Reticulate Acropigmentation of Kitamura: A Dermoscopic Perspective

Keshavmurthy A. Adya, Arun C. Inamadar, Aparna Palit[1]

Department of Dermatology, Venereology and Leprosy, Shri B M Patil Medical College, Hospital and Research Center, BLDE (Deemed to be University), Vijayapur, Karnataka, [1]Department of Dermatology and Venereology, All India Institute of Medical Sciences, Bhubaneswar, Odisha, India

A 38-year-old female presented with asymptomatic freckle-like pigmentation of the upper extremities and chest. The lesions initially appeared 10 years back over the dorsa of the hands and gradually extended to involve the entire upper extremities and the chest. Patient informed about similar lesions in her mother as well. Examination revealed multiple hyperpigmented macules configured in a reticulate pattern involving both the flexor and extensor aspects of the upper extremities, and the chest. The lesions were predominantly concentrated over the extremities [Figure 1a]. Multiple fine pits were evident on the palmar aspects of the hands and digits [Figure 1b]. Based on the history and clinical findings, a diagnosis of reticulate acropigmentation of Kitamura (RAPK) was considered. Dermoscopy of the pigmented lesions using DermLite™ DL3 (3Gen, San Juan Capistrano, CA, USA) under polarized mode revealed multiple discrete hyperpigmented globules in an irregular pattern exhibiting a dark brown to tan-colored background studded with black dots and superficial fine white scaling [Figure 2]. Dermoscopy of the palmar lesions revealed multiple irregular interruptions/breakages in the dermatoglyphics appearing as canaliform structures arranged perpendicular to the dermatoglyphics [Figure 3]. Histopathologically, the pigmented macules showed hyperkeratosis of the stratum corneum, slight epidermal atrophy, and irregularly elongated rete pegs with intense melanization of the basal layer along with dermal melanin incontinence and focal melanin clumps in the upper epidermal layers [Figure 4] which confirmed the clinical diagnosis.

Dermoscopy is a non-invasive, quick, office-based diagnostic imaging technique. The dermoscopic features of a lesion correspond to its histological and/or clinical attributes. When these findings are viewed in the context of the clinical picture, they provide a very useful assistance to the clinical diagnosis, at times even precluding the need for an invasive skin biopsy.

Reticulate acropigmentation of Kitamura belongs to the group of reticulate pigmentary anomalies and represents one of the two autosomal dominant

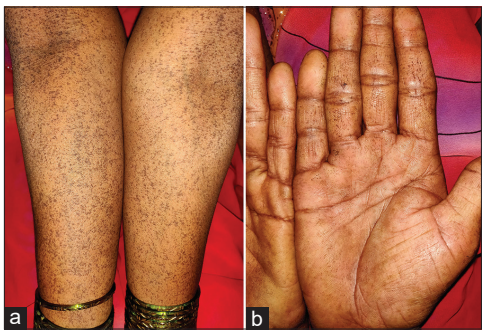

Figure 1: (a) Multiple hyperpigmented macules in a reticulate configuration involving the upper extremities (b) multiple discrete fine pitting of the palmar aspect of the hand and digits

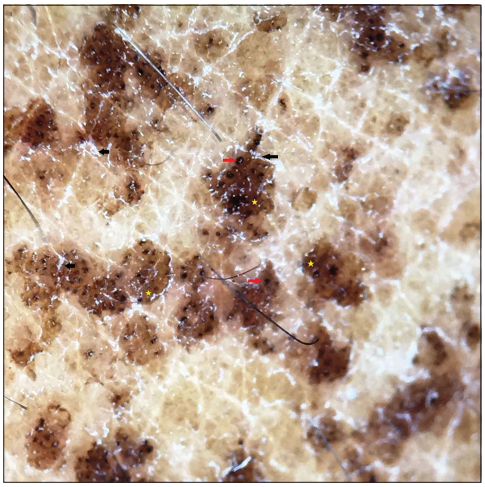

Figure 2: Non-contact dermoscopy under polarized mode using DermLite™ DL3 showing multiple hyperpigmented globules in an irregular pattern with intervening normal skin. Individual globules demonstrate a dark brown to tan background (yellow stars) with overlying black dots (red arrows) and superficial white scaling (black arrows). [Original magnification ×10]

How to cite this article: Adya KA, Inamadar AC, Palit A. Reticulate Acropigmentation of Kitamura: A Dermoscopic Perspective. Indian Dermatol Online J 2020;11:128-30.

