

Occupational systemic allergic dermatitis caused by sevoflurane

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Sevoflurane, isoflurane and other halogenated anaesthetic agents are widely used in inhalational induction of anaesthesia. Although various adverse reactions have been described, skin reactions are uncommon. Contact dermatitis caused by isoflurane has been reported (1). Generally, contact dermatitis is observed in areas directly exposed to the allergen, although systemic exposure to an allergen (orally, inhaled, or intravenous) may produce generalized dermatitis with histopathological findings similar to those of contact dermatitis (2).

Case Report

A 59-year-old male surgeon who had been working as a surgeon for 30 years presented with an itchy erythematous rash on his thighs, groin, and anogenital area. Despite appropriate treatment, a month later the eruption spread onto his abdomen, face (eyelids), and flexures (axillae and elbow).

There was no immediate relationship with his environment at home or work, or history of drug ingestion. He was medically otherwise well. There was no eosinophilia, raised total IgE, or specific IgE to common allergens (including latex). A biopsy of lesional skin revealed spongiotic dermatitis with lymphocytes and eosinophils; the histopathological features were compatible with eczema.

Patch testing was performed (allergens from Bial-Aristegui, Bilbao, Spain) with the European baseline series and other series (acrylates, plastics, textile, and rubber) and the result (D2 and D4) was negative.

Several months later, the patients presented with persistent eczematous lesions with lichenification. Partial improvement was obtained with topical drugs, phototherapy, and a short course of steroids.

The clinical impression suggested chronic endogenous eczema. However, the patient was now aware of exacerbation following work in an operating theatre with a generalized, macular, red eruption (mainly localized in the gluteal area and the major flexures, with a distribution typical of the 'baboon syndrome') over his chronic eczema. It was established that sevoflurane was always employed as an anaesthetic in this operating theatre. A repeated open application test (ROAT) (3) with sevoflurane and desflurane was performed on the inner aspect of the forearm (application of 1 ml without occlusion). The ROAT with sevoflurane gave a positive result 48 hr after its application, with non-irritating, small red macules spreading inside the marked area. Three control subjects showed no response. The ROAT with desflurane gave a negative result. It was concluded that sevoflurane was the cause of the patient's dermatitis, and he was recommended to avoid exposure to this anaesthetic agent; complete remission of the eczema resulted.

Discussion

Contact dermatitis or systemic allergic dermatitis caused by sevoflurane has not previously been reported. The pattern of distribution of the dermatitis was consistent with the entity known variously as 'baboon syndrome' or SDRIFE (2). Exposure to a systemically administered drug (sevoflurane) resulted in symmetrical intertriginous and flexural exanthema, a ROAT gave a positive result (a patch test would be more usual), and resolution was achieved when the drug was avoided.

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