

DERMOSCOPIC STUDY OF PRIMARY CUTANEOUS AMYLOIDOSIS : NEW CARTWHEEL AND HORSE-SHOE PATTERN REVEALED

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Abstract

Cutaneous Amyloidosis is the anomalous deposition of amyloid in the skin. It is broadly classified into primary localized cutaneous amyloidosis (papular, macular and nodular amyloidosis) and secondary localized cutaneous amyloidosis. Some time it is difficult to differentiate it from other causes of pigmentation and similar non specific conditions. So we did an extensive one year dermoscopic study to reveal all possible dermoscopic signs of primary cutaneous amyloidosis (PCA) in Indian cases. Aim – To study dermoscopic features of Primary cutaneous amyloidosis in Indian skin type patients. Study period – One year (from December 2016 to December 2017). Study subjects-All the patients who attended the dermatology clinic from December 2016 to December 2017 with the clinical diagnosis of PCA and who fulfilled the inclusion and exclusion criteria. Methodology- All the patients who attended the dermatology clinic from December 2016 to December 2017 with the diagnosis of PCA and who fulfilled the inclusion and exclusion criteria were recruited for the study. Dermoscopy was performed with DL4 dermatoscope. The images were further magnified with the help of smart phone. Results-. Our study showed various dermoscopic signs in cases of PCA. The commonest pattern was Central hub pattern (38.15 %) followed by non specific pigment configurations (17.1 %). Our study discovered two new dermoscopic signs (not mentioned in the earlier literature) which includes the Horseshoe pattern (6.57 %) and Cart-wheel pattern (7.89 %). The other classical patterns revealed in our dermoscopic study were amorphous pigment globules (14.47 %), central scar pattern (7.89 %) and patchy pigmentation with other patterns (7.89%). Discussion-Dermoscopy is a novel helpful bedside noninvasive technique in clinical dermatology practice which allows us to make a quick and accurate diagnosis of PCA. It also helps to distinguish it from other mimickers of pigmentation. The common patterns were Central hub pattern (38.15 %) and non specific pigment configurations (17.1 %). Our study identified two novel dermoscopic signs which includes the Horseshoe pattern (6.57 %) and Cart-wheel pattern (7.89 %). The dermatoscopic diagnosis of PCA is made by the acquaintance and meticulous search of various signs and should not be dependent on the presence of single observation. Other recent dermoscopic study of PCA supported our findings. There are very few dermoscopic studies in PCA across the world. Therefore our study may be helpful in developing a strong scientific scaffold for further dermoscopic research to reveal its importance in the cases of PCA.

Key Words - Primary cutaneous amyloidosis, Dermoscopy, Dermatoscope, Dermoscopy of cutaneous amyloidosis, PCA, Dermoscopy of dark skin

Introduction

Cutaneous Amyloidosis is the anomalous deposition of amyloid like substance in the skin which can be associated with mild pruritus, abnormal pigmentation and can affect skin texture too.^{1,2} As far as skin is considered it is broadly classified into primary localized cutaneous amyloidosis (papular amyloidosis, macular amyloidosis and nodular amyloidosis) and secondary localized cutaneous amyloidosis.^{2,3,4} Some time it is difficult to differentiate it from the other causes of pigmentation and similar non specific dermatological conditions.⁴ So we did an extensive one year dermoscopic study to reveal possible dermoscopic signs of PCA in Indian cases. There are very few dermoscopic studies in PCA.^{5,6} Therefore our study may be helpful in developing a scientific scaffold for further dermoscopic research to reveal its importance in the cases of PCA.

Materials & Methods

Aim – To study dermoscopic features of Primary cutaneous amyloidosis in Indian skin type patients.

Study subjects-All the patients who attended the dermatology clinic from December 2016 to December 2017 with the clinical diagnosis of PCA and who fulfilled the inclusion and exclusion criteria.

Inclusion criteria

All clinical cases of PCA

Exclusion criteria

- 1) Inability to give consent
- 2) Patients with non specific lesions
- 3) Having co-existent other skin diseases near the lesions

Study period – One year (from December 2016 to December 2017).

Methodology- All the patients who attended the dermatology clinic from December 2016 to December 2017 with the diagnosis of PCA and who fulfilled the inclusion and exclusion criteria were recruited for the study. Dermoscopy was performed with DL4 dermatoscope. The images were further magnified

with the help of smart phone.

Results

We recruited 76 patients of PCA on the basis of their clinical diagnosis during the one year study period(Fig. 1,2). Our study showed various dermoscopic signs in cases of PCA. The commonest pattern was Central hub pattern (fig. 3) (38.15 %) followed by non specific pigment configurations (fig. 4) (17.1 %).Our study discovered two new dermoscopic signs(not mentioned in the earlier literature) which includes the Horseshoe pattern (6.57 %) and Cart-wheel pattern (fig. 5) (7.89 %). The other classical patterns revealed in our dermoscopic study were amorphous pigment globules (fig. 6) (14.47 %), central scar pattern (fig. 7) (7.89 %) and patchy pigmentation with other patterns (7.89%). Figure 8 summarizes the findings.



