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Case Report

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Prurigo Nodularis: Presentation of a Case Report

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ABSTRACT

Nodular prurigo (NP) is a chronic pruritic disorder of unknown origin, characterized by the formation of firm, hyperkeratotic papules and nodules with excoriations. It occurs with higher incidence between 20 and 60 years of age. Its pathophysiology remains unknown, however recent studies point to a neurocutaneous component. Among the systemic causes that trigger chronic nodular prurigo, several entities stand out, among them some bacterial and hematological infections. We present the case of a patient with NP treated in our department where therapeutic management with topical and systemic corticosteroids for pruritus control and phototherapy with UVB light was performed.

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Case Study

45-year-old female patient, skin phototype IV according to the Fitzpatrick scale. She presented with generalized, bilateral and symmetrical dermatosis, predominantly in the abdominal region and lower limbs. Characterized by purplish nodules, firm consistency, 1-2 cm in diameter and areas of excoriation, pruritic, of months of evolution. (Figures 1 and 2) Dermoscopy with polarized light showed a white starburst pattern (Figure 3).

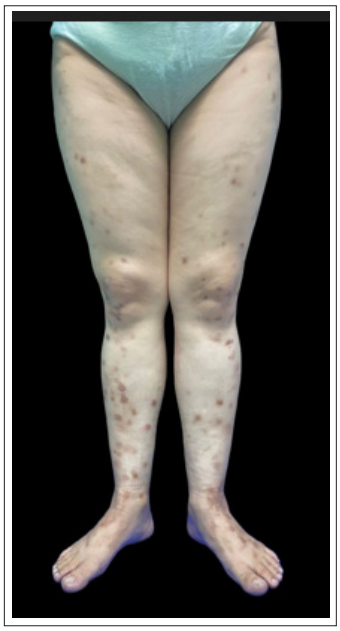

Figure 1: Multiple, Firm, Purple Nodules Measuring 1 to 2 cm in Diameter and Areas of Excoriation on the Lower Limbs

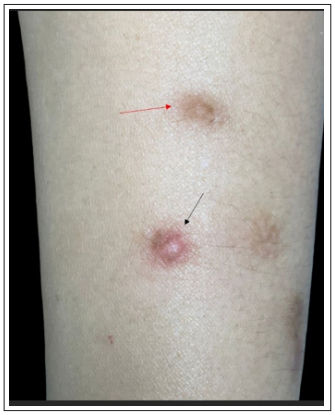

Figure 2: A Black Arrow Indicates a Hyperkeratotic, Purple Nodule, and a Red Arrow Indicates a Post-Inflammatory, Brownish Nodule

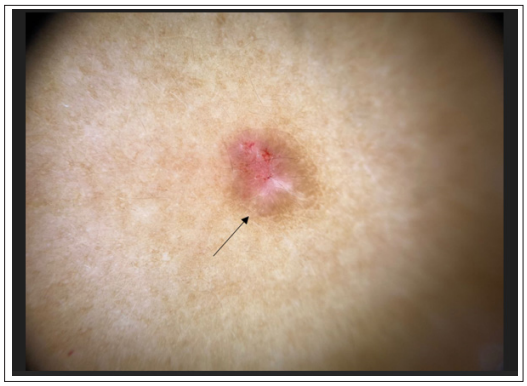

Figure 3: Polarized Light Dermoscopy. White Starburst Pattern (Black Arrow) and Area of Central Hemorrhage

Paraclinical tests were performed: Hemoglobin (9.5 gr/dl), Ht: 30% and MCV: 99 fL, Leukocytes (9700 mm3) Neutrophils (72%), Lymphocytes (20%), Eosinophils (5%), Monocytes (3%), Platelets (321.000mm3). Skin biopsy: with hematoxylin eosin staining, it was evidenced at 10X and 40X: epidermis with hyperkeratosis, irregular acanthosis, fibrosis in the papillary dermis and a scarce superficial perivascular lymphocytic inflammatory infiltrate.

Treatment consisted of high potency topical steroids such as Clobetasol propionate 0.05% daily order for 1 month, as well as the use of H1 type antihistamine for 15 days and sessions of narrow band UVB phototherapy twice a week, initial dose of 280mj/cm2 with increment per session (120mj/cm2) maximum dose (1400mj/cm2) with a total of 30 sessions, later reevaluated and started a pyramidal scheme of systemic steroid, showing improvement of pruritus and skin lesions.

Discussion

Chronic nodular prurigo is a skin disease in which raised lesions form as indurated nodules, with or without the presence of crusts on their surface, which are highly pruritic. Its etiology is controversial and little studied. The pathogenesis of prurigo nodularis is structured on two axes, inflammation and neuronal plasticity, and the interrelation between them. At the anatomical level, in prurigo nodularis there is a hyperplasia of nerve endings in the papillary dermis and a hypoplasia of the same in the epidermis. This hypoplasia occurs in both lesional and healthy skin, but its significance does not seem to be fully elucidated. The immune response plays a key role in prurigo nodularis, as overexpression of proinflammatory cytokines, such as IL-4, IL-13 and IL-31, which are involved in itching sensation and skin inflammation, has been observed. In addition, some studies have suggested that prurigo nodularis may be associated with other autoimmune diseases.

On the other hand, the proliferation of nerve endings in the dermis seems to be related to increased local inflammatory activity, which is in turn promoted by proinflammatory substances secreted by the nerve endings. Thus a positive feedback loop is created.

Nodular prurigo, despite being a benign disease that has no serious problems, is a chronic and often very difficult to treat disease, which can be quite uncomfortable or have a profound impact on the patient's quality of life. Its severity varies according to the number of lesions. Recurrence is common and in many cases some lesions remain even after long-term treatment.

Current therapy for prurigo consists of topical steroids, capsaicin, calcineurin inhibitors, ultraviolet (UV) therapy, systemic administration of gabapentinoids, opioid receptor antagonists, antidepressants or immunosuppressants.

Phototherapy can be very useful, mainly in patients with generalized form who are not candidates for therapy with systemic immunosuppressants due to their advanced age or the presence of comorbidities. There are several studies showing its efficacy with PUVA, UVA, UVB and narrow band UVB [1-8].

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