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Letter to the Editor

A unilateral case of multiple minute digitate hyperkeratosis

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Main Text

Multiple minute digitate hyperkeratosis (MMDH) is asymptomatic non-follicular digitate lesions bilaterally affecting the trunk and limbs.[1] We report a case of a female patient with extremely rare unilateral MMDH.

A 54-year-old woman presented with a 1-month history of asymptomatic, multiple, non-follicular, digitate keratotic lesions on the left axillary fossa (Fig. 1a). She had felt itching, and dermatophyte infection had been confirmed by a consulting dermatologist. She had topically applied antifungal creams every summer since elementary school. She had no dermatophyte infection at any other body site. She had neither history of internal malignancy nor family history of similar digitate keratosis. A punch biopsy specimen of a keratotic papule revealed extensive hyperkeratosis with parakeratosis lacking the granular layer, and moderate acanthosis (Fig. 1c, d). She was treated with topical white petrolatum with 10% salicylic acid applied twice daily. Four months later, some improvement was noted. 1 year and 6 months after she started the 10% salicylic acid ointment, her lesions disappeared (Fig. 1b). She has continued the topical application of the ointment twice daily without recurrence.

The predilection sites of MMDH are the chest, shoulders, upper arms, thighs, and

popliteal fossae.[2] All previously reported MMDH cases showed lesions bilaterally. Thus, the present unilateral case is thought to be an extraordinary one. She had episodes of recurrent dermatophyte infection on the left axilla every summer, where the MMDH developed.

Although MMDH is usually difficult to treat, various topical keratolytics and topical or oral retinoids have been reported to provide some improvement. We have successfully maintained the remission of the lesions by topical 10% salicylic acid application.

We found no reports in the literature of associations between MMDH and dermatophyte infection or antifungal agents. However, the present patient had MMDH lesions only on the left axilla where she had had recurrent dermatophyte infections, and her MMDH lesions disappeared with only 10% salicylic acid topical ointment. From these facts, we speculate that dermatophyte infection or inappropriate use of antifungal agent-containing creams might be associated with the MMDH lesions.

We reviewed the 32 previously reported cases, including several described as diseases synonymous with MMDH (Supplementary Table S1 and Supplementary Information).

Sporadic MMDH cases have been known to be associated with internal malignancy.[3] However, our investigations found only two cases associated with internal malignancy: cervical carcinoma, and breast cancer. Spiny keratoderma has also been known to be associated with malignancy. Chee *et al*.[4] reported that 10 out of 37 cases of spiny keratoderma were associated with malignancy. Spiny keratoderma and MMDH show very similar skin lesions and clinical presentations. However, spiny keratoderma occurs only on the palms and soles, whereas MMDH shows lesions on any body site except the palms and soles.[5] The prevalence of internal malignancy in the present series of MMDH patients is much lower than that in spiny keratoderma patients. Thus, we consider that MMDH might have only a tenuous connection with internal malignancy. Such information is important for us dermatologists in deciding whether to recommend malignancy screening to patients.

CONFLICT OF INTEREST

The authors declare that we have no conflicts of interest for this article.

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FIGURE LEGENDS

Figure 1. The clinical and histopathological features of the present case of multiple minute digitate hyperkeratosis (MMDH). (a) Multiple, non-follicular, digitate keratotic lesions on the left axillary fossa at initial examination in our hospital. Inset: A close-up of the digitate keratotic lesions. (b) The same region at 18 months after the start of 10% salicylic acid. The keratotic lesions have disappeared. (c, d) Histopathology of a keratotic papule on the axilla. Extensive hyperkeratosis with parakeratosis and moderate acanthosis are seen (x 100) (c). A high-magnification micrograph shows the absence of the granular layer in the lesion (x 200) (d).