

Pigmented Palmar Pits in Reticulate Acropigmentation of Kitamura

Sir,

Reticulate acropigmentation of Kitamura (RAPK) is one of the rare reticulate pigmentary disorders. It is characterized by a network of freckle-like pigmentation over the dorsal aspect of hands and feet, palmoplantar pits, and break in dermatoglyphics.

A 19-year-old female presented with pigmentation over face and acral limbs of 7 years duration. The lesions first appeared over the dorsal aspect of hands [Figure 1a] and feet and within a few months involved the face. Similar lesions were present in her mother. Mucocutaneous examination revealed pigmented palmar pits [Figure 1b and c] along with slightly atrophic brown macules in a reticular pattern distributed on the dorsal aspect of hands and feet, volar aspects of wrists, forehead, periorbital region, and sides of face [Figure 2a]. Flexures were relatively spared. Break in dermatoglyphics because of multiple small pits [Figure 2b] were noted on both palms. The pits were easily demonstrable because of associated pigmentation. Dermoscopy (DermLite III; polarized mode, 10× magnification) of the skin lesions revealed brownish reticular pigment networks [Figure 3a]. Palmar pits were highlighted on dermoscopy as a break in the ridges with homogenous black globules in it [Figure 3b]. Histopathology from the cheek showed atrophic epidermis and filiform elongation of rete ridges with hyperpigmented basal keratinocytes [Figure 4a]. Clusters of melanocytes were seen at the tip of the rete ridges [Figure 4a and b]. Dermis showed mild lymphoplasmacytic infiltrates without any melanophages. Topical azelaic acid 20% was advised for RAPK. Genetic etiology and long-term persistence of pigmentation were explained to the patient.

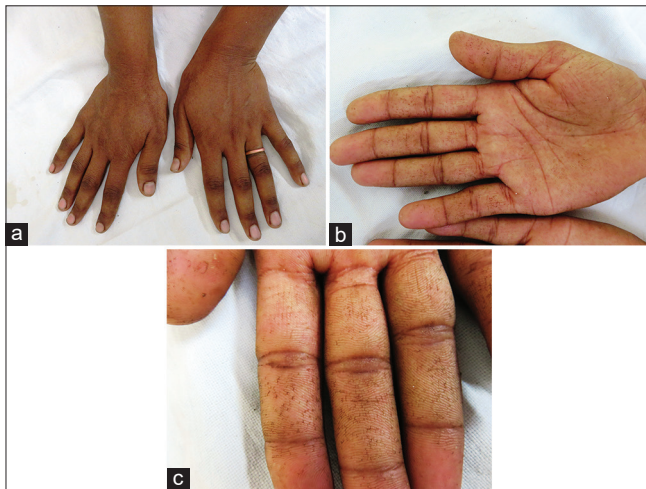


Figure 1: (a) Freckle-like pigmentation over the dorsal aspect of hands. (b) Magnified image showing pigmented palmar pits (c) Magnified image showing pigmented palmar pits

RAPK has been mostly reported from the Asian countries having an autosomal dominant pattern of inheritance. This is a progressive disorder having onset in the first to second decade of life. The lesions sharply demarcated black/brown macules, slightly depressed localized to the dorsal aspect of hands and feet. These hyperpigmented macules increase in number and spread centripetally with age. Eventually, the extensors aspects of limbs, neck, upper trunk, face, and eyelids^[1] are involved. However, palms, soles, and flexures can rarely be involved. The presence of small pits causes a break in the epidermal ridge pattern on the palms and rarely on the dorsal aspect of fingers which is a diagnostic feature.

Our case had pigmented palmar pits which were a rare presentation of RAPK. On reviewing the images of RAPK published in the English literature, we have found

