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LETTER TO THE EDITOR

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Ashy dermatosis with a positive patch test to gold sodium thiosulfate

Dear Editor,

A 53-year-old Japanese woman was referred to our hospital with asymptomatic, disseminated blue-gray patches on her trunk and extremities. The skin rashes had started as mild erythema without pruritus and had evolved gradually to the blue-gray macules. She previously consulted three dermatologists and received topical corticosteroid therapy for the treatment of presumptive eczema. However, the lesions were intractable and increased in number. Physical examination revealed asymptomatic, disseminated, blue-gray macules of 1-4 cm in diameter on the patient's back, and bilateral abdomen and extremities (Figure 1A,B). Her mucosa, skin of the face and neck, and hair and nails were intact. Histopathological examination of a lesion on her left arm revealed mild lymphocytic infiltration of the upper dermis, slight vacuolar degeneration of the basal layer, and both deep and shallow pigmentary incontinence. Lichenoid tissue reaction was not remarkable (Figure 1C,D). Based on the clinical and histopathological findings, we diagnosed the case as ashy dermatosis.

We performed patch tests for 17 metals, including gold sodium thiosulfate 2% aq. (Torii Pharmaceutical, Tokyo, Japan), and positive reactions were observed on days 2, 3, and 7 (Figure 1E). The patient was treated with tacrolimus ointment and we requested that her dentist remove dental metals containing gold, which was done. The development of additional lesions has stopped, but currently, the pigmented macules remain.

Ashy dermatosis (AD), otherwise known as erythema dyschromicum perstans, is a rare and idiopathic dermal melanosis. The typical clinical findings of AD are asymptomatic, ash-colored, macular hyperpigmentations that symmetrically affect the trunk and extremities.[1] Histopathological findings generally include deep pigmentary incontinence, epidermal vacuolar degeneration, and perivascular inflammation without a lichenoid infiltrate.[1] Although the etiology remains unclear, previous cases were caused by drugs such as ethambutol and omeprazole, and were included by consumption of ammonium nitrate

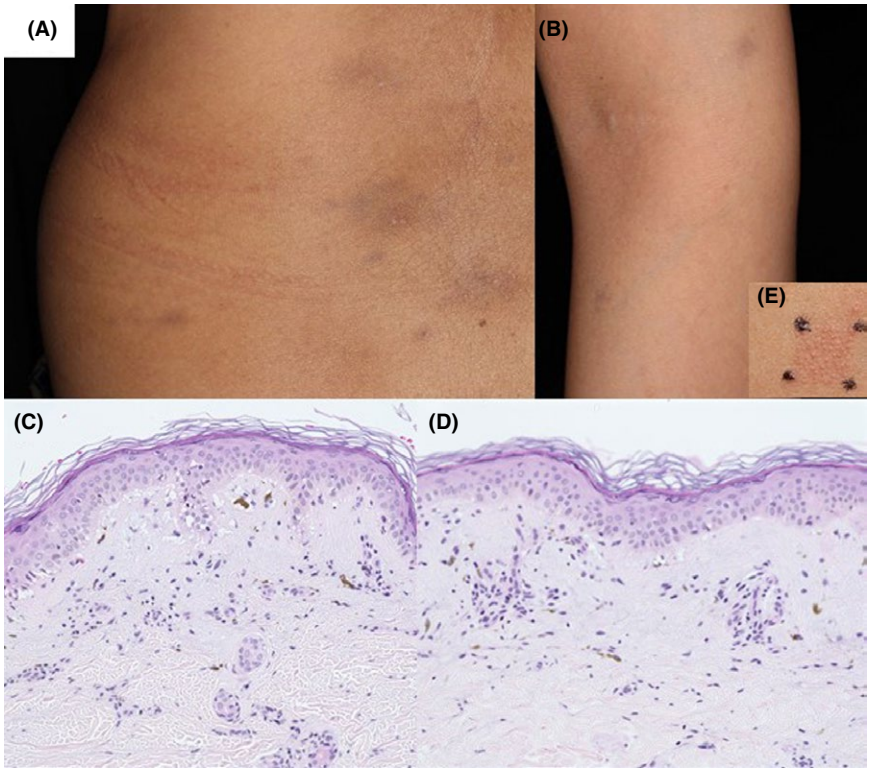

FIGURE 1 A, B, Asymptomatic, disseminated, and blue-gray macules of 1-4 cm in diameter on the patient's back, and bilateral abdomen and extremities. C, D, Histopathological examination of a lesion on the left arm revealed mild lymphocytic infiltration of the upper dermis, slight vacuolar degeneration of the basal layer, and both deep and shallow pigmentary incontinence. No lichenoid tissue reaction was present. (Hematoxylin and eosin staining; original magnifications: C, ×100; D, ×100.). E, Positive reaction to gold sodium thiosulfate 2% aq. 2 d after exposure, reading on day 2

and allergy to cobalt.[2] In this case, since the patient had not consumed the relevant drugs, we performed patch testing using 17 metals, including cobalt and gold sodium thiosulfate. Since gold sodium thiosulfate was positive, we requested that the patient's dentist remove her dental implants containing gold. The development of additional lesions subsequently stopped, and therefore, gold allergy is suggested as a cause in the present case.

The most important differential diagnosis of AD is lichen planus pigmentosus (LPP). A rare variant of lichen planus, LPP presents as hyperpigmented macules over the flexural folds and photoexposed areas such as the face and often in the oral mucosa.[3] It is typically accompanied by pruritus, and some patients eventually develop erythematous lesions. Histopathological findings of LPP typically show a lichenoid infiltrate in the papillary dermis, and melanin deposits and melanophages in the superficial dermis. However, LPP is often very difficult to distinguish from AD.[4–6]

In the present case, the lesions were not accompanied by pruritus and did not occur on the flexural folds or photoexposed areas. Furthermore, histopathological findings showed no lichenoid infiltrate in the dermis, but, instead, revealed deep pigmentary incontinence. We therefore diagnosed the patient in this case as having AD rather than LPP.

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CONFLICT OF INTEREST

The authors declare no conflict of interest.

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