Contact lens associated giant papillary conjunctivitis

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Contact lens associated giant papillary conjunctivitis (CLPC) is a complication primarily associated with soft contact lens (SCL) wear.\(^1\)-\(^3\) With approximately 40 million people wearing contact lenses in the United States, it is disconcerting that a recent study of 572 contact lens patients found approximately 50 percent of the eyes suffered from at least one contact lens-related complication.\(^4\) There was no statistically significant difference between silicone and non-silicone SCL complication rates, while there was a statistically significant reduction in complications with RGP lenses.\(^5\) In a different study that focused solely on patients with CLPC, it took 5-10 times longer for CLPC development with PMMA lenses and two times longer for RGP lenses as compared to soft lenses.\(^5\)

Giant papillary conjunctivitis (GPC) is associated with surface deposits on contact lenses and ocular prosthetics, as well as with mechanically related micro-trauma (potential sources include corneal sutures, filtration blebs and scleral buckles).\(^5,6\) While silicone hydrogel lenses have been very useful for addressing corneal hypoxia issues, the relatively high modulus has caused an apparent increase of CLPC as compared to standard hydrogel lenses.\(^1\) It has been noted that while silicone hydrogel lenses have relatively less protein deposits, the deposits that are found are mostly denatured proteins with a higher antigenic potential.\(^1\)

The ultimate management goal for patients with CLPC is to enable them to comfortably remain in contact lenses long-term. This can be accomplished in a variety of ways. As mentioned above, switching a patient out of a silicone hydrogel material can reduce the antigen load and decrease mechanical trauma, while abandoning soft lenses altogether in favor of RGP lenses is another option. Other treatments include temporarily discontinuing lens wear, changing a patient’s care system to a preservative-free solution, switching the patient into a daily disposable lens, and/or adding steroidal or non-steroidal pharmaceutical agents.\(^5\)

References:


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