[Visual acuity, pachymetry and corneal density after 5% sodium chloride treatment in corneal edema after surgery].

[Article in French]
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Abstract

PURPOSE: To evaluate the effectiveness of a hyperosmolar medication in corneal edema.

METHODS: This was a prospective randomized study, performed in patients with post-operative corneal edema. Two groups were created: group 1 treated with hypertonic eye drops of 5% sodium chloride with 0.15% sodium hyaluronate in addition to the usual post-operative treatment for 1 month; group 2 without treatment for edema. Visual acuity, pachymetry and corneal density were measured at 1 day, 1 week, 1 month, 3 months and 6 months following surgery.

RESULTS: Forty-four patients were included in group 1 and 42 in group 2. Visual acuity was significantly better in group 1 than in group 2 at 7 days (0.84 logMAR vs 1.55 logMAR, P=0.019 CI 95% [-1.298; -0.128]) and was no longer different at one month, three and six months. Pachymetry decreased significantly in 7 days in group 1 (decrease of 17%, P=0.04, CI 95% [1.987; 258.305]), compared to group 2 (P=0.8, CI 95% [-132.9; 161.8]), but the difference between the 2 groups was not statistically significant (P=0.11, CI 95% [-16; 19.1]). Corneal density was also not significantly different between the two groups.

CONCLUSION: Five percent sodium chloride hypertonic eye drops show a statistically significant reduction in post-operative corneal edema as shown by the improvement in visual acuity at one week and the downward trend in pachymetry.

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KEYWORDS: Acuité visuelle; Corneal densitometry; Corneal edema; Densitométrie; Hyperosmolar eye drops; Pachymetry; Pachymétrie; Solution hyperosmolaire; Visual acuity; Edème de cornée

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