

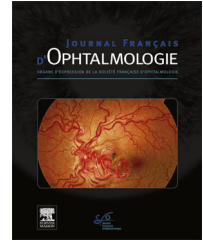


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GENERAL REVIEW

Prognostic factors of epiretinal membranes: A systematic review



Facteurs de pronostic des membranes épirétiennes : revue systématique

A.I.M. Miguel*, A. Legris

Département d'ophtalmologie, polyclinique de la Baie, 50300 Avranches, France

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KEYWORDS

Revision;
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Summary

Introduction. – Epiretinal membranes (ERM) have been increasingly characterized with the advent of new optical coherence tomographies (OCTs). We intended to perform a systematic review regarding prognostic factors (PF) of ERM after surgery.

Materials and methods. – Systematic review of electronic databases was performed (last date of search was 10 August 2015): Medline, Scopus, Google Scholar, clinicaltrials.gov and current controlled trials. Search queries included: ‘membrane’, ‘pucker’, ‘prognosis’, ‘prognostic’, ‘epiretinal’, ‘épirétiennes’. Inclusion criteria were: (1) primary purpose was to identify a PF of ERM; (2) prospective or retrospective study, case series (more than 10 patients), or clinical trials; (3) follow-up of at least 3 months; (4) complete ophthalmological evaluation in each patient with visual acuity and OCT, preoperative and ≥ 3 months after surgery; (5) vitrectomy with ERM peeling performed in each patient. Eligibility criteria verification, data extraction and evaluation of risk of bias were performed according to Cochrane's recommendations.

Results. – From 817 studies found, 21 were included (9 prospective, 12 retrospective, 0 trials). In all studies, there was significant visual acuity improvement after surgery. The majority of the studies included pars plana vitrectomy (PPV) combined with phacoemulsification.

* Corresponding author. Département d'ophtalmologie, polyclinique de la Baie, 1, avenue du Quesnoy, 50300 Saint-Martin-des-Champs, France.

E-mail address: myworld_ana@hotmail.com (A.I.M. Miguel).

MOTS CLÉS

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épirétinienne ;
Vitrectomie ;
Pronostic

Discussion and conclusion. — PF for visual acuity (VA) improvement after ERM surgery included: shorter duration of symptoms before surgery, lesser central foveal thickness at baseline identified by the OCT, good integrity of the inter segment/outer segment photoreceptor junction at baseline, and thinner ganglion cell inner plexiform layer at baseline. To avoid bias, studies should analyze VA separately if phacoemulsification is also performed. The knowledge of these PF may assist in planning surgery.

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Résumé

Introduction. — Les membranes épirétiniennes (MER) sont mieux caractérisées par les nouvelles tomographies par cohérence optique (OCT). Notre but est de préciser les facteurs pronostiques des MER après chirurgie.

Matériel et méthodes. — Revue de la littérature (dernière date de recherche : 10/8/2015): Medline, Scopus, Google Scholar, clinicaltrials.gov et « current controlled trials ». Les mots clés sont: « membrane », « pucker », « prognosis », « pronostic », « epiretinal », « épirétinienne ». Les critères d'inclusion sont : (1) études identifiant les facteurs pronostiques des MER ; (2) études prospectives ou rétrospectives, séries de plus de 10 cas ou essais cliniques ; (3) suivi supérieur à 3 mois ; (4) évaluation ophtalmologique complète pour chaque patient avec acuité visuelle (AV) et OCT, avant et ≥ 3 mois après la chirurgie ; (5) vitrectomie avec pelage de MER effectuée pour chaque patient. Les critères de sélection, l'extraction de données et l'évaluation de qualité ont été effectués selon les recommandations de Cochrane.

Résultats. — Parmi 817 études revues, 21 ont été retenues (9 prospectives, 12 rétrospectives, 0 essais). Dans toutes les études, la chirurgie s'accompagne d'une amélioration visuelle. La majorité des études comprennent la vitrectomie associée à la chirurgie de cataracte.

Discussion et conclusion. — Les facteurs pronostiques d'amélioration d'AV après chirurgie de MER comprennent: chirurgie précoce, faible épaisseur maculaire centrale avant chirurgie et bonne intégrité des photorécepteurs estimée par l'OCT avant chirurgie. Pour éviter les biais, les études devraient analyser séparément l'AV en cas de chirurgie combinée à la cataracte. La connaissance de ces facteurs pronostiques peut aider à la décision de chirurgie.

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Introduction

Epiretinal membranes (ERM) are a fibrocellular contractile proliferation that form over the surface of the internal limiting membrane of the retina, usually in the macular area [1]. They were first described by Iwanoff [2] in 1865. Epiretinal membranes can be idiopathic or secondary to other ocular pathologies, namely retinal detachment, uveitis, retinal vascular occlusions and trauma [3]. The prevalence of this pathology is reported to be between 4% [4] and 12,8% [5] (the latter in a series of patients with secondary ERM to retinal detachment). Bilaterality is present in up to 10–20% of cases, usually with asymmetry [3]. The pathological mechanisms are not entirely known, however the posterior vitreous detachment is thought to be key [1].

The diagnosis of an epiretinal membrane is clinical, aided by Optical Coherence Tomography (OCT) and occasionally by fluorescein angiography.

The treatment depends on the patient's symptoms (such as metamorphopsia) and visual loss, and consists of vitrectomy with membrane peeling, usually aided by coloring agents [1,3].

There is a need for an updated review of epiretinal membranes considering the relatively new modalities of treatment (small-gauge vitrectomies, coloring agents, peeling of internal limiting membrane, combined phacoemulsification) and the new era of OCTs that give us further anatomical details of the retina and the ERM itself, allowing a complete preoperative and postoperative evaluation. Therefore, we intended to perform a review of epiretinal membranes, namely concerning their prognostic factors after surgery.

Materials and methods**Search methods**

Electronic searches were performed and included the following databases: Medline (via Pubmed) (1950 to August 2015), Scopus (2000 to August 2015) and other databases via EBSCO (1986 to August 2015), Wiley online library and Google Scholar. We also searched clinicaltrials.gov and Current Controlled Trials (www.controlled-trials.com). A manual search was also

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