

## ABSTRACT

### COMPARISON OF 20% AUTOLOGOUS SERUM EYE DROPS WITH CELLULOSE AND DEXTRAN 70 IN THE TREATMENT OF THIRD GRADE DRY EYE DISEASE

#### (Clinical Experimental Study)

Fitrika Wahyu Listari, Eddyanto, Endang Retnowati

**Purpose:** This study evaluated the effectiveness of 20% autologous-serum eye drops versus unpreserved cellulose and dextran 70 in the treatment of patients with third grade dry-eye disease.

**Methods:** Patients fulfilling inclusion criteria were randomized to either 2 weeks of 20% autologous serum eye drops or 2 weeks of unpreserved cellulose and dextran 70 eyedrops. Changes from baseline to 2-week values of ocular-surface-disease index (OSDI), corneal and conjunctival staining with fluorescein and rose bengal, tear-break-up time (TBUT), ferning test and were measured. Statistical analyses were carried out using T-Test and Mann-Withney Test.

**Results:** Fifty eyes (15 patients) in the autologous-serum group and 16 eyes (16 patients) in the unpreserved cellulose and dextran 70 group completed the study. OSDI scores showed significant improvement in the autologous-serum group compared to that of the unpreserved cellulose and dextran 70 group at 2 weeks ( $p = 0.021$ ). However, differences in staining scores, TBUT and ferning test were not significant.

**Conclusion:** Use of both 20% autologous-serum eye drops and unpreserved cellulose and dextran 70 is safe and effective as single treatment for third grade dry-eye disease. However, dry-eye symptom significantly improved among patients in the autologous-serum group than those in the unpreserved cellulose and dextran 70 group.

**Keywords:** Autologous-serum eye drops, Unpreserved cellulose and dextran 70, third grade dry-eye disease, Ocular-surface staining, Ocular-surface-disease index