Figure 1: Lichen (papular) amyloidosis clinical image



Figure 2: Clinical image of macular amyloidosis with classical rippled pattern of pigmentation



Figure 3: Central hub pattern



Figure 4: Non specific pigment configurations

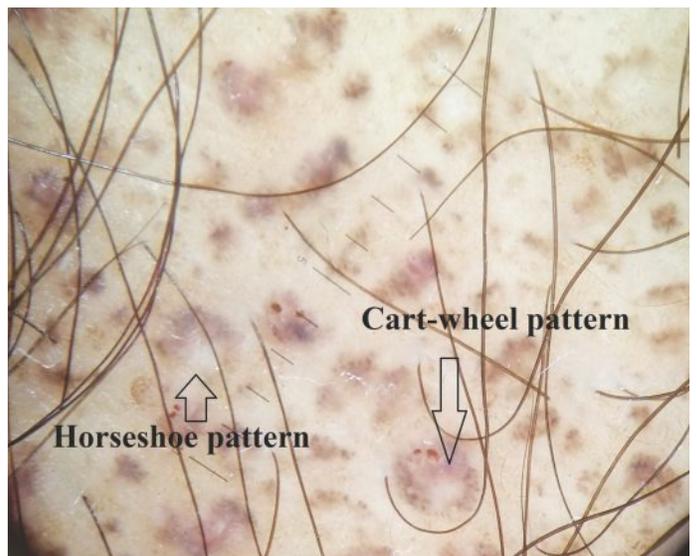


Figure 5: Cart-wheel and horseshoe pattern (new dermoscopic signs in PCA revealed by our study)



Figure 6: Amorphous pigment globules

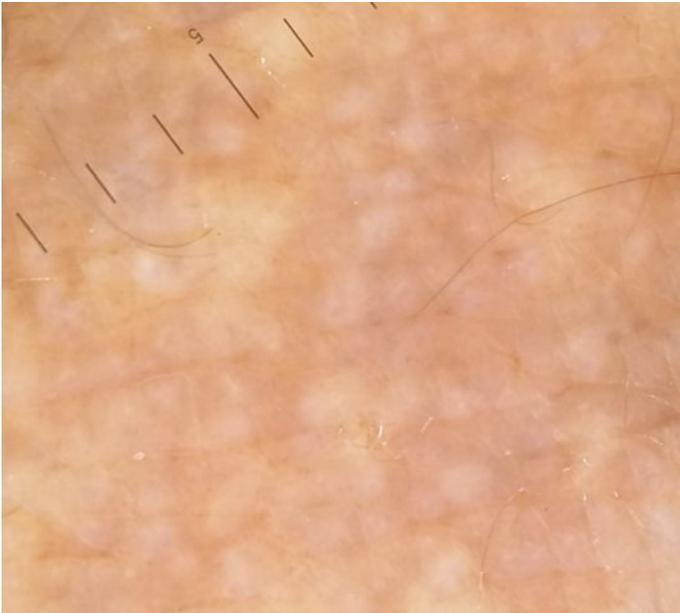


Figure 7: Central scar pattern

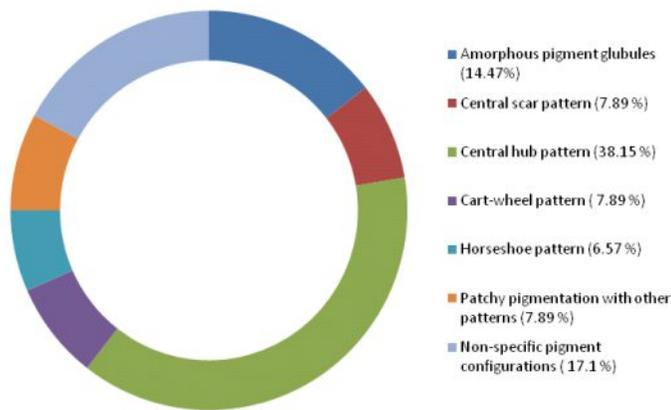


Figure 8: Various dermoscopic signs and their incidence seen in our study

Discussion

Dermatoscopy is a novel helpful bedside non invasive technique in clinical dermatology practice which allows us to make a quick and accurate diagnosis of PCA. It also helps to distinguish it from the other mimickers of pigmentation and similar cutaneous conditions. The common patterns were central hub pattern (38.15 %) and non specific pigment configurations (17.1 %). Our

study identified two novel dermoscopic signs which includes the Horseshoe pattern (6.57 %) and Cart-wheel pattern (7.89 %). The dermoscopic diagnosis of PCA is made by acquaintance and meticulous search of various signs and should not be dependent on the presence of single observation. Other recent dermoscopic study of PCA supported our findings.⁶ There is very limited literature available as far as dermoscopy of PCA is considered.^{5,6} There are very few dermoscopic studies in PCA in the world. Therefore our study may be helpful in developing a strong scientific scaffold for further dermoscopic research to reveal its importance in the cases of PCA.

How to cite this article:

Sharma RK. Dermoscopic Study Of Primary Cutaneous Amyloidosis –New Cartwheel And Horse-shoe Pattern Revealed. *JDA Indian Journal of Clinical Dermatology* 2018;1:68-70.

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