Saudi Journal of Medical and Pharmaceutical Sciences **ISSN 2413-4929 (Print)**
Scholars Middle East Publishers **ISSN 2413-4910 (Online)**
Dubai, United Arab Emirates
Website: http://scholarsmepub.com/

Idiopathic Choroidal Macular Neovascularisation in Young Patients about a Case

Aziz El Ouafi*, Adil Bouzidi, Fatine El Alami, Abdelkader Laktaoui
Military Hospital ophthalmology service Moulay Ismail Meknes Morocco

Original Research Article

***Corresponding author**
Aziz El Ouafi

Article History
Received: 14.12.2018
Accepted: 23.12.2018
Published: 30.12.2018

DOI:
10.36348/sjmps.2018.v04i12.015

Abstract: The choroidal macular neovascularisation (NVC) of the young subject is a serious condition that threatens visual function. The decrease in marked visual acuity is related to the foveolar or juxta-foveolar localization of the neovessels. The therapeutic management of idiopathic NVC of the young subject is difficult due to frequent recurrences despite the treatment. The use of anti-VEGF (vascular endothelial growth factor) represented a turning point in the management of this condition. The intravitreal (IVT) injection of bevacizumab appears to be effective and well tolerated.

Keywords: Idiopathic choroidal, neovascularisation, bevacizumab.

INTRODUCTION

Idiopathic choroidal neovasculature (CNV) in young subjects is the second leading cause of CNV in subjects under 50, accounting for 17% of cases [1]. The etiology is by definition unknown. This is a serious condition that threatens visual function due to the often-close seat of the fovea and the often unavoidable course of recurrence and blindness despite treatments. This severity is reinforced by the attack on young active adults. The use of vEGF (vascular endothelial growth factor) was a real turning point in the management of all intraocular neovascularizations.

PATIENTS AND OBSERVATIONS

It is the observation of a 28-year-old man with no ophthalmological or general history who underwent a complete ophthalmological examination, fluorescein angiography, and OCT optical coherence tomography.

The symptomatology began a month ago with a sharp drop in the visual acuity of the left eye accompanied by metamorphopsia and perception of a central scotoma. Visual acuity was 10/10 P2 on the right with an examination of the anterior segment and fundus without abnormality.

On the left, visual acuity was limited to the finger count at 0.5 m. The fundus objective is a macular neovascular membrane with retinal serous detachment (DSR) and a bleeding crown (Figure-1). Examination of the retinal periphery was perfectly normal.

Fluorescein angiography shows early and intense hyperfluorescence with late diffusion of the dye in the macular area corresponding to juxta-foveal choroidal neovessels, a serous detachment of the neuroepithelium related to a deep vascular lacis (Figure 2 & 3).

OCT shows a detachment of the macular juxta pigment epithelium on the right. The central macular thickness measured by OCT was initially 461 µm (Figure-4).

The etiological assessment is normal. The diagnosis of idiopathic sub-retinal neovessels is retained. The patient received three monthly intra-vitreous injections of bevacizumab.

The evolution was marked by an improvement in visual acuity at 5/10 in the left eye and a regression of macular edema.

Fig-1: Photograph of the fundus of the left eye showing a macular neovascular membrane

