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Inguinal porokeratosis in a Japanese man

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ABSTRACT Inguinal and genital porokeratosis are rare but seem to be more common in Asians. We report a case of a 69-year-old Japanese man with multiple lesions of porokeratosis in both inguinal regions. The lesions first appeared in the inguinal region and subsequently spread to the trunk. The patient reported that his father had had similar lesions. Dermoscopy demonstrated central brown pigmentation and blue-gray dots surrounded by a single "white track" at the periphery. The exterior border of the white track also showed light brown pigmentation. Genital or inguinal porokeratosis is uncommon and may be misdiagnosed as Bowen's disease, lichen planus or extramammary Paget's disease. However, awareness of this entity and the use of dermoscopy are helpful to establish a correct diagnosis.

Case presentation

A 69-year-old Japanese man presented with pigmented skin lesions on the inguinal regions (Figure 1). The lesions were first noticed three years earlier, and they subsequently spread to the chest (Figure 2) and back. The patient had no specific symptoms but reported that his father had had similar lesions. Physical examination showed dark brown macules of up to 20 mm in diameter with partial confluence (Figure 3). Some of the macules were intermingled with atrophic whitish areas interiorly. The macules on the chest tended to be smaller (maximum diameter: 5 mm) and lighter in color than those on the back. Dermoscopy demonstrated central brown pigmentation with many blue-gray dots surrounded by a single hypopigmented band, namely "white track" at the periphery (Figure 4). The peripheral border of the white track showed light brown pigmentation, making the white track recognizable. There was no whitish linear structure corresponding to Wickham's striae often seen in lichen planus. A biopsy was taken from the peripheral ridge of a brown macule on the right inguinal area.

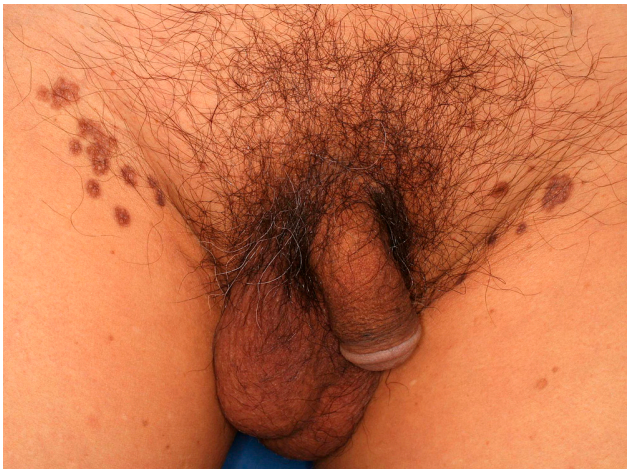

Figure 1. A 69-year-old Japanese man presented with a three-year history of pigmented skin lesions in the inguinal regions. [Copyright: ©2013 Hayashi et al.]

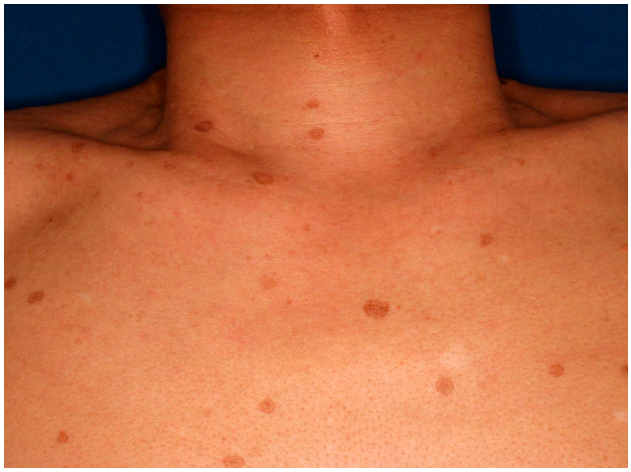

Figure 2. Light brown, smaller macules subsequently appeared on the trunk. [Copyright: ©2013 Hayashi et al.]

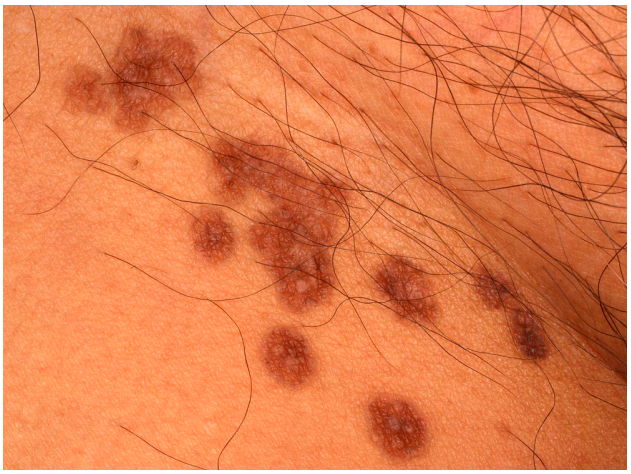

Figure 3. Dark brown macules of up to 20 mm in diameter were noted in the inguinal area with partial confluence in some areas. Some of the macules intermingled with interiorly atrophic whitish areas. [Copyright: ©2013 Hayashi et al.]

