Irritant Contact Dermatitis due to “Kajal”

Sangeeta Priyadarshi Sawant • Meenakshi Bhat • Volga More

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A five-mo-old baby was referred to the authors with hypopigmentation at both lower lid margins. There was history of “Kajal” application for the first time which was immediately followed by redness and itching over the lids. Three days later there was post-inflammatory hypopigmentation at both the lid margins (Fig. 1). He was diagnosed to have Irritant contact dermatitis to “Kajal” with post-inflammatory hypopigmentation. The parents were advised against Kajal application in future.

Irritant contact dermatitis is more frequent in children, particularly during the early years of life caused by a direct local cytotoxic effect of an irritant on the cells of the epidermis, with a subsequent inflammatory response in the dermis. It can result from prolonged or repetitive contact with various substances that most commonly include saliva and the exogenous irritants like citrus juices, bubble bath, detergents, abrasive materials, strong soaps, and proprietary medications.

It manifests with redness, itching, swelling, blistering and scaling of the damaged area. The diagnosis is established on the clinical appearance of dermatitis at a site sufficiently exposed to a known cutaneous irritant. It should be excluded from allergic contact dermatitis which is due to delayed hypersensitivity reaction. The

Fig. 1 Clinical photograph of the child showing dermatitic changes of lower lid margins

definitive treatment consists of identification and removal of the causal agent.

Application of “Kajal/surma” is a common practice in Indian families. It has been claimed to keep the eyes cool and clean, improve vision and strengthen the eyes. It is also said to ward off an ‘evil eye’. Most commercially produced ‘kajal’ contain high levels of lead. Studies have revealed that ‘Kajal’ comprises of galena (PbS), minium (Pb_3O_4), amorphous carbon, magnetite (Fe_3O_4), and zincite (ZnO). Prolonged application may cause excessive lead storage in the body resulting in various hematological and CNS side effects. In addition it can cause trauma and infection to the eyes.

Although concerns about its safety have been raised, its use in pediatric age is very prevalent even today. The above case emphasizes the need for the health care providers to educate the parents and grandparents regarding the various adverse effects associated with “kajal” application.

S. P. Sawant (✉) • M. Bhat
Department of Pediatrics, Bhabha Atomic Research Centre
Hospital, Anushaktinagar, Mumbai 400094, India
e-mail: drss123@rediffmail.com

V. More
Deonar-West Dispensary, Bhabha Atomic Research Centre
Hospital, Anushaktinagar, Mumbai, India