

## THE COMPARISON OF THE EFFECT OF TWO DIFFERENT DISPERSIVE VISCOELASTICS ON CORNEAL ENDOTHELIUM DURING PHACOEMULSIFICATION SURGERY

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**Purpose:** To compare the effects of two different dispersive viscoelastics used in phacoemulsification surgery (sodium hyaluronate % 3 [Endocoat®] and chondroitin sulfate 4.0% sodium hyaluronate 3.0% combination [Viscoat®]) on corneal endothelium.

**Material & Methods:** We divided the patients into two groups: Group 1 composed of 20 eyes of 20 patients; Endocoat was used during phacoemulsification. Group 2 composed of 20 eyes of 20 patients; Viscoat was used during phacoemulsification. Endothelial cell count (ECC) of all patients is measured at postoperative 1<sup>st</sup> and 30<sup>th</sup> days. The change in ECC at postoperative 30<sup>th</sup> day from baseline was compared between two groups.

**Results:** Preoperative mean ECC was 2350 cells/mm<sup>2</sup> in the Viscoat group and 2299 cells/mm<sup>2</sup> in the Endocoat group. The mean ECC decreased by 311 cells/mm<sup>2</sup> (a 9.4% loss) in the Viscoat group and by 331 cells/mm<sup>2</sup> (a 14% loss) in the Endocoat group at postoperative 30<sup>th</sup> day. There was no statistically significant difference in ECC change from preoperative values at postoperative 30<sup>th</sup> day between the two groups ( $p=0.105$ ).

**Conclusion:** The protective effect of sodium hyaluronate 3% (EndocoatR) and the combination of chondroitin sulfate 4.0% and sodium hyaluronate 3.0% (ViscoatR) on corneal endothelium during phacoemulsification is similar.

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