Received: August, 2018. **Revised:** October, 2018. **Accepted:** October, 2018. **Published:** April, 2019.

Address for correspondence:
Dr. Arun C. Inamadar, Department of Dermatology, Venereology and Leprosy, Shri B M Patil Medical College, Hospital and Research Center, BLDE (Deemed to be University), Vijayapur - 586 103, Karnataka, India.
E-mail: aruninamadar@gmail.com

Access this article online

Website: www.idoj.in

DOI: 10.4103/idoj.IDOJ_311_18

Quick Response Code:

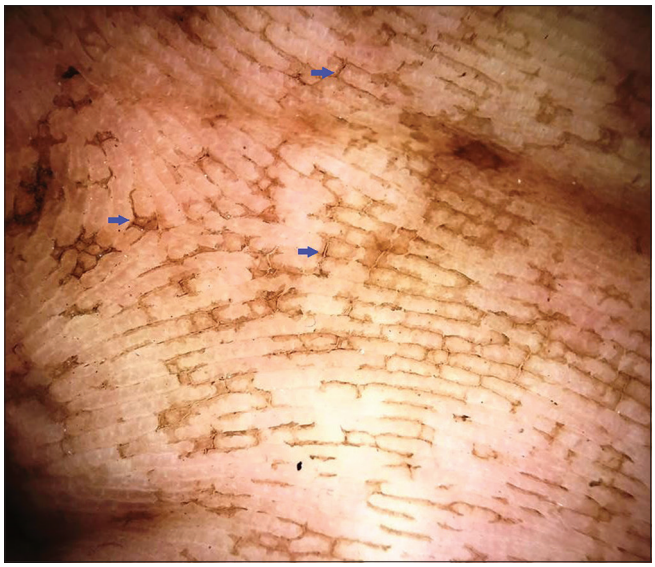

Figure 3: Non-contact dermoscopy under polarized mode using DermLite™ DL3 of the palm showing conspicuous interruptions in the dermatoglyphics as canaliform structures aligned perpendicular to dermatoglyphics at irregular intervals (blue arrows). [Original magnification ×10]

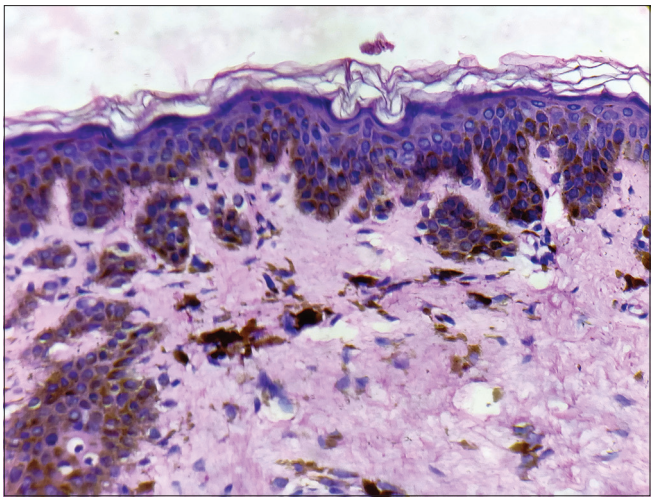

Figure 4: Photomicrograph showing hyperkeratosis of stratum corneum, slight atrophy of the malphigian layer, and irregularly elongated rete ridges with excessive melanization of the basal layer. Melanin incontinence in the upper dermis and focal melanin clumps in the upper layers of the epidermis are also evident. [Hematoxylin and eosin, original magnification ×40]

