



DERMOSCOPY AND SKIN IMAGING

## DERMOSCOPIC-HISTOLOGICAL CORRELATION IN LICHEN PLANUS PIGMENTOSUS: UTILITY OF DERMOSCOPY IN ASSESSING DISEASE SEVERITY

*Pankaj Tiwary<sup>(1)</sup> - Pragya Gurudiwan<sup>(1)</sup>*

*Patna Medical College, Department Of Skin & Vd, Patna, India<sup>(1)</sup>*

**Background:** Lichen planus pigmentosus (LPP) is characterized by macular pigmentation of varying shades involving the exposed areas, especially the face and neck. Dermoscopy, a non-invasive technique aids in diagnosis and prognostication of various dermatoses. In this prospective study, we present a dermoscopic-histological correlation in cases of inactive LPP.

**Methodology:** Out of 169 treatment-naïve Indian patients with Acquired dermal pigmentation, 67 patients were included with the closest diagnosis of inactive LPP, based on involvement, absence of preceding/concurrent erythema/edema & minimal-to-absent infiltrate on histology. Dermoscopic images were evaluated for - alteration of pseudoreticular network, presence of dermoscopic pigmented structures (DPS) - dots, globules and clods, their color and peri-adnexal arrangement. Histology was graded for dermal density and depth of macrophages. Spearman's coefficient ( $P < 0.05$ ) was employed for statistical correlation.

**Results:** Mean age & disease duration were  $40.2 \pm 11.5$  years and  $4.15 \pm 1.82$  years respectively (51 females, 16 males). Dermoscopic findings - exaggeration of pseudoreticular network (41.9%); pigmented dots (100%), globules (84%), clods (53.2%), periadnexal involvement (30.6%). Color of DPS - brownish-black (88.7%), slate grey-bluish (38.7%). Histological findings - dermal macrophage density - severe in 64.5%, and dermal depth showed:  $< 2\text{mm}$ -19.3%;  $2-3\text{ mm}$ -37.1%;  $> 3\text{ mm}$ -43.5%. Significant correlation found between size of DPS and dermal melanophages density & color of DPS and dermal depth of pigment incontinence, with deeper involvement ( $> 3\text{mm}$ ) correlating with slate grey-to-bluish hue.

**Conclusion:** The density of melanophages in the dermis & depth of dermal involvement with pigment incontinence are the two primary histological determinants of severity of LPP & response to therapy can be detected dermoscopically based on the size and color of DPS. A validated clinico-dermoscopic-histologic score needs to be evolved for LPP severity for therapeutic trials.

