patient. A follow-up of 6 months did not reveal any functional or structural deterioration.

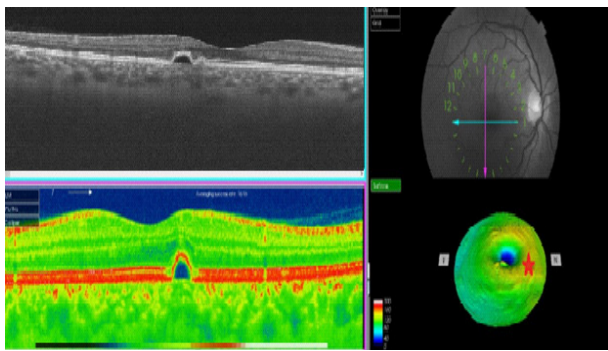


Figure 2: Macular OCT of the right eye: The round pigment epithelium detachment of homogeneous hyporeflective content, without signs of exudation opposite located in temporo-macular, with a respected foveolar depression. The EDI (enhanced deep imaging) mode allowed us to find a thickened choroid with dilated choroidal vessels.

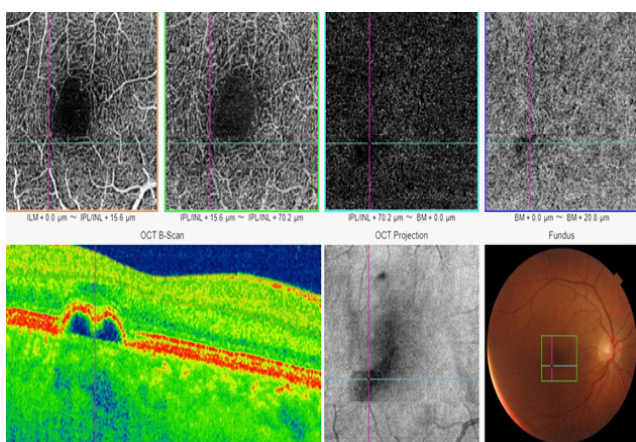


Figure 3: OCT-Angiography of the right eye: No identifiable choroidal neovessel.

Discussion

The term pachychoroid comes from the ancient Greek “pachy,” which means thick, and refers to different pathologies that have in common a thick choroid. The detachment of the pigment epithelium occurs between the basal part of the pig-

ment epithelium and the inner layer of the Bruch’s membrane [1]. It is better visualized by OCT and its content can be more or less reflective. In the vast majority of cases (> 60%), it is of degenerative origin associated with AMD (macular degeneration related to age) [2]. Isolated pigment epithelium detachments are rather rare.

Multimodal retinal imaging, including color retinography, autofluorescence and infrared images, spectral domain OCT (if possible in EDI or swept-source), fluorescein and indocyanine green angiography, and OCT-angiography are tools that provide arguments regarding the nature of the pigment epithelium detachment and form a bundle of arguments about their origin. The essential point is to distinguish neovascularized pigment epithelium detachments from other pigment epithelium detachments [3]. Pachychoroidopathies are a recent description dating back to 2013 by K. B. Freund [4]. They include choroidal thickening, choroidal hyperpermeability, and pigment epithelium alterations without a retinal serous detachment [4]. The pathophysiological mechanisms explaining pachychoroid are unknown. The best examination to assess choroidal thickness is OCT in Enhanced Deep Imaging (EDI) mode. There is a wide spectrum of pathologies associated with pachychoroid, which can be complicated by choroidal neovascularization [5]. Epitheliopathy pigmentosa pachychoroid is part of the clinical spectrum of anomalies with pachychoroid. It particularly affects patients around 50 years old with type A personality, and the involvement is often bilateral and asymmetric [6]. In addition to the pachychoroid detected by OCT-EDI, there are alterations of the pigment epithelium without the presence of subretinal fluid [4]. The major risk is the development of choroidal neovascularization [5], which requires close monitoring of these young patients to identify any functional or structural worsening that would then require treatment with IVT anti-VEGF.

Conclusion

When encountering isolated pigment epithelium detachment associated with pachychoroid in a young subject, it is necessary to consider the possibility of epitheliopathy pigmentosa pachychoroid. Close monitoring is required to detect neovascular complications requiring treatment with IVT anti-VEGF. In case of diagnostic doubt, close follow-up often allows detection of serious forms as well as benign forms.

Declarations

None of the authors has any conflicts of interests to disclose

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