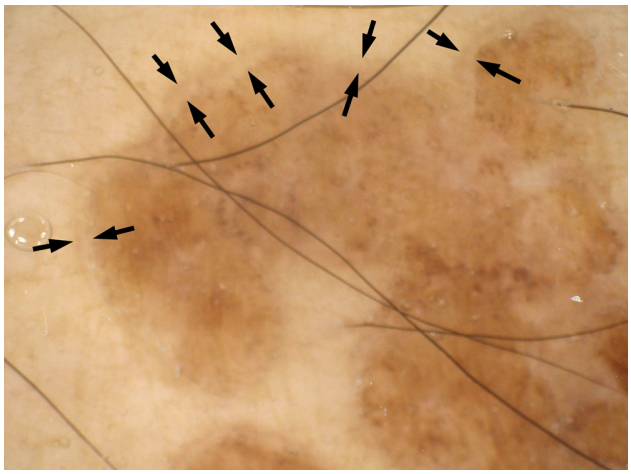

Figure 4. Dermoscopy demonstrated central brown pigmentation with many blue-gray dots surrounded by a single hypopigmented band, namely "white track" (between black arrows) at the periphery. [Copyright: ©2013 Hayashi et al.]

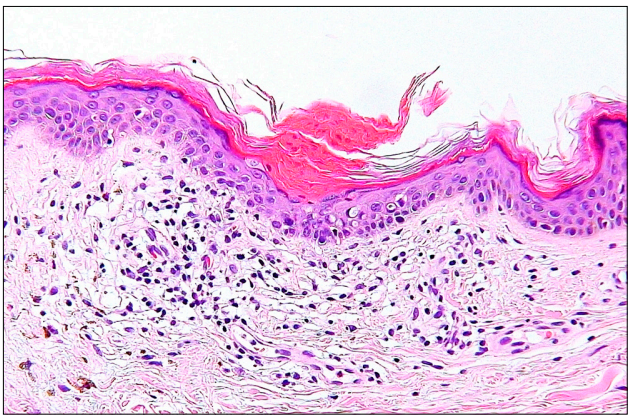

Figure 5. Histopathological examination showed a cornoid lamella and irregular arrangement of keratinocytes underneath the parakeratotic column. No granular layer was found at the site of parakeratosis. A nonspecific perivascular lymphocytic infiltrate intermingled with melanophages was present in the upper dermis. [Copyright: ©2013 Hayashi et al.]

Histopathological examination showed a parakeratotic column, the so-called 'cornoid lamella (Figure 5). Irregular arrangement of keratinocytes with pyknotic nuclei, in addition to perinuclear edema were noted in the epidermis underneath the parakeratotic column. No granular layer was found at the site of parakeratosis. A nonspecific perivascular lymphocytic infiltrate intermingled with melanophages was present in the upper dermis. The clinico-pathological features established the diagnosis of disseminated superficial porokeratosis.

Discussion

Porokeratosis is inherited in an autosomal dominant pattern. Five different forms can be distinguished, including the plaque type of Mibelli, disseminated superficial actinic porokeratosis (some lesions of this type are distributed mainly in areas not exposed to the sun or appear in patients on immunosuppres-

sants), linear porokeratosis, porokeratosis plantaris palmaris et disseminata and punctuate porokeratosis [1]. Genital porokeratosis is extremely rare, but classical lesions have been reported on the penis and scrotum [2,3]. Chen et al [3] reported 10 cases of genital porokeratosis in Asian patients and the lesions in three of their patients were in genital and adjacent areas, with one patient presenting with inguinal lesions. It seems that genital porokeratosis is more common in Asian populations [2]. The lesions in our patient appeared first in the inguinal area and subsequently spread to the trunk. Since the lesions on the trunk were relatively subtle compared to those in the inguinal area, the patient only complained of the latter lesions on the initial examination, thus the differential diagnosis included lichen planus linearis. However, dermoscopic examination demonstrated typical features characteristic of porokeratosis, namely a "white track" or "whitish-yellowish annular" structure [4,5]. As reported by Chen et al [3], genital porokeratosis is extremely rare and some of their cases were clinically indistinguishable from extramammary Paget's disease, Bowen's disease or lichen planus. Accordingly, dermoscopic examination is essential and of great help.

Conclusion

Because genital or inguinal porokeratosis is very rare, though more common in Asians and often mimics extramammary Paget's disease, Bowen's disease or lichen planus, dermoscopic examination is useful when the "white track" structure is detected at the periphery of the macule.

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