

Post Traumatic rupture of Bruch membrane: about a case

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Abstract:

A contusion of the globe can be complicated by the rupture of the Bruch's membrane or the choroid. This complication occurs in 5 to 10% of cases, with a clear male predominance. We report the clinical case of a 32 year-old patient, victim of a severe contusive trauma in the left eye. The examination found a rupture of the Bruch's membrane at the fundus; the spontaneous evolution was marked by a visual improvement without neovascular complications. During post-traumatic Bruch's membrane ruptures, the prognosis is essentially linked in part to its location in relation to the macula; and secondly to the occurrence of neovascular complications (15 to 30% of cases).

Keywords: Bruch rupture, eye injuries, neovascularization

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I. Introduction:

Contusive eye trauma is a common reason for consultation in ophthalmological emergencies; all structures of the eye may be affected. We report the case of a 32 year-old young man seen in the ophthalmological emergency room, victim of a severe contusive trauma in the left eye, by a metal bar.

II. Case Report:

The initial examination found a visual acuity of 5/10 in the left eye, which cannot be improved without metamorphopsia. Biomicroscopic examination showed a left fixed dilatated pupil. The anterior chamber was clear with no cells and flare. Fundus was normal in the right eye while multiple white-yellowish lines in the lower retinal quadrants were found. The papilla and macula were normal (Figure 1). The patient underwent retinal angiography at fluorescein, showing the presence of spontaneous linear hyperfluorescences in the lower retinal quadrants with no preretinal or subretinal hemorrhages. Coherence tomography optic of the left eye showed multiple ruptures of the Bruch's membrane without damage to the foveolar depression or neovascularization. The right eye examination was normal. During the various ophthalmological follow-up checks, the spontaneous evolution was marked by the absence of the extension of the rupture lines of the Bruch's membrane on OCT. There was no neovascular complication, and the recovery of visual acuity was up to 8/10.



Figure 1 : Slit lamp photograph that shows rupture of Bruch membrane

III. Discussion:

Traumatic rupture of the retinal pigment epithelium (RPE), Bruch's membrane, and choroid occurs in 4 % to 10% of ocular contusions [1,2]; with a sharp male predominance sex ratio 5/1 [3]. The diagnosis is done when dealing with the nature of the traumatism. The clinical description: The rupture appears as a yellowish crescent. It is well demarcated, with a radial disposition to the optic nerve [1], the angiographic and OCT data. Indocyanine green angiography finds its interest in the acute forms masked by blood, in case of hemorrhages or when the rupture appears under form of a hypo fluorescent streak. The functional impact depends on the location of the rupture. Close to half the cases of ruptures are macular. Multiple ruptures are found in 37% of cases[1,4]. It also depends on the occurrence of choroidal neovascularization most often within 1 to 37 months [5], hence the importance of monitoring regular fundus. Neovascularization should be considered when dealing with a delayed BAV or the appearance of metamorphopsia. the neovascular risk is higher in the first six months, requiring treatment with Dynamic phototherapy or anti-VEGF injection, depending on the case [6]. In our case, the break lines of the BM are limited with respect for the foveolar depression and without neovascular complications over 3 months, which explains the spontaneous recovery of correct visual acuity.

IV. Conclusion:

Bruch's membrane rupture is a common complication of contusive ocular trauma. Its highest risk is the sight threatening appearance of choroidal new vessels. Monitoring rigorous fluorescein angiography is recommended during the first year.

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Competing interest:

No potential conflict of interest relevant to this article was reported.

Authors' contributions:

All authors have contributed to redaction, verification and correction of this work.

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