CASE REPORT

Nevoid hyperkeratosis of the nipple and areola: Case series

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ABSTRACT

Nevoid hyperkeratosis of the nipple and areola is an uncommon or underdiagnosed entity. Until 2018, 150 cases have been reported, most of them sporadic and in women. Histopathology is the confirmatory method in this entity. We present three cases of childbearing age women with histopathologic confirmation, two by dermoscopy study. In literature, there is little dermoscopic description. Two dermoscopic patterns that would facilitate diagnosis in cases that represent a challenge and biopsy cannot be considered.

INTRODUCTION

Nevoid hyperkeratosis of the nipple and areola (NHNA), is a benign, rare entity of unknown etiology, described in 1923 by Tauber.[1] It predominantly affects women of childbearing age. It has been suggested that hormonal changes may be related to their pathogenesis.[2]

It manifests as hyperkeratotic pigmented papules or plaques, uni or bilateral, which affect the nipple, areola or both. Most cases are asymptomati. However, they generate great concern for their cosmetic appearance.[3]

Clinically, it can sometimes represent a challenge to distinguish them from other benign or malignant entities, so the clinical correlation with the histopathological study constitutes the gold standard.[3] However, dermoscopy's constant development is of great help in its diagnosis.[4]

CASE REPORT

First case

23-year-old female patient presents with itchy erythematous papules of slow growth in the left nipple, evolving to form a desquamative erythematous plaque, with irregular edges of 5 years of evolution (Figure 1). With the presumptive diagnosis of chronic adenomatosis of the nipple, a biopsy was performed and it revealed epidermis with orthokeratotic hyperkeratosis, accompanied by horny plugs, elongation of the interpapillary crests, hyperpigmentation of the epidermis. Moderate papillomatosis accompanied by scarce perivascular lymphocyte infiltrate, without changes suggestive of malignancy. These findings were suggestive of nevoid hyperkeratosis of the nipple.

Second case

A 30-year-old female patient presents with papillomatous-looking plaques that affect the areola and nipples bilaterally from years of evolution (Figure 1). Dermoscopic examination showed multiple brown-gray globular structures on a pigmented background. Findings of the histopathological study supported the diagnosis of nevoid hyperkeratosis of the nipple.

Case 3

A 27-year-old female patient, during her first visit indicated a clinical picture of 13 years of evolution with thickening of the left areola and subsequent bilateral involvement, along with previous biopsy performed in another institution reporting seborrheic keratosis. After 6 years, she returned with itching and burning in the same area (Figure 1). In a new dermoscopic examination, multiple yellow-brown globular structures were observed, separated by brown linear structures, with excoriations and whitish scales (Figure 2). With the presumptive diagnosis of nevoid hyperkeratosis of the nipple and areola, a biopsy was requested that confirmed the diagnosis.

