LETTER TO THE EDITOR

Two cases of prurigo pigmentosa in atopic patients

A 17-year-old man presented with pruritic confluent reticulated erythematous papules and hyperpigmented patches on his shoulders, abdomen and back that he had suffered with for 2 years (Fig. 1a). The condition had not responded to the previous treatments of oral antihistamines and topical steroids. He was reported to have had allergic rhinitis and allergic conjunctivitis, and these conditions spontaneously resolved during childhood and required no ongoing therapy. His mother and older sister also had allergic rhinitis. The physical exam showed erythematous papules and hyperpigmented brownish patches in a reticulated pattern that were symmetrically distributed on his trunk. He also had scaly brownish ichthyosiform patches on his flanks. The results of the laboratory tests including complete blood count, urinalysis, liver and renal function tests, the lipid profiles, and total immunoglobulin (Ig)E and eosinophil cationic protein (ECP) levels were within normal limits.

He showed a strong positive response to the immediate-type allergy skin prick test with *Dermatophagoides pteronyssinus*, *Dermatophagoides farinae*, cat fur and horse hair. There was no positive reaction on the patch tests using the Korean standard series. A biopsy specimen taken from the abdomen showed spongiosis and a few dyskeratotic cells in the epidermis and perivascular lymphocytic infiltrates and a few melanophages in the dermis (Fig. 2). Dapsone therapy at a dose of 100 mg daily was started. After 1 week of treatment, the erythematous papules were almost cleared up with some residual hyperpigmentation.

A 23-year-old man presented with a 6-month history of pruritic erythematous eruptions over both sides of the neck. He had a typical course of erythema recurrently occurred on reticulated pigmentation over both sides of the neck and he denied exposure to any industrial chemical. He also had a chronic relapsing pruritic dermatitis that affected the flexural...
surfaces, such as antecubital and popliteal fossae and his father was also reported to have had atopic dermatitis. Examination showed erythematous papules and plaques with reticulated brownish patches on both sides of the neck, from the medial one-third of clavicle to acromion (Fig. 1b). On the laboratory tests, the complete blood cell count, urinalysis and stool examination were within normal limits. However, there was eosinophilia in the peripheral blood (8%) and also significantly elevated levels of total IgE (646 ku/l, reference value: < 200 ku/l) and ECP (33.1 µg/l, reference value: < 20 µg/l). He showed a positive response to the skin prick test with *D. pteronyssinus* and *D. farinae* with contributory results on the radioallergosorbent assay test (*D. pteronyssinus*: class 5; *D. farinae*: class 6). On the patch tests using the Korean standard series, he showed a weak positive response to neomycin sulfate of a weakly-positive degree. A biopsy specimen taken from the neck showed mild spongiosis in the epidermis, subepidermal blister and dense cell infiltrates of lymphocytes and eosinophils in the dermis. The results of direct immunofluorescence were negative. Treatment with antihistamines and topical steroids was started, but we did not have the chance to try dapsone or minocycline as he was lost to follow up.

The cause of prurigo pigmentosa remains unknown. Nagashima suggested that some unknown environmental contaminants might play a role in the development of this disease, and that friction from clothing such as sweaters, underwear and brassieres could be the triggers of non-specific mechanical stimuli. Yamasaki et al. thought that this disease arose from contact allergic reactions to chemicals such as para-amino compounds. Others proposed that the disease was related to contact with trichlorophenol or chromium, and also to the ingestion of bismuth-subsalicylate. In addition to these exogenous factors, some cases were thought to be related with ketosis caused by diabetes mellitus, fasting or dieting to lose weight. It has been recently suggested that *Helicobacter pylori* infection might have a possible relationship to prurigo pigmentosa. Currently, 28 cases have been reported in Korean dermatological published work. Some cases were associated with friction from wet clothing or swimming suit and sweating, whereas others were associated with diabetes mellitus, pregnancy or diet restriction. However, in most cases, the authors couldn’t tell what were the possible causes (Table 1).

Although little is known about a causal relationship between prurigo pigmentosa and atopy, eosinophilia was found in some cases and elevated total IgE levels were detected in other cases. In addition, there was a previous report of another patient who had a medical history of atopy. One of our patients had a past history of respiratory atopy and the other patient had the active skin lesions of atopic dermatitis. Based on our cases as well as the previous cases, we suppose that atopy could be a favorable condition for the development of prurigo pigmentosa. It is possible that physical trauma and friction from
clothing could be more sensitive stimuli for atopic patients; otherwise, it may be a response to a specific allergen for these patients.

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REFERENCES
