

Clinico Epidemiological Study and Dermoscopic Findings of Pigmented Purpuric Dermatitis

Dear Editor,

Pigmented purpuric dermatosis (PPD) is a chronic and relapsing disorder characterized by symmetrical pigmented macular to petechial rashes, usually confined to the lower limbs. Five different clinical types of PPD have been described. They include the following: (1) Schamberg disease (SD), (2) Itching purpura (Eczematid-like purpura of Doucas and Kapetanakis, EDAK), (3) Pigmented purpuric lichenoid dermatosis (PPLD) of Gougerot and Blum, (4) Lichen aureus, and (5) Purpra annularis telangiectodes or Majocchi's disease (MD).

Dermoscopy is a noninvasive diagnostic technique that has emerged as novel modality for the rapid diagnosis, especially in confusing cases. We evaluated dermoscopic findings of all major variants of PPD. We also tried to evaluate the disease burden, clinical presentation, and associated comorbidities.

The study was hospital-based cross-sectional descriptive study carried out on 54 patients who attended the dermatology outpatient department at a tertiary care hospital a during period of 2 years from October 2019 to October 2021. All patients clinically diagnosed as PPDs were included in the study, irrespective of age and gender. Dermoscopic examination was done in each case to assess specific findings of PPD and findings were photographed and recorded. A DermLite DL3N dermatoscope, and 12 MP Samsung note 10 plus camera were used to capture findings.

Fifty-four patients with PPD attended the Dermatology outpatient department at our tertiary care hospital during the period of 2 years. Cases of PPD were 0.15% of total patients (36 000). SD was the most common variant encountered and constituted 87% ($n = 47$) of total cases, other variants like EDAK, PPLD, LA, and MD constituted 3.7% ($n = 2$), 1.8% ($n = 1$), 3.7% ($n = 2$), and 3.7% ($n = 2$), respectively.

PPD is more common in males and can present at any age, but the most common age of presentation is the fourth and fifth decades of life. The incidence in our study was more in males, with male to female ratio of 1.3:1 and the most common age group affected was 30 to 50 years (55.5% cases) with mean and median age being 37.8 and 35 years, respectively.

In this study, most patients 52 (96.2%) complained of brownish to red-colored spots over bilateral lower limbs, while 2 patients had unilateral lesions. Lesions were associated with mild-to-moderate itching in 22.2% ($n = 12$) cases.

Around 40 patients presented with investigations. Twenty percent ($n = 8$) patients had raised cholesterol, and 12.5% ($n = 5$) had raised low-density lipoprotein (LDL) levels. Two patients had hypothyroidism, 3 were hypertensive, 3 had diabetes mellitus, and 3 were anemic. The prevalence of hypercholesterolemia and raised LDL among PPD patients was higher than the levels in Indian adults, whose prevalence rates for hypercholesterolemia and raised LDL, according to the ICMR-INDIAB study were 13.90% and 11.8%, respectively.^[1]

Doppler ultrasonography was done in 10 out of 54 patients, none reported venous insufficiency.

Red dots (100%, $n = 54$), red globules (83.3%, $n = 45$), and coppery red pigmentation (77%, $n = 42$) were the most common dermoscopic findings of PPD in this study [Table 1 and Figure 1]. Other common dermoscopic observations were brown reticular network (48%, $n = 26$), brown globules (42%, $n = 23$), linear vessels (38%, $n = 21$), brown dots (33%, $n = 18$), and red patches (22%, $n = 12$).

Dermoscopic features of variants other than SD have rarely been reported. On dermoscopy, characteristic findings of PPD-like red dots, globules, and coppery red pigmentation

