

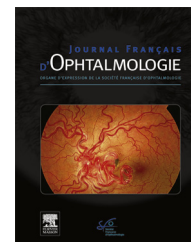


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ORIGINAL ARTICLE

Is topical corticosteroid necessary in traumatic hyphema?



Les corticostéroïdes topiques sont-ils nécessaires dans l'hyphéma traumatique ?

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KEYWORDS

Trauma ocular;
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Trauma eye;
Injury traumatic;
Hyphema;
Topical
corticosteroid;
Steroid

Summary

Purpose. – To compare the outcomes in the management of traumatic hyphema treated with topical corticosteroid plus supportive therapy versus only supportive therapy.

Patients and methods. – In this retrospective study, 206 patients were divided into two groups; group I, 98 eyes were treated with topical corticosteroid 12 × 1 and supportive therapy including bed rest, keeping the head elevated (45 degrees), and hydration. In group II, 108 eyes were treated with only supportive therapy. Hyphema size, initial and final visual acuities and intraocular pressure, time to hyphema clearance, and incidence of rebleeding were evaluated.

Results. – The time needed for hyphema resorption in the two groups were 60.25 ± 33.9 and 62.3 ± 28.9 hours respectively ($P=0.62$). There was no significant difference in rebleeding rate between the topical corticosteroid group (4.01%) and non-steroid group (6.48%) ($P=0.67$). The initial and final visual acuities were similar in the two groups ($P=0.86$). In Groups I and II, the average intraocular pressures were 19.7 ± 8.01 and 14.2 ± 10.2 mmHg respectively. The difference between the two groups was statistically significant ($P=0.04$).

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MOTS CLÉS

Traumatisme oculaire ;
 Traumatisme contondant ;
 Lésion traumatique ;
 Hyphéma ;
 Corticostéroïdes topiques ;
 Stéroïdes

Conclusion. – Patients who were treated with topical corticosteroids were no less likely to experience a rebleed or a poor visual outcome than those treated with supportive therapy alone. Supportive therapy alone may be convenient and cost-effective management strategy in uncomplicated traumatic hyphema.

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Résumé

But. – Comparer les résultats de la gestion de l'hyphéma post-traumatique traité par corticothérapie et traitement de soutien versus traitement de soutien seul.

Patients et méthode. – Dans cette étude rétrospective, 206 patients ont été divisés en 2 groupes ; groupe I, 98 yeux ont été traités avec des corticostéroïdes topiques 12 × 1 et une thérapie de soutien comprenant repos au lit, tête surélevée (45 degrés), supplémentation en eau. Dans le groupe II, 108 yeux ont été traités avec seulement une thérapie de soutien. La taille de l'hyphéma, l'acuité visuelle initiale et finale, la pression intra-oculaire, le temps de résorption de l'hyphéma et l'incidence de la récurrence hémorragique ont été évalués.

Résultats. – Le temps nécessaire à la résorption de l'hyphéma dans les groupes étaient respectivement de 60,25 ± 33,9 et de 62,3 ± 28,9 heures ($p=0,62$). Il n'y avait pas de différence significative dans le taux de récurrence hémorragique entre le groupe prenant des corticoïdes (4,01 %) et le groupe sans corticoïde (6,48 %) ($p=0,67$). L'acuité visuelle finale était similaire dans les deux groupes ($p=0,86$). La pression intraoculaire moyenne était de 19,7 ± 8,01 dans le groupe I et 14,2 ± 10,2 mmHg dans le groupe II. La différence entre les deux groupes était statistiquement significative ($p=0,04$).

Conclusion. – Les patients qui ont été traités avec des corticostéroïdes topiques ne sont pas moins susceptibles de présenter des récurrences hémorragiques ou un mauvais résultat visuel que ceux traités avec une thérapie de soutien seule. Une simple thérapie de soutien peut être donc une bonne stratégie dans la prise en charge des hyphémas post-traumatiques.

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Introduction

Hyphema (blood in the anterior chamber) occurs mainly by blunt or lacerating trauma. In the literature, two thirds of traumatic hyphemas are due to blunt ocular trauma [1,2]. Complications of traumatic hyphema such as increased intraocular pressure, secondary hemorrhage, optic atrophy, and corneal bloodstaining can cause worse visual acuity [3–5]. For this reason, physicians should prevent these complications early and ensure the recovery. Some suggestions about treatment are: use of various medications (e.g., cycloplegics, systemic or topical steroids, antifibrinolytic agents, analgesics, and antiglaucoma medications); the patient's activity restriction; use of a patch and shield; outpatient vs. inpatient management; and medical vs. surgical management [6]. Despite the fact that much has been written on this subject, the management of traumatic hyphema still remains controversial. In this paper, we aimed to explore the effectiveness of topical steroid with supportive therapy (bed rest, activity restriction, water supplement) against only supportive therapy in traumatic hyphemas without serious complications.

Material and methods

From February 2009 to April 2013, 206 patients with the diagnosis of hyphema due to blunt trauma of the globe

were reviewed retrospectively. Patients with open globe injury, preexisting eye pathological features, prior intraocular surgery, a history of aspirin usage, and a concomitant ocular pathology which affect the final visual acuity and IOP such as iridodialysis, lens subluxation, traumatic cataract, retinal detachment, macular edema were excluded. The study was approved by the ethics committees of the institutions and was conducted in accordance with the Declaration of Helsinki.

According to the files of patients, at the initial examination a detailed history had been taken about the mechanism of trauma, also a general medical history about other systemic diseases and medications used. All patients had been hospitalized. Patients had been monitored daily with ocular examination and vital sign testing for the five days of treatment. The eye examination included visual acuity with Snellen charts, pneumatic tonometry, slit-lamp biomicroscopy, and fundus examination. Gonioscopy was performed two weeks after the hyphema was absorbed to avoid the risk of rebleeding. In certain cases, the patients underwent orbital tomography.

The hyphema size was graded according to the percentage of the anterior chamber filled with blood. Grade 1 occupied less than one third of the anterior chamber (Fig. 1), Grade 2 greater than one third but less than half of the anterior chamber, Grade 3 one half or more of the anterior chamber, Grade 4 was a complete blood clot in the anterior chamber. A secondary hemorrhage was defined as an

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