reticulate acral pigmentary disorders. A classical case of RAPK is characterized by reticulate hyperpigmented macules involving the dorsa of the hands and forearms together with fine pitting and irregular interruptions in the dermatoglyphics of the palms and soles. The pigmentary lesions may also be extensive involving the lower extremities and trunk.[1-3] The typical histological features of the pigmented lesions include hyperkeratosis, epidermal atrophy, and irregular elongation of the rete ridges with intense melanization of the basal layer. Dermal melanin incontinence and superficial perivascular infiltrate are other findings.[4]

The other member of this group of disorders is the reticulate acropigmentation of Dohi (dyschromatosis symmetrica hereditaria) sharing certain features with RAPK. It is characterized by hypo- and/or hyperpigmented acral macules in a reticular fashion, which may be associated with freckle-like lesions on the face. However, the palmoplantar pitting of RAPK are not seen in this disorder, and the hypopigmented macules seen in this disorder are not a feature of RAPK.[1-3]

Dermoscopically, the dark brown or tan background of the macules correspond to the excessive melanin in the basal layer, the black dots to the focal melanin clumps in the upper epidermal layers, and the white scales to the hyperkeratotic stratum corneum. Although dermal melanin incontinence is conspicuous in histopathology, the same is not reflected in dermoscopy (as bluish-black structures) possibly because of being obscured by the dense basal layer melanization. The conspicuous interruptions in the dermatoglyphics on dermoscopy correspond to the fine superficial discrete pits seen clinically on the glabrous skin of the palms and digits.

Table 1: Dermoscopic features of reticulate pigmentary disorders

Reticulate pigmentary disorders	Dermoscopic features
Reticulate acropigmentation of Dohi	Reticulate and/or monotonous hyperpigmented and/or hypopigmented spots
Dowling-Degos disease	Irregular star-shaped brown outline on a red background around follicular plugging and inclusion cysts
Macular amyloidosis	Central brown or white hub with surrounding brown streaks in different configurations

Although an uncommonly encountered disorder, the distinctive phenotypic features of RAPK allow a clinical diagnosis which can be further reinforced by dermoscopic assessment thus preventing the need for invasive biopsy. However, there is scarcity of literature on dermoscopy of this disorder[5] and to the best of our knowledge, this is the first observation in an Indian patient. Further observations are required to delineate objective dermoscopic diagnostic criteria. Dermoscopic features of other reticulate pigmentary disorders reported in the literature are outlined in Table 1.[2,6-8]

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.

References

1. Adya KA, Inamadar AC, Palit A. Acral freckling with palmar pits. Indian Dermatol Online J 2015;6:234-5.
2. Adya KA, Inamadar AC, Palit A. Reticulate dermatoses. Indian J Dermatol 2014;59:3-14.
3. Adya KA, Inamadar AC, Palit A. "Pitted" lesions in dermatology. Int J Dermatol 2017;56:3-17.
4. Weedon D. Disorders of pigmentation. In: Weedon D, editor. Weedon's Skin Pathology. 3rd ed. Edinburgh: Churchil Livingstone Elsevier; 2010. p. 281-99.
5. 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.
6. Oiso N, Murata I, Hayashi M, Amatsu A, Yoshida M, Suzuki T, *et al*. Dermoscopic features in a case of dyschromatosis symmetrica hereditaria. J Dermatol 2011;38:91-3.
7. Geissler S, Dyall-Smith D, Coras B, Guther S, Peters B, Stolz W. Unique brown star shape on dermatoscopy of generalized Dowling-Degos disease. Australas J Dermatol 2011;52:151-3.
8. Chuang YY, Lee DD, Lin CS, Chang YJ, Tanaka M, Chang YT, *et al*. Characteristic dermoscopic features of primary cutaneous amyloidosis: A study of 35 cases. Br J Dermatol 2012;167:548-54.