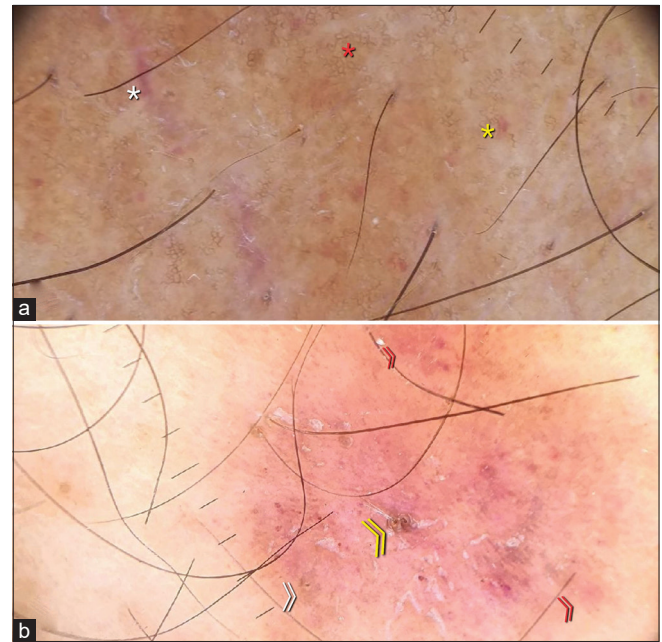


Figure 1: (a) Dermoscopy of Schamberg disease showing red dots (yellow asterisk), red globules, coppery-red pigmentation, linear vessels (white asterisk), and brown reticular network (red asterisk). (b) Dermoscopy of pigmented purpuric lichenoid dermatosis showing red globules (red arrow), red dots, brown globules (white arrow), follicular hyperkeratosis, and perifollicular scaling (yellow arrow)

Table 1: Comparative dermoscopic features of PPD between our study and other studies

Study name	No.	Red dots (%)	Coppery pigmentation (%)	Brown reticular (%)	Brown dots (%)	Red globules (%)
Present study India (2019-2021)	54	100	77	50	33	83.3
Kim <i>et al.</i> Korea ^[4] (2021)	60	96.7	68.3	51.7	68.3	96.7
Metin <i>et al.</i> ^[5] Turkey (2018).	25	100	72	40	40	100
Ozkaya <i>et al.</i> ^[6] Istanbul (2015)	32	69	97	16.8	16.6	75
Çakmak <i>et al.</i> ^[7] Portugal (2016)	18	100	100	44.4	16.6	100

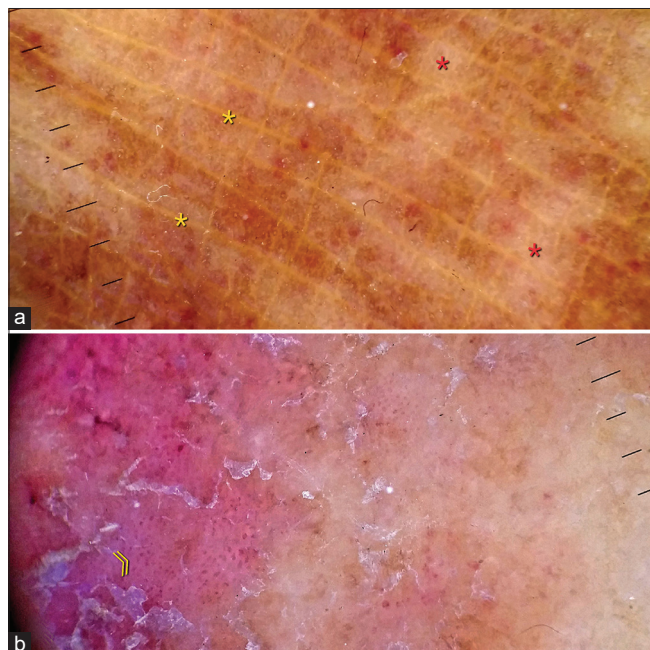


Figure 2: (a) Dermoscopy of lichen aureus showing golden background, golden-brown streaks (yellow asterisk), and structure-less white areas (red asterisk). (b) Dermoscopy of Eczematid like purpura of Doucas and Kapetanakis showing strawberry appearance (yellow arrow), scaling, red dots, red globules, and coppery-red pigmentation

were common among all variants with various added findings, like in EDAK, we found strawberry-like appearance with intense red background with collarette scaling [Figure 2]. In LA findings were similar to those reported by Portela *et al.*^[2] In addition to this, we observed intense golden background, golden brown streaks with few scattered structures, and less white areas [Figure 2]. There are only few reports on dermoscopy of PPLD. Park *et al.*^[3] reported diffuse copper backgrounds, with red globules, plaque and round-to-oval dots, some gray dots, and a network of interconnected pigmented lines. Our study had similar findings with added observations like follicular hyperkeratosis, perifollicular scaling, and brown polygonal structures [Figure 1].

Our study revealed the burden of disease at a tertiary care hospital in Rajasthan. We also evaluated dermoscopic features of different variants of PPD. Limitation of our study was that it was hospital-based with a small study group and lack of controls. Treatment of PPD is challenging with mild response to various available modalities. Hence, early diagnosis and counselling of the patient about the benign nature of this disease is important to avoid undue stress on patients.

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Conflicts of interest

There are no conflicts of interest.

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