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Treatment of bacterial and viral conjunctivitis with topical ultrapure stable hypochlorous acid (HOCl): a clinical evaluation and treatment response in 79 cases

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Purpose: Determine the efficacy and tolerability of ultrapure stablised hypochlorous acid as a general anti-microbial agent in the treatment of bacterial and viral conjunctivitis. Hypochlorous acid is one of the most efficient anti-microbial agents, effective against numerous bacteria and viruses including MRSA and HIV, as well as fungi. Hypochlorous acid mediates its action on contact and is selfsterilising and with no possibility of emerging resistance. Previous methods of manufacture contain other chorine compounds, such as chlorine gas and hypochlorite which are noxious and irritating to the eye. We have developed an ultrapure and stabilized HOCl solution and have undertaken studies to determine the utility in treating infective eye disease.

Methods: 65 cases of bacterial and 14 cases of viral conjunctivitis (which included one case of severe viral corneal endothelitis) were treated with a solution of Ultrapure Stabilized HOCl at 80mg/l, pH 5.4. Tolerability and efficacy were noted during the treatment period. HOCl eye drops were administered two drops in each eye 3 times per day and prior to sleep. The clinical response and tolerability was examined at day 1, 3 and 7.

Results: Total resolution of the bacterial conjunctivitis occurred in 64/65 cases examined, including one subject who had previously failed Tobramax, Tobradex, Maxitrol and Fuse ointment. One bacterial case had a poor response, possibly due to compliance issues and the presence of a systemic infection. All viral conjunctivitis cases showed complete and rapid resolution of symptoms. In addition toresolution of the infection, all patents showed rapid improvement of redness, eye discharge, photophobia and impaired vision. In the

one case with associated viral corneal endothelitis, corneal clouding resolved with normal vision returning. No tolerability issues were identified.
Conclusions: A new treatment method for infective eye conditions is proposed which does not rely on the use of topical antibiotics.

HOCl, when applied at 80mg/l pH5.4, is profoundly effective and well tolerated in cases of bacterial or viral conjunctivitis.HOCl is cheap to manufacture and is stable at ambient temperatures and may be useful in the treatment of infective eye disease in locations where access to antibiotics is difficult.