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Outcomes of Thermal Pulsation Treatment for Dry Eye Syndrome in Patients With Sjogren Disease

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Abstract

Purpose: To evaluate the clinical outcomes of thermal pulsation treatment in patients with meibomian gland dysfunction (MGD) and dry eye secondary to Sjogren disease.

Methods: Twenty-four eyes from 13 patients with previously diagnosed Sjogren disease who presented to our institution with dry eye symptoms and had thermal pulsation treatment were prospectively followed up. Patients underwent comprehensive slit-lamp examination, including MGD grading, gland oil flow, corneal and conjunctival staining scores, and tear break-up time (TBUT). Tear osmolality was tested before and after treatment.

Results: The average patient age was 62.4 years (range, 31-78 yrs); 12 were women and 1 a man. The average meibomian gland oil flow score showed an increase from pretreatment 0.71 to 1.75 at 1 year posttreatment (range 9-15 months) (P = 0.001). The average corneal staining score decreased from a pretreatment grade of 1.04 to a posttreatment grade of 0.36 (P < 0.001). The average conjunctival staining score decreased from a pretreatment grade of 1.5 to a posttreatment grade of 0.48 (P < 0.001). The average tear break-up time improved from 3.8 seconds before treatment to 7.5 seconds after thermal pulsation treatment (P < 0.001). There was no statistically significant change in the tear osmolality or Ocular Surface Disease Index score.

Conclusions: Our findings suggest that MGD is an important contributor to dry eye disease in patients with Sjogren disease and should not be overlooked when considering treatment options. Thermal pulsation is a therapeutic option for patients with Sjogren disease who have MGD and dry eye symptoms. After a single treatment, patients exhibited increased oil flow and tear break-up time with an associated decrease in corneal and conjunctival staining.

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