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عنوان البحث:

## **Outcomes of preservative free topical steroids in treatment of Idiopathic Inflammatory Punctal Obstruction**

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### **Outcomes of preservative free topical steroids in treatment of Idiopathic Inflammatory Punctal Obstruction**

**Purpose:** Determine the optimal concentration of dexamethasone for the treatment of idiopathic inflammatory punctal obstruction by comparing the efficacy of different concentrations of dexamethasone (0.1% preserved, 0.1% non-preserved, 4% non-preserved) with non-preserved artificial tears; based on clinical staging and anterior segment optical coherence tomography (AS-OCT) finding .

**Patients and Methods:** in a randomized clinical trial conducted 49 patients selected and randomly allocated into three treatment groups in a 1:1:1 ratio group (I) received non-preserved dexamethasone 0.1, group (II) received preserved dexamethasone 0.1, group (III) received non-preserved dexamethasone 0.4, Slit lamp punctal staging and anterior segment OCT before, immediately after, and one month after stopping the treatment.

**Results:** There was a statistically significant improvement in symptom and slit lamp staging among group (I) and group (III). While in group (II) there were non-statistically significant improvement in the symptom and slit lamp staging score. The measured outer punctal diameter (OPD) by AS-OCT, OPD was increased significantly in (group (I) and group (III) on posttreatment assessment as compared with pre-treatment assessment. While in group (II) there was non-statistically significant improvement on post-treatment assessment as compared with pre-treatment assessment. Regarding the assessment of OPD one month after discontinuation of the treatment, there was non-statistically significant difference as compared with the posttreatment assessment in all the three studied groups. At the end of treatment, 27 (57.4%) showed improvement of clinical symptom, there was a statistically significant lower rate of improvement among dexamethasone 0.1% eye drops groups. The statistically highest improvement rate (80%) was among non-preserved dexamethasone 0.4% eye drops group.

**Conclusion:** Dexamethasone (0.1% non-preserved, 0.4% non-preserved) showed an effective, symptom relieving and outer punctal diameter (OPD) improvement as compared with the 0.1% preserved dexamethasone.