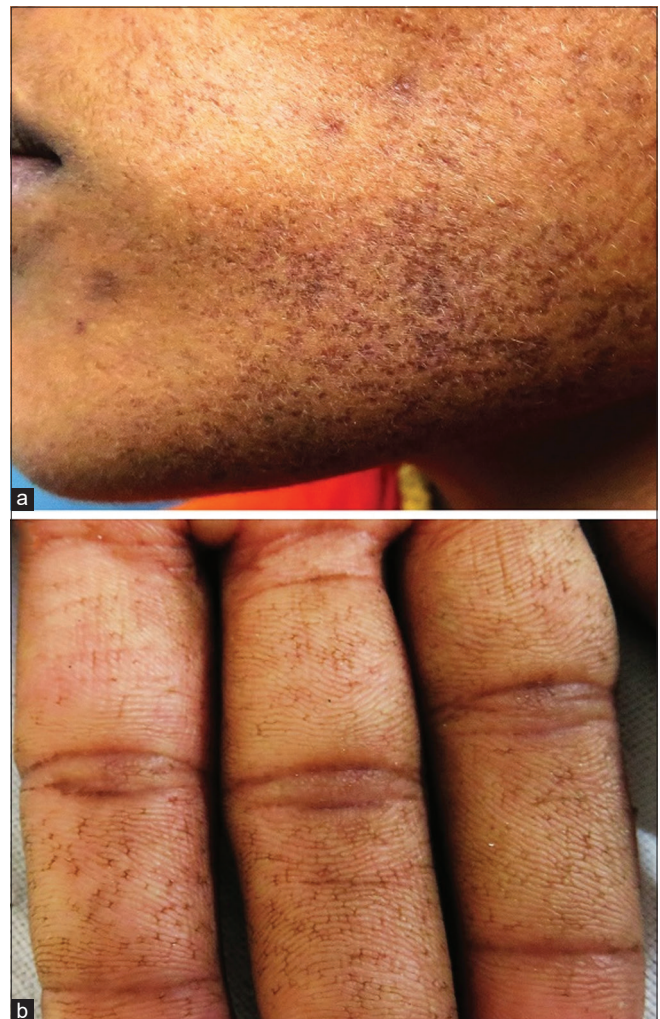


Figure 2: Atrophic brown macules in a reticular pattern over side of face (a), volar aspect of digits (b)

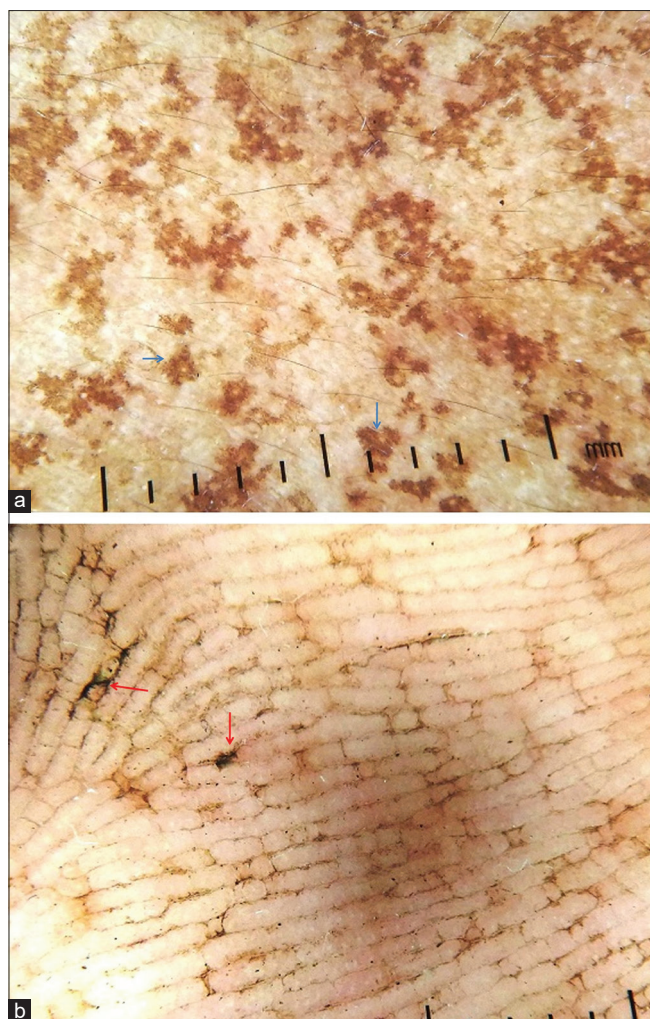


Figure 3: Dermoscopy (DermLite III; polarized mode, 10× magnification) showing the brownish reticular pigment network (a) (blue arrow) and break in the ridges with homogenous black globules (b) (red arrow)

nonpigmented palmar pits in patients with RAPK with lighter skin color^[2] and pigmented palmar pits in the skin of color.^[3] This was not highlighted as a distinct finding in the reported literature. However, Koguchi *et al.*^[4] have reported co-localization of nonpigmented pits with pigmented macules that too was revealed only on dermoscopy. Hence, the pigmented palmar pits may be the result of an epidermal breach of the atrophic pigmented macules over ridges on shearing forces. Thus, palmar pits in RAPK may be a secondary phenomenon of broken atrophic pigmented macules involving the palms. However, our hypothesis is limited by a lack of attempt for histopathological documentation.