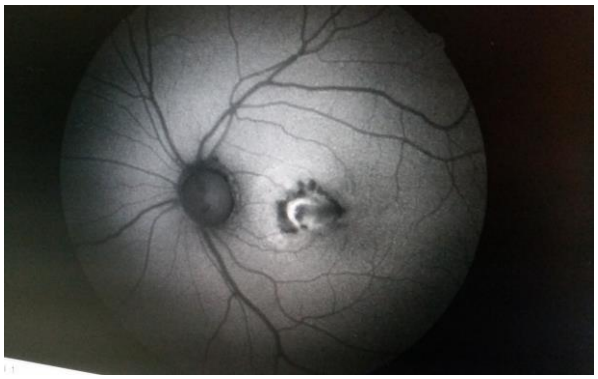

Fig-2: Anerythre picture of the left eye

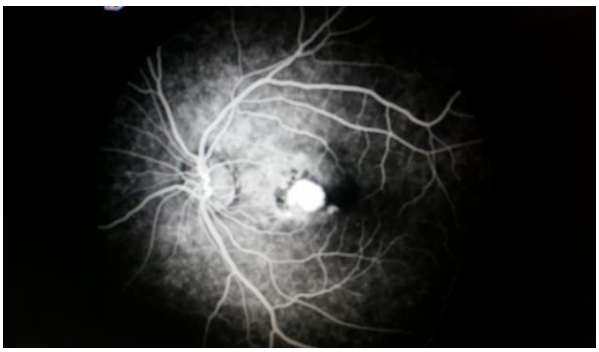

Fig-3: Fluorescein angiography of the left eye shows early and intense hyperfluorescence with late diffusion of the dye in the macular area

DISCUSSION

Idiopathic retinal neovasculature of the young is a relatively rare disease. The decrease in marked visual acuity is related to the foveal or juxta foveolar location of neovessels. They represent the second etiology after strong myopia.

It is most often a neovascular membrane in a subject under 50 years without ocular or systemic etiology most often unilateral, peripapillary localization or interpapillo macular. In general, newborns are preepithelial.

The diagnosis is based on fundus examination, fluorescein angiography and OCT.

In the absence of treatment, the natural evolution of idiopathic CNV is very pejorative, as it tends to spread and heal at the expense of sub-retinal fibrosis, which is very detrimental to central vision [2]. Until very recently, idiopathic CNV therapeutic approaches in extra-foveal young subjects were limited to laser photocoagulation [3]. But when CNV is retrofoveolar, photocoagulation can not be applied. Attempts to surgically excise the neovascular retrofoveolar membrane or macular translocation were also performed. But it is an invasive technique, requiring a great deal of surgical expertise and having numerous complications both per- and postoperatively (retinal detachment, macular hole, haemorrhage ...) [4-6].

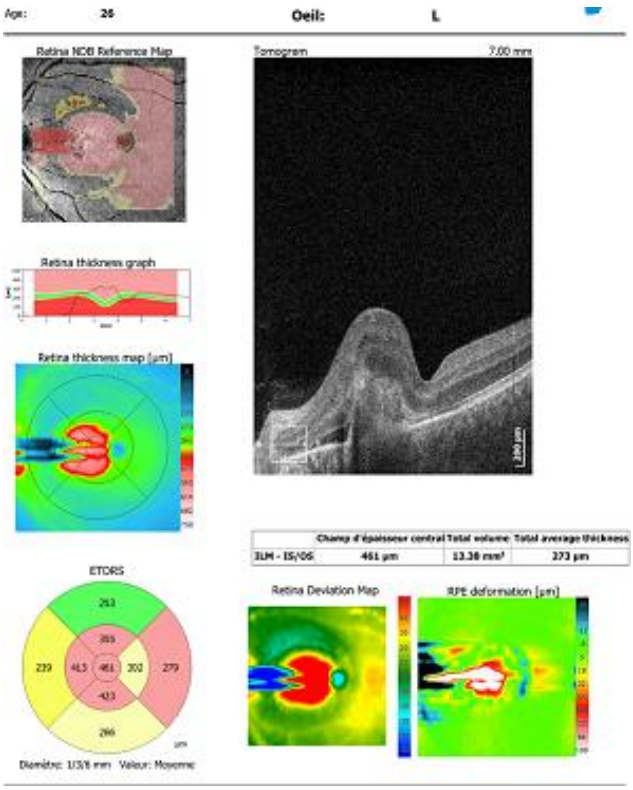

Fig-4: Optical coherence tomography left eye showing macular thickening and detachment of the pigment epithelium

Dynamic Verteporfin Phototherapy (PDT) has opened a new therapeutic era in the management of retrofveolar CNV. However, severe atrophies of the pigment epithelium have been observed in the treatment of idiopathic CNV of the young subject by PDT [7, 8].

