



Fig. 1. Positive scratch chamber test to coffee powder after 2 days.

Nail-fold contact dermatitis from coffee powder

Contact Dermatitis 2009; 60: 289–290

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Key words: coffee powder contact dermatitis;
food allergen; nail-fold dermatitis; paronychia.

Chronic paronychia is usually secondary to fungal infection. Even though coffee is one of the most frequently consumed beverages in the world, contact dermatitis to the powder of roasted coffee is very rare. Herein, we report such a case that presented as a paronychia.

Case Report

A 40-year-old woman presented with a 1-year history of a chronic paronychia involving the left thumb that had not responded to antifungal creams. The patient worked as a barmaid and daily prepared a large number of cups of coffee. The on-off button of the coffee maker was located below the powdered coffee reservoir. When she pushed the button with her left thumb, it became dusted with coffee

powder falling from above. The severity of her paronychia tended to improve during holidays.

Because the patient suspected that coffee powder was the cause of her problem, she underwent allergy testing that also included patch testing with the European baseline series and the Trolab (Hermal, Reinbek, Germany) antimicrobials and preservatives series with negative results. However, patch testing to coffee powder showed a reaction (+) at 2 days, and a positive scratch chamber test was positive after 20 min and 2 days. Ten controls were negative (Fig. 1).

Rapid improvement of the paronychia ensued after one intralesional injection of depot corticosteroid in

the proximal and lateral nail fold and a job change, but transverse grooves over the nail plate were still visible 6 months later (Fig. 2).

Discussion

Despite enormous consumption, roasted coffee powder rarely causes contact dermatitis. Allergic reactions have been reported to green berries in coffee plantations (1). The allergen is unknown but does not appear to be the same as in roasted coffee powder. There is one report of an allergic contact oral mucositis because of instant coffee (2).

Piraccini et al. reported chronic hand eczema in a woman who had been working in a bar for 12 years and had



Fig. 2. After-effects of paronychia caused by allergy to coffee powder.

noticed worsening of her eczema when she was serving coffee after contact with the powder or with liquid coffee. Patch tests were positive to coffee extract. Her dermatitis improved after she stopped preparing coffee (3).

There is a single report of coexistent type I and type IV allergy from occupational exposure to coffee. The patient had a rhinoconjunctivitis and eczema of the hand and face from type I and type IV sensitization to green coffee beans and type I allergy to roasted coffee dust (4).

Approximately 10% of stevedores who handle coffee bags develop asthma from green or roasted coffee beans (5). Generalized urticaria after coffee ingestion has been rarely reported, and prick testing with a 10 mg/ml preparation of caffeine was positive (6, 7).

The aromatic compounds present in coffee are generated by heat during roasting. Complex interactions between proteins, acids, and carbohydrates give rise to more than 1000 flavouring substances. Their nature and proportion determine the specific character of coffee: caffeine, vanillin, guaiacol, etc. Many of these compounds are lost by exposure to air or light.

Generally, chronic paronychia is considered to be the result of candida infection: the proximal and lateral nail folds are erythematous and oedematous, and as the eponychium is absent, there is opening of the proximal nail fold to micro-organisms and environmental dust that maintain chronic inflammation. Transverse ridges on the nail plate are indicators of previous inflammation. However, Tosti et al. showed that chronic paronychia could be secondary to hypersensitivity to food allergens (8). Specific diagnosis was obtained by a variant of the 'rub test': an open patch test with fresh food over the involved proximal nail fold, during a quiescent phase, 2 weeks, or more after an acute episode of paronychia.

Paronychia may be secondary to hypersensitivity to food allergens. Contact dermatitis to the powder of roasted coffee is rare, and nail-fold dermatitis causing paronychia has not been previously reported.

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