

CONTACT ALLERGY TO HARD CONTACT LENS

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Three patients developed recurrent irritation, redness and watery discharge from their eyes after using hard contact lens. Patch tests were positive with the material of the hard contact lens and negative with teepol, sodium lauryl sulphate and material of the soft contact lens. All the three patients became alright after they stopped using hard contact lens.

Key words : Contact allergy, Hard contact lens, Conjunctivitis.

Individuals wearing contact lenses have been reported to develop complications such as punctate keratitis,¹ filamentary keratitis,² infective keratitis,³ giant papillary conjunctivitis⁴⁻⁶ superior limbic kerato-conjunctivitis,⁷ keratoconus⁸ and scleral perforation.⁹ One patient having allergic contact conjunctivitis due to merthiolate in the soft contact lens was reported by Pedersen in 1978.¹⁰ We are reporting 3 cases of contact conjunctivitis caused by the hard contact lens.

Case Reports

Case 1

A 28-year-old male started using spectacles in 1970, but because of a rapid increase in the power of his lenses, in 1972 he was advised to use hard contact lenses. After 4-5 years of using these lenses, he started having redness of the palpebral and bulbar conjunctivae and watering of both his eyes. His eyes would become normal in a week's time by avoiding contact lenses but the symptoms would re-appear within 2 days after using contact lenses again. Since 1980, he was not using contact lenses and had remained alright. In March 1982, patch tests were performed with the materials of the hard, semi-soft and soft contact lenses. An erythe-

matous, papulo-vesicular reaction was observed at the site of patch test with the hard lens material, while there was no reaction at the sites where semi-soft and soft lens materials had been applied. Since then, he started using semi-soft contact lenses and remained alright. In October 1983, however, he lost his semi-soft contact lenses and started using hard contact lenses again, but this time there was no problem in his eyes. In January 1984, patch tests were repeated with the hard and semi-soft contact lens materials, savlon and sodium lauryl sulphate. A positive reaction was still obtained with the hard contact lens material only.

Case 2

In November 1983, a 18-year-old girl started using hard contact lenses, but within an hour she noticed irritation, redness and a watery discharge from both her eyes. These symptoms disappeared after she removed the lenses. Subsequently, she would notice the same symptoms within one hour of wearing the hard contact lenses, and when she stopped using the contact lenses, she would become alright. In December 1983, patch tests were done with the materials of the hard and the soft contact lenses, sodium alkyl sulphate and sodium lauryl sulphate. Positive reaction was obtained with the hard contact lens material only.

Case 3

A 14-year-old girl noticed redness and a watery discharge in both her eyes 1½ hours

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after wearing hard contact lenses. These disappeared on removing the lenses. After 1 month, when she again used the same contact lenses, she developed the redness and watering from both her eyes again. Patch tests with the material of the hard contact lens, cetavlon, sodium alkyl sulphate and sodium lauryl sulphate showed positive reaction with the material of the hard contact lens only.

Comments

In India, 3 types of contact lenses are being used, hard, semi-soft and soft. The hard contact lenses are prepared from methylmethacrylate by the process of polymerisation of the monomer; the semi-soft contact lenses consist of a polymer of silicone and polymethylmethacrylate, while the soft contact lenses contain hydroxyethylmethacrylate. In addition, benzoyl peroxide and hydroquinone are added to methylmethacrylate during the process of polymerization. Contact hypersensitivity can be caused by the unpolymerized monomer—methylmethacrylate, benzoyl peroxide and hydroquinone or the cleansing and the sterilising solutions used for the contact lenses. Positive patch tests in our cases were obtained only with the material of the hard contact lens. This material is obtained from a British firm in the form of buttons of polymerised methylmethacrylate. Patch tests with benzoyl peroxide and hydroquinone could not be performed.

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