The advent of anti-angiogenic agents has transformed the therapy of retrofreveolar CNV. Compared with previous treatments for CNV, anti-VEGF have the advantage of targeting the neovascular process through the inhibition of angiogenesis. Anti-VEGF also has an anti-inflammatory role that contributes to the therapeutic effect upstream of the neovascular process. The first published series reporting the interest of the use of anti-VEGF in idiopathic CNV of the young subject, with encouraging medium-term results, concern bevacizumab (Avastin®) [9-11].

Inoue *et al*., [11] treated seven eyes of seven patients with idiopathic CNV of the young subject, by IVT of bevacizumab, report a functional and anatomical improvement. Our observation confirms the efficacy and good tolerability of IVTs of bevacizumab in the treatment of idiopathic CNV in young subjects.

CONCLUSION

The interest in sub-retinal neovessels is reinforced by new imaging techniques and new therapeutic proposals. However, their prognosis remains formidable because of their location and their functional repercussions.

Conflicts of Interest

The authors do not declare any conflict of interest

Contributions of the Authors

All authors participated in the development of this work. All authors have read and approved the final version of the manuscript.

REFERENCES

1. Cohen, S. Y., Laroche, A., Leguen, Y., Soubrane, G., & Coscas, G. J. (1996). Etiology of choroidal neovascularization in young patients. *Ophthalmology*, *103*(8), 1241-1244.
2. Lindblom, B., & Andersson, T. (1998). The prognosis of idiopathic choroidal neovascularization in persons younger than 50 years of age. *Ophthalmology*, *105*(10), 1816-1820.
3. Macular Photocoagulation Study Group. (1990). Krypton laser photocoagulation for idiopathic neovascular lesions. Results of a randomized clinical trial. *Arch Ophthalmol*, *108*, 832-837.
4. Kumar, A., Prakash, G., & Singh, R. P. (2004). Transpupillary thermotherapy for idiopathic subfoveal choroidal neovascularization. *Acta Ophthalmologica Scandinavica*, *82*(2), 205-208.
5. Desmettre, T., Maurage, C. A., & Mordon, S. (2003). Transpupillary thermotherapy (TTT) with short duration laser exposures induce heat shock protein (HSP) hyperexpression on choroidoretinal layers. *Lasers in Surgery and Medicine: The*

Official Journal of the American Society for Laser Medicine and Surgery, *33*(2), 102-107.

6. Fujii, G. Y., Pieramici, D. J., Humayun, M. S., Schachat, A. P., Reynolds, S. M., Melia, M., & De Juan Jr, E. (2000). Complications associated with limited macular translocation. *American journal of ophthalmology*, *130*(6), 751-762.
7. Postelmans, L., Pasteels, B., Coquelet, P., El Ouardighi, H., Verougstraete, C., & Schmidt-Erfurth, U. (2004). Severe pigment epithelial alterations in the treatment area following photodynamic therapy for classic choroidal neovascularization in young females. *American journal of ophthalmology*, *138*(5), 803-808.
8. Sii, F., & Lee, L. R. (2006). Retinopathy associated with photodynamic therapy for treatment of idiopathic choroidal neovascularization. *Clinical & experimental ophthalmology*, *34*(2), 184-186.
9. Mandal, S., Garg, S., Venkatesh, P., Mithal, C., Vohra, R., & Mehrotra, A. (2007). Intravitreal bevacizumab for subfoveal idiopathic choroidal neovascularization. *Archives of Ophthalmology*, *125*(11), 1487-1492.
10. Çakır, M., Çekiç, O., & Yılmaz, Ö. F. (2009). Intravitreal bevacizumab for idiopathic choroidal neovascularization. *Journal of American Association for Pediatric Ophthalmology and Strabismus*, *13*(3), 296-298.
11. Ouhadj, O., Degheb, N., Idir, S., Nebab, A., & Nouri, M. T. (2012). Traitement par injection intravitréenne de ranibizumab des néovaisseaux choroïdiens maculaires idiopathiques du sujet jeune. *Journal Français d'Ophtalmologie*, *35*(7), 514-522.