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Benzoin Spray: Cause of Allergic Contact Dermatitis due to Its Rosin Content

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Dear Editor:

Colophony, known as rosin, and its derivatives are ubiquitous in our environments. As shown by patch tests, allergies to rosin are relatively common and are increasingly prevalent[1]. According to previous studies, many of these allergies are due to the rosin content of printing inks, adhesives, chewing gum, and sports grips[1]. However, rosin is also present in benzoin spray, which is used to provide a mild protective coating to the skin before the application of surgical tape, adhesive straps, casting material, and orthopedic appliances. We present a case of allergic contact dermatitis due to rosin in benzoin spray.

A 51-year-old woman was referred for erythematous lesions including yellow blisters on her nose and both

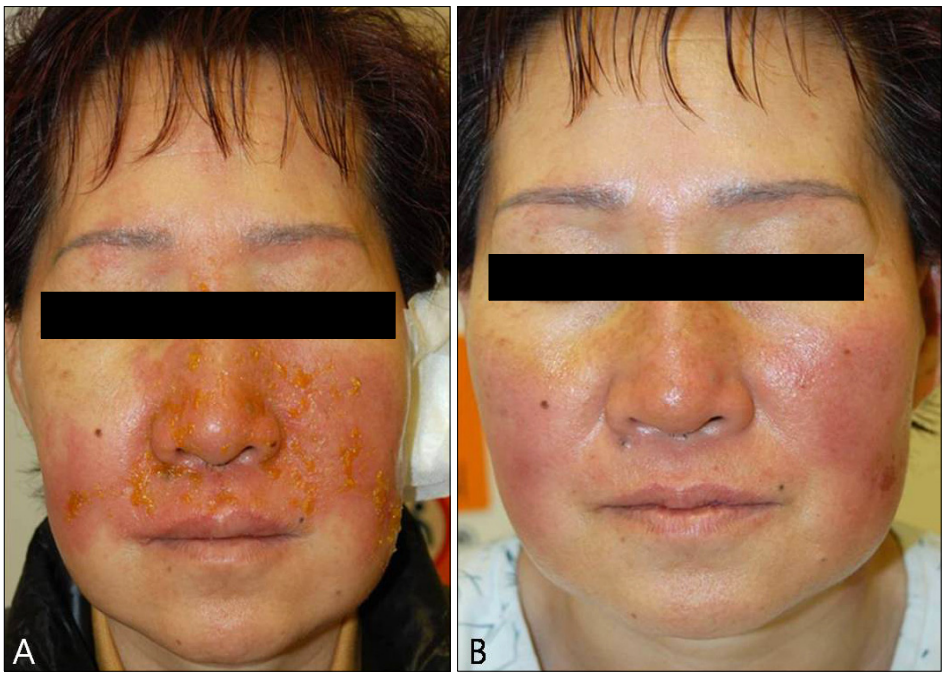

Fig. 1. (A) Erythematous lesions with some yellow blisters on the nose and both cheeks. (B) Four days later, the lesions improved.

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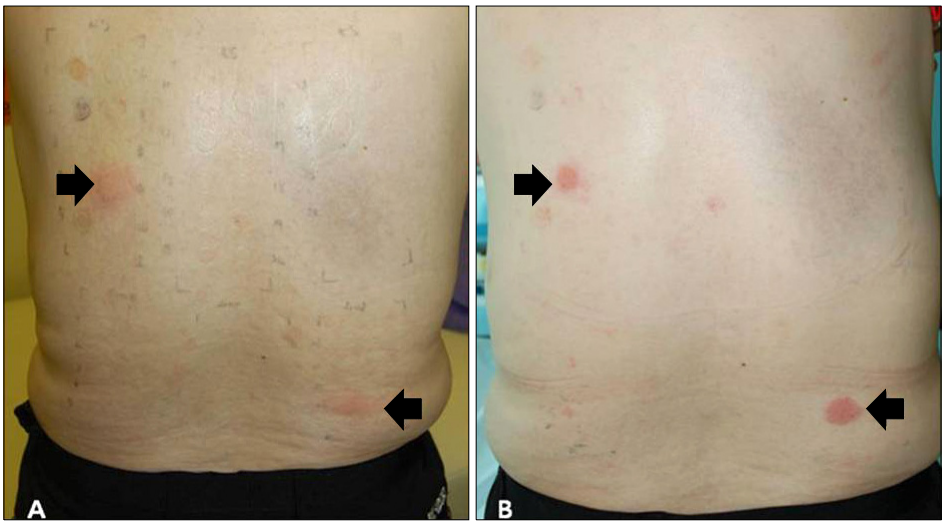

Fig. 2. (A) Reaction on day 2. (B) Results on day 4, showing reactions to colophony (rosin) and sandalwood oil. Right arrow (→): rosin, left arrow (←): sandalwood oil.

cheeks (Fig. 1A). She had undergone rhinoplasty 2 days before her presentation. One day prior, she had received dressings with benzoin spray to protect the skin from the bandages. When she removed the dressings 1 day before her visit, she found severe erythematous lesions with yellow blisters under the area that had been covered with the benzoin spray-treated tape. Contact dermatitis due to the benzoin spray treatment was suspected. After her first visit, she was treated with prednisolone (12.5 mg/day) and clobetasol propionate ointment (0.05%). Four days later, she was discharged because her lesions had improved and the blisters had disappeared (Fig. 1B). We performed patch testing to confirm the diagnosis with the Korean standard and a fragrance series, but not 'as is' patch testing. This was the limitation of our report. Reactions were scored according to the criteria of the International Contact Dermatitis Research Group. Results observed on days 2 and 4 indicated reactions to colophony (grade 2+ with erythema and mild discrete vesicles) and sandalwood oil (grade 1+ with light edema) (Fig. 2). On the basis of these findings and because contact dermatitis was still considered the main diagnosis, we suspected that the rosin in the benzoin spray might have induced the allergic contact dermatitis observed in our patient.

Benzoin spray consists of the fluid extract of 25% benzoin Sumatra and 75%～80% alcohol that contains aloes, tolu balsam, ethanal, benzoin, rosin, 15%～25% ethyl alcohol, 30%～45% isopropyl alcohol, and isobutene. Rosin chiefly consists of different resin acids, especially abietic acid[2]. Meaningful conclusions about the prevalence of rosin allergies are difficult to draw from currently published studies. It is certainly a common finding of patch tests performed in clinics, and may be more prevalent in persons who perform particular jobs or receive various types of exposure. Identifying a relevant sensitizing episode may be difficult because rosin is widely used. Among English patients with occupational dermatitis, 4.1% were allergic to colophony, most of whom were employed in the furniture industry[3]; on the other hand, 1.3% of Swedish house painters were patch- test positive for colophony[4]. Contact dermatitis due to rosin in benzoin spray has not been reported previously; therefore, we present this case, which indicates that dermatologists should be careful when using benzoin spray in skin dressings.

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