A case series and literature review of erythema palmare hereditarium (Lane's disease)

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Sir,

Erythema palmare hereditarium, also known as Lane's disease, is characterized by an early-onset palmar erythema in the absence of any underlying causes[1] We believe that an increased awareness of this rarely-reported, or possibly under-recognized, entity is important to assure the patients and their families regarding the benign nature of erythema palmare hereditarium. Herein, we report two unrelated families with erythema palmare hereditarium and review the previously published data.

An 18-year-old lady presented with asymptomatic palmar erythema which was present since her childhood. Dermatological examination showed diffuse bilateral palmar erythema without any scaling [Figure 1a]. Family history revealed that her father had similar lesions on both palms as long as he could remember [Figure 1b].Telangiectasias on a homogenous pink background were noticed on dermoscopic examination [Figure 1c].

A 5-year-old girl presented with asymptomatic palmar redness. The lesions were first noticed shortly after her birth. The dermatological examination was normal except for the ill-defined erythematous patches on palms [Figure 2a]. Similar lesions were also evident on bilateral palms of her elder brother [Figure 2b]. Dermoscopic examination revealed homogenous pink-red areas [Figure 2c].

The other possible causes of palmar erythema, including pregnancy, liver dysfunction, connective tissue diseases and medications were excluded through a detailed history, physical

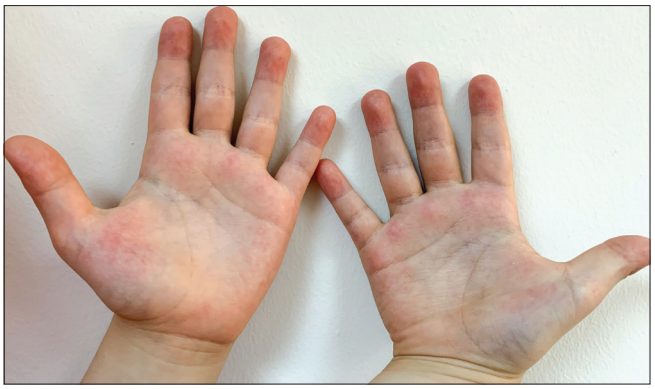

Figure 1b: Mild erythema and telangiectasias on her father's palms

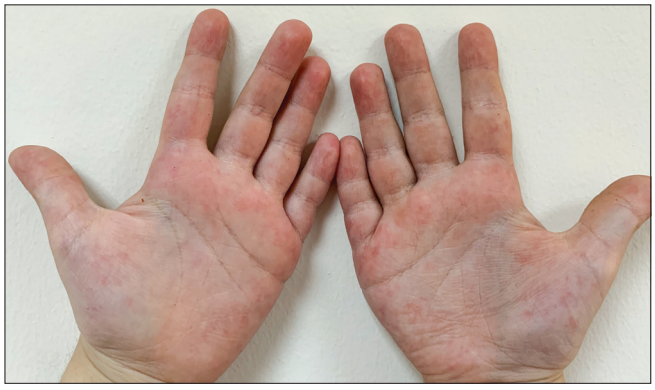

Figure 1a: Diffuse palmar erythema and telangiectasias

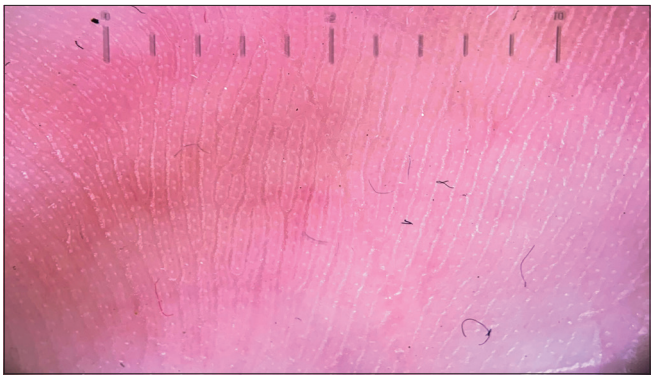

Figure 1c: Telangiectasias on a homogenous pink background on dermoscopy (Heine Delta 20, non-polarized dermoscope, ×10)

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examination and laboratory tests. The lesions were not associated with any physical stimuli such as changes in temperature. Therefore, a diagnosis of erythema palmare hereditarium were made based on the clinical, laboratory findings and positive family history in all patients.