In summary, our case highlights how racial factors influence the color of palmar pits in RAPK. Dermoscopic demonstration of pigment structures in palmar pits of RAPK by us as well as by Koguchi *et al.*^[4] suggests that palmar pits of RAPK may be the differential expression of atrophic pigmented macules in the palm.

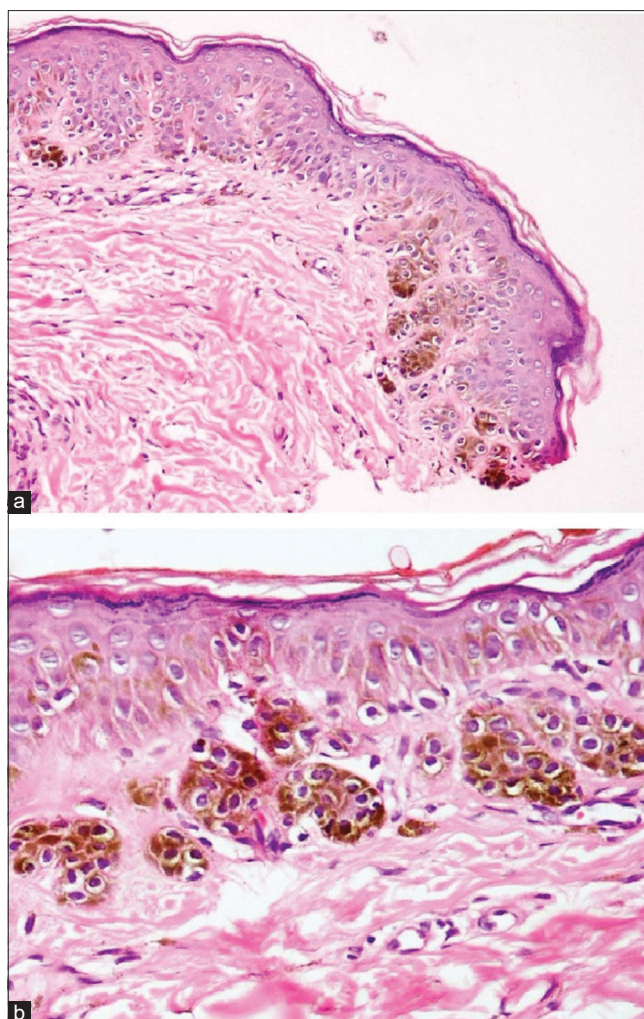


Figure 4: H and E staining under 40× showing atrophic epidermis and filiform elongation of rete ridges with hyperpigmented basal keratinocytes. Dermis shows mild lymphoplasmacytic infiltrates without any melanophages (a). Clusters of melanocytes are seen at the tip of the rete ridges (b)

Declaration of patient consent

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

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

**Yashdeep Singh Pathania,
T. Muhammed Razmi, Bishan Dass Radotra',
Sendhil M. Kumaran**

*Departments of Dermatology, Venereology and Leprology and
Histopathology, Postgraduate Institute of Medical Education and
Research, Chandigarh, India*

Address for correspondence:


*Dr. Sendhil M. Kumaran,
Department of Dermatology, Venereology and Leprology,
Postgraduate Institute of Medical Education and Research,
Sector 12, Chandigarh - 160 012, India.
E-mail: drsen_2000@yahoo.com*

References

1. Sinha P, Sinha A, Baveja S, Chatterjee M. Reticulate acropigmentation of Kitamura: A familial case with eyelid involvement. *Med J Armed Forces India* 2015;71:S245-7.
2. Okamura K, Abe Y, Araki Y, Hozumi Y, Kawaguchi M, Suzuki T. Behavior of melanocytes and keratinocytes in reticulate acropigmentation of Kitamura. *Pigment Cell Melanoma Res* 2016;29:243-6.
3. Das A, Das D, Ghosh A. Reticulate acropigmentation of Kitamura. *Indian Pediatr* 2013;50:980-1.
4. Koguchi H, Ujiie H, Aoyagi S, Osawa R, Shimizu H. Characteristic findings of handprint and dermoscopy in

reticulate acropigmentation of Kitamura. *Clin Exp Dermatol* 2014;39:85-7.

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Access this article online	
Website: www.idoj.in	Quick Response Code 
DOI: 10.4103/idoj.IDOJ_82_19	

How to cite this article: Pathania YS, Razmi TM, Radotra BD, Kumaran SM. Pigmented palmar pits in reticulate acropigmentation of Kitamura. *Indian Dermatol Online J* 2020;11:108-10.

Received: February, 2019. **Revised:** April, 2019.

Accepted: April, 2019. **Published:** January, 2020.

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