CASE REPORT

Symmetrical interdigital keratoderma of the feet

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ABSTRACT

Symmetrical interdigital keratoderma is a rare disorder described by Frei in 1923, characterized by localized hyperkeratosis of the interdigital space of the hands and feet. We report two cases of symmetrical interdigital keratoderma of both feet in a 10 year old Kuwaiti boy and his sister.

CASE REPORT

CASE NO. 1

A 10-year-old Kuwaiti boy presented to dermatology clinic with thickening of the skin of both feet mainly in the interdigital areas, since the age of two months.

Examination revealed well defined hyperkeratosis of the skin of the interdigital area of both feet with maceration of some interdigital areas (Fig. 1).The patient also has focal keratoderma affecting both feet, palms (Fig. 2), and transgredient keratoderma of dorsal surface of hands near finger nails (Fig. 3) and toe nails. The patient also has nail changes consisting of three different colors in toe nails and finger nails (Fig. 4).

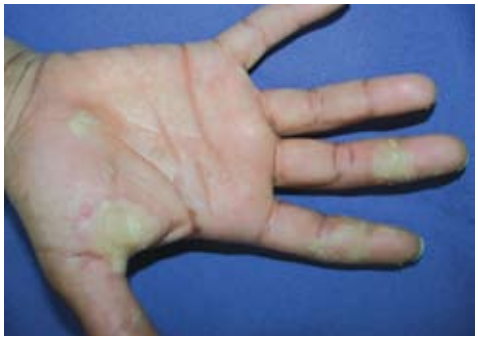

Fig. 2 Focal keratoderma of palm.

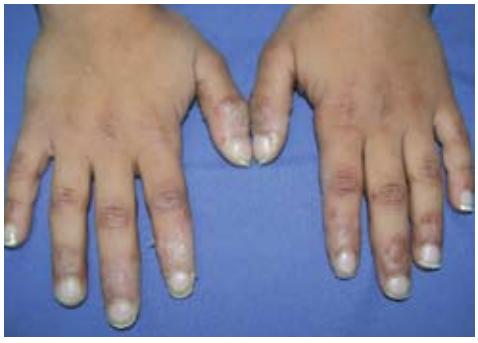

Fig. 3 Transgredient keratoderma on dorsal surface of both hands.

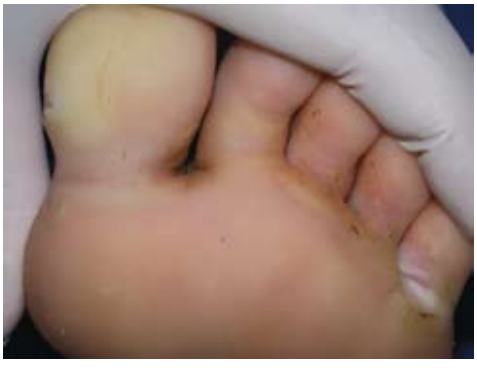

Fig. 1 Interdigital keratoderma and maceration of left foot.

Fig. 4 Colour changes of finger nail.

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CASE NO. 2

A 9-year-old patient is sister of the above mentioned patient, presented with symmetrical interdigital keratoderma of both feet since the age of 2 months, the patient also has focal keratoderma of both feet, palms and transgredient keratoderma of dorsal surface of both hands near finger nails and dorsal surface of toe nails. The patient also has changes of both of finger nails and toe nails that is similar to her brother. The patient also has multiple skin colored and brownish papules some umbilicated on the side of both feet, insteps (Fig. 5), hypothenar and thumbs of both palms (Fig. 6). The differential diagnosis in this case is focal acral hyperkeratosis or acrokeratosis verruciform of Costa. We did biopsy that revealed mild acanthotic epidermis with prominent orthohyperkeratosis. Verhoeff's stain showed preserved elastic fibres. Mild mononuclear inflammatory infiltrate is seen around the vessels of the superficial plexus. This is consistent with focal acral hyperkeratosis. Skin biopsy was done from interdigital keratoderma of the boy and showed orthohyperkeratosis, hypergranulosis and acanthosis.

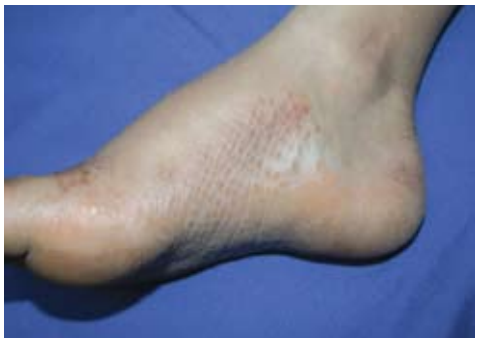

Fig. 5 Papules, some umbilicated on margin and instep of foot.

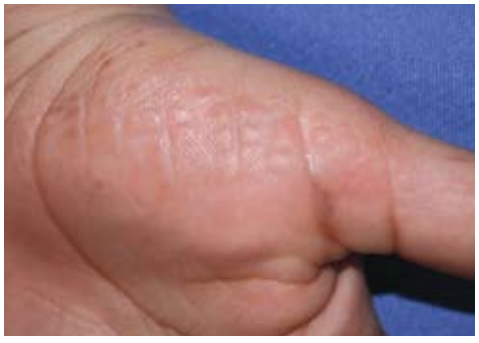

Fig. 6 Papules on thumb and hypothenar of palm.

DISCUSSION

Frei described a case of congenital symmetrical interdigital keratoderma of hands and feet in 1923 since then only few cases has been published.[1] In 1990 Salamon reported the case of 19 years old man with a symmetrical skin lesion limited to the interdigital space of the hand associated with scrotal tongue and high arched palate.[2] In 1993 Patrizi et al,reported a case of 7 year old girl with symmetrical lesions of the second ,third and fourth interdigital spaces of the hands.[3] In 1995 DiLernia et al reported a case of 28 year old bank clerk affected by symmetrical keratoderma localized to the interdigital spaces of the fingers.[4]

We report the first case of brother and his sister with bilateral symmetrical interdigital keratoderma of feet. Our patients has four brothers and four sisters all are normal and their parents also not affected that suggest an autosomal recessive inheritance, because we don't have facility for gene study, we were not able to do gene analysis.

Our reported cases have many associations not previously described. The male patient has in addition to bilateral interdigital keratoderma of feet, focal keratoderma of soles, palms, transgredient keratoderma of dorsal aspects of fingers near fingers nails, dorsal surface of toe nails and nail changes characterized by three color changes distal to normal color of nail. The female patient has in additional to bilateral symmetrical interdigital keratoderma of feet, focal keratoderma of palms, soles and transgredient keratoderma of dorsal aspects of fingers near finger nails, toe nails, nail changes like her brother, but she also has multiple

brownish papules some of them umbilicated on the margin, instep of feet and on the thumb and hypothenar of palms, clinically and pathological compatible with focal acral hyperkeratosis.

To the best of our knowledge this is the first case of brother and his sister characterized by bilateral and symmetrical interdigital keratoderma of both feet that share some association and differ in some.

REFERENCES

1. 1-Frei L.Congenitale symmetrische interdigitale hyperkeratose.Zentralbl Hautkr Geschlechtskr 1923; 6:71.
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3. 3-Patrizi A,Neri I,DiLERNIA v,Varotti C.Symmetrical interdigital hyperkeratosis of the hands:a new case.Acta Derm Venerol[Stockh] 1993; 73:459-60.
4. 4-DiLernia V,Cavazza A and Bisighni G.Symmetriacl interdigital keratoderma of the hands.Clinical and Experimental Dermatology 1995; 20:240-241.