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Pigmentogenic lichen planus: Epidemioclinical profile and pathological associations

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Abstract

Pigmentogenic lichen planus (PPL) is a rare variant of cutaneous lichen planus characterized by hyperpigmented lesions on the tegument. This dermatosis has rarely been described in association with other diseases. The aim of our study is to describe the epidemiological profile and pathological associations of PPL in a prospective study conducted in our dermatology department in the university hospital of Marrakech, over a period of 11 months, focusing on histologically confirmed cases of PPL. We identified 65 histologically confirmed cases of PPL, with phototypes ranging from 3 to 5. The sex ratio was M/F = 0.3. The mean age was 43.5 years, with a mean duration of progression of 5 years. 32 patients had phototyped IV, 21 patients had phototyped V and 12 patients had phototyped III. There were two similar cases in the family. Triggering factors, in descending order, were stress followed by scrubbing in the Moorish bath, then sun exposure without photoprotection, drugs such as estrogens and progestogens, insulin and metformin, then the application of oils such as lavender oil, orange oil and olive oil, pregnancy, then finally the use of henna-based preparations, and coffee masks. Pruritus was present in 38 patients, then 23 patients reported aesthetic discomfort and 4 reported a burning sensation. Pathological associations were dominated by frontal fibrosing alopecia, depression, type 2 diabetes, viral hepatitis B, lichen planus pilaris, hypothyroidism and Crohn's disease.

Keywords: Hyperpigmentation; Pathological Associations; Triggering Factors; Phototype

1. Introduction

Pigmentogenic lichen planus (PPL) is a rare variant of cutaneous lichen planus characterized by the presence of hyperpigmented lesions on the tegument. This dermatosis has rarely been described in association with other diseases. The objective of our study is to describe the epidemiological profile and pathological associations of PPL [1].

2. Materials And Methods

This is a prospective study carried out in our dermatology department over a period of 11 months (from July 2023 to June 2024) focusing on cases of PPL confirmed by histology.

3. Results

We identified 65 cases of histologically confirmed PPL, with a phototype varying from 3 to 5. The sex ratio was M/F = 0.3. The average age was 43.5 years, over an average duration of development of 5 years. Most of our patients had phototype 4 (49.3%), 21 patients (32.3%) had phototyped 5, and 12 patients (18.4%) had phototyped 3.

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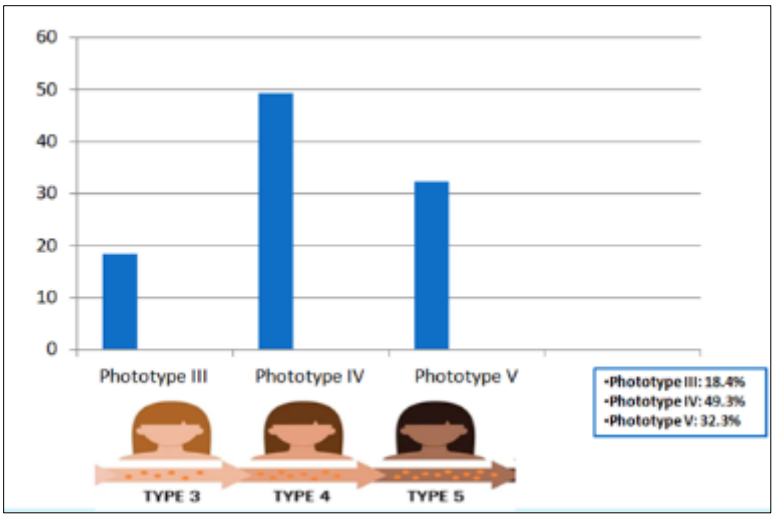

Figure 1 Distribution of patients according to phototype (%)

There were two similar cases in the family. For the triggering factors in descending order, we note stress which predominated with a percentage of 45%, followed by the scrub in the Moorish bath (33%). Then sun exposure without photoprotection (32%), medication such as estrogen and progestogens, insulin and metformin (19%), the application of oils such as lavender oil, orange oil and olive oil, (5%), pregnancy (5%), then finally the use of henna-based preparations, and coffee masks with a percentage of 3%. Pruritus was present in 38 patients (59%), then 23 patients reported aesthetic discomfort (35%) and 4 of our patients (6%) reported a burning sensation. The lesions were brown in 36 patients (55.3%) and blue gray in 29 patients (44.6%). They were in layers in 41 patients (63%), linear in 13 patients (20%) and cross-linked in 11 patients (17%). Pathological associations were dominated by frontal fibrosing alopecia (73.8%), depression (41.5%), type 2 diabetes (18.4%), viral hepatitis B (9.2%), lichen planus pilaris (6.1%), hypothyroidism (7.6%), and Crohn's disease (1.5%).

Figure 2 pigmentogenic lichen of the face

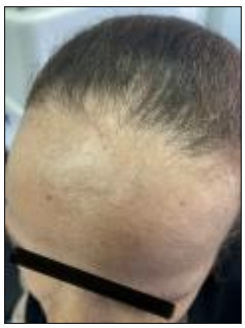

Figure 3 fibrosing frontal alopecia in a patient with pigmentogenic lichen

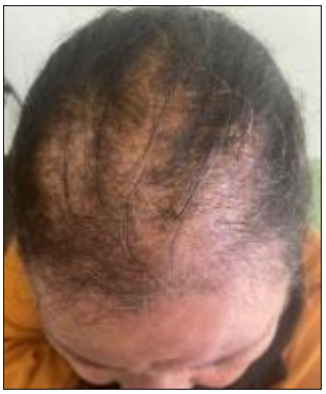

Figure 4 lichen pilaris in a patient with pigmentogenic lichen

4. Discussion

Pigmentogenic lichen planus is a dermatosis of unknown etiology, rare but relatively common in our region, characterized by small round or oval macules, well defined then confluent forming large hyperpigmented areas. It differs clinically from classic lichen planus by the pigmented nature of the lesions, the absence of nail involvement, and the exceptional involvement of the mucous membranes. The results of our series confirm the literature [1] data regarding the predominance of the female sex and the occurrence in the 3rd or 4th decade of life but not the rarity of this entity [2]. We found an association with other diseases, such as diabetes [2,3], hypothyroidism and chronic inflammatory bowel diseases. Thus, immunological mechanisms could be involved in the pathogenesis of PPL [4,5]. The frequent association with depressive disorder could also highlight the involvement of psychological factors in the genesis of this pathology.

5. Conclusion

Our serie and analysis of the literature confirmed the rarity of PPL and the female predominance. Although the pathogenesis and etiologies are still poorly understood, various triggering factors have been associated with this dermatosis. • Would it not be necessary to request a thyroid assessment, an immunological assessment and a fasting blood sugar level in addition to viral hepatitis serologies when we are in front of an PPL case?

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

Statement of ethical approval

All procedures were carried out after the agreement of all individual participants included in the study.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

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