

Evaluation of the effect of hypochlorous acid hygiene solution on ocular surface disease index and Schirmer tear test in patients with blepharitis

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ABSTRACT

Introduction: The purpose of this study was to determine whether a commercial formulation of hypochlorous acid (HOCl) hygiene solution (0.01%), Ocucyn™, can treat blepharitis and improve dry eye disease symptoms by evaluating Schirmer tear test (STT) and ocular surface disease index (OSDI) questionnaire results. **Materials and Methods:** Patients and caregivers were taught to use a spray form of HOCl (Ocucyn™) on a dry cotton bud and it was then used to perform lid scrub, twice a day. Patients were reviewed at 0 week and 4 weeks from treatment initiation. Outcomes were assessed by reviewing symptoms, anterior segment photograph comparisons, STT and OSDI questionnaires. At the end of the 4 weeks, the medication was discontinued. **Results:** This study comprised of 5 patients (10 eyes) treated with blepharitis. Subjects were 4 males and 1 female in this study. Prior to treatment, 2 patients (40%) presented with both mild and moderate while 1 patient with severe dry eye grading. Post treatment, 3 patients (60%) recovered normal grading while 2 patients (40%) mild grading. STT showed 4 eyes (40%) with severe and 5 eyes (50%) with moderate dry eye pre-treatment. Post-treatment STT showed 6 eyes (60%) recovered normal grading. Anterior segment photography revealed improvement of blepharitis post-treatment. **Conclusion:** HOCl is an effective, safe stand-alone treatment option for blepharitis and improving dry eye disease symptoms.