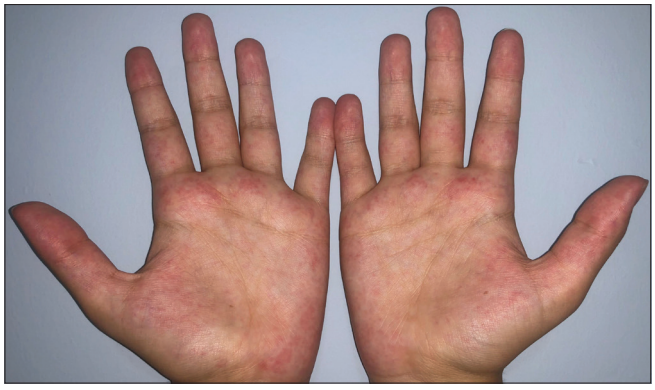

Figure 2a: Ill-defined erythema on palms

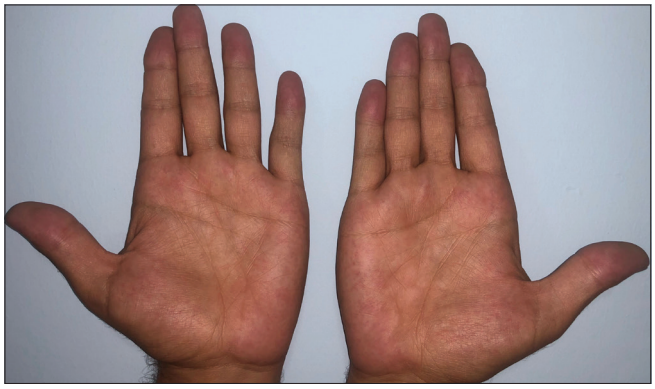

Figure 2b: Erythematous patches on the palms of her elder brother

Palmar erythema may occur as a primary/physiologic condition or may be a cutaneous manifestation of hepatic, endocrine, autoimmune, infectious diseases or neoplasms. Primary or physiologic palmar erythema can be classified as idiopathic, pregnancy-related and hereditary, the latter being the most common form of primary palmar erythema among children.[2]

Erythema palmare hereditarium was first described in two adult patients presenting with diffuse palmar erythema without any underlying cause by Lane in 1929.[3] We found only 17 patients who have been reported with this condition since then in literature.[1,4-12] We think that the paucity of the reports in literature might be attributed to under-recognition, rather than the rarity of the condition. Females were more commonly affected than males, with 11 of 17 patients reported in the literature being female. All patients had positive family history and very early-onset palmar erythema. Recessive or dominant transmissions have been suggested. However, the exact mode of inheritance has not been elucidated yet. The

Figure 2c: Telangiectasias on dermoscopy (Heine Delta 20, non-polarized dermoscope, ×10)

Table 1: Summary of the reported patients in the literature

Reference	Number of patients	Female/male	Family history (*n*)	Involvement	Symptoms
Lane, 1929	2	0/2	2/2	Bilateral palmar	None
Meirowsky, 1933	1	0/1	2	Bilateral palmar, thenar and hypothenar eminences	None
Walsh, 1941	2	2/0	1/1	Bilateral palmar erythema	None
Dorn, 1958	1	1/0	1/1	Palmar erythema	None
Rupec, 2000	1	1/0	4	Bilateral palmar, thenar and hypothenar eminences	None
Sarma and Wang, 2007	1	0/1	2	Bilateral palmar	None
Kluger, 2010	1	1/0	1	Bilateral palmar monticule, thenar and hypothenar eminences, phalanges	None
Langanauer, 2014	1	1/0	0	Bilateral palmar, hypothenar eminences	None
Duriex, 2016	1	1/0	2	Bilateral palmar, thenar and hypothenar eminences, the palmar aspect of fingers	None
Gurioli, 2017	5	3/2	1/1/0/1/1	Bilateral palmar, thenar and hypothenar eminences	None
de lorenzi, 2019	1	1/0	2	Bilateral palmar erythema with telangiectasia to the thenar and hypothenar eminences	None
Present report	4	2/2	1/1/1/1	Bilateral palmar erythema	None

n: Number of patients

increased recognition of this condition may lead to diagnosis of more patients and help the elucidation of the underlying genetic defect, if any. The clinical characteristics of previously reported patients with erythema palmare hereditarium are given in Table 1.

The diagnosis of erythema palmare hereditarium requires a positive family history, onset shortly after birth or during childhood and exclusion of any systemic disease through a careful history and physical examination.[1,11]

The dermoscopic features of erythema palmare hereditarium have been previously defined in only one study.[11] A dermoscopic pattern consisting of arborizing vessels on a red, structureless background, similar to observation in our patients, was reported to be suggestive of erythema palmare hereditarium. Future studies might help to understand if the use of dermoscopy in the diagnosis of erythema palmare hereditarium is of benefit.

In conclusion, erythema palmare hereditarium is an innocuous, familial form of palmar erythema and should be kept in mind in patients with early-onset palmar erythema without any underlying cause. Considering the comprehensive list of differential diagnosis of secondary palmar erythema, increased recognition of this entity among physicians seems important to prevent patients from undergoing excessive laboratory testing which might cause anxiety in patients.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient has given her consent for her images and other clinical information to be reported in the journal. The patient understand that name and initials will not be published and due efforts will be made to conceal identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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