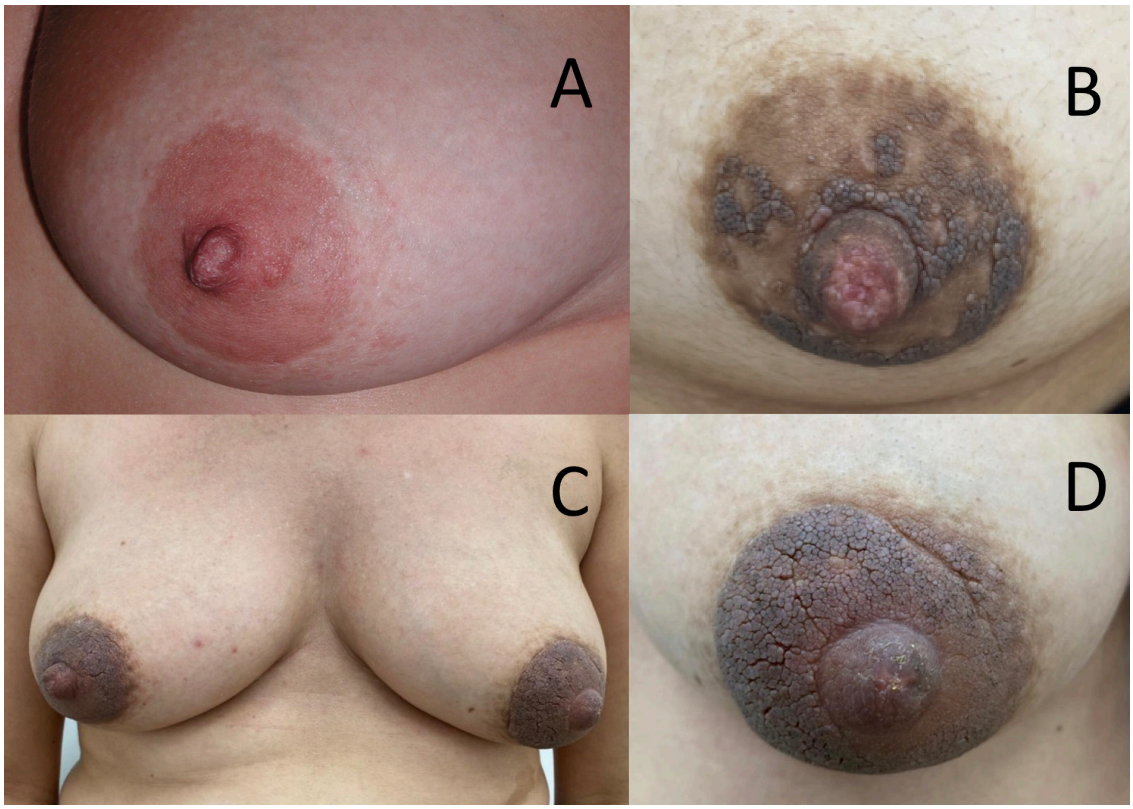

Figura 1. A: Primer caso se observan pápulas eritematosas hiperqueratósicas en pezón y areola. B: Segundo caso con pápulas que confluyen formando placas hiperqueratósicas pigmentadas en complejo areola-pezón. C y D: Tercer caso, se observan placas hiperqueratósicas pigmentadas con afectación bilateral que no sobrepasan el área de la areola.

Figura 2. Imágen dermatoscópica de la lesión del tercer caso, donde se observan múltiples estructuras globulares amarillo-marrón, separadas por estructuras lineares marrón, con excoriaciones y escamas blanquecinas.

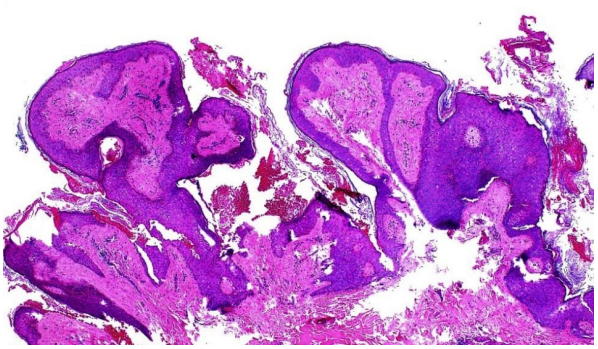

Figura 3. Histopatología correspondiente al tercer caso, se observa acantosis, ortoqueratosis, papilomatosis, con aumento de vascularización, fibrosis e inflamación leve en dermis.

DISCUSSION

Nevoid hyperkeratosis of the nipple and areola (NHNA), is a benign, rare entity of unknown etiology with approximately 150 cases reported until 2018.[5] It was described in 1923 by Tauber.[1]

In 1938, Levy and Franckel classified it into 3 categories: the first, as an extension of an epidermal nevus, the second associated with disseminated dermatoses, and the third, identified as isolated or idiopathic nevoid.[6,7] It has been suggested that, according to the description of the first category, it is rather an epidermal nevus that affects this area. Consequently, in this sense it should not be considered as an NHNA.[6]

Currently, the most accepted classification is that of 1990 by Pérez-Izquierdo et al., according to its etiology, with two categories: primary, idiopathic or nevoid, and secondary which can in turn be local or systemic, depending on the type of dermatosis that accompanies it.[8,7]

Although the pathogenesis is not well established, Scwartz-Mold-Jegasothy argue that changes in estrogen level could be involved. This theory explains the condition begins in puberty. There is exacerbation during pregnancy with transformation from a unilateral to bilateral form. Cases reported in men are associated with hormonal treatment with diethylstilbestrol.[2,9]

The presence of globose and restricted Malassezia has been reported in the lesions, being the effective antifungal therapy. Although it is not clear to the authors whether Malassezia was the direct cause or a finding.[10]

Classically, it presents as hyperkeratotic papules or hyperpigmented plaques with verrucous appearance, asymptomatic or with mild pruritus, uni or bilateral. There are no associated lymphadenopathies or secretion. Nor does it affect the functionality of the mammary gland. However, in severe cases, it can hinder breastfeeding.[7]

Kubota et al., reported that 17% affects only the nipple, 25% the areola and 58% both. The extension beyond the areolar region is rare.[1,11]

Its coexistence with mycosis fungoides (MF) has been reported, in some cases differentiating them by their histology and immunohistochemistry.[12,13,5]

Considering previous dermoscopic descriptions in the literature, two patterns could be distinguished. The first one, a homogeneous lattice pattern, given by the yellow-brown flake-shaped structures.[4] The second one, a pattern formed by yellow-brownpolygonal structures or globules, separated by pigmented irregular linear structures, furthermore bluish globules.[14]

Histologically, it bears similarity with other pathologies. Mainly the epidermal nevus. Hyperkeratosis, orthokeratosis, acanthosis, corneous plugs, basal layer hyperpigmentation, papillomatosis, mild perivascular lymphocyte infiltrate are observed.[1] Collections of intraepidermal lymphocytes reminiscent of MF Pautrier abscesses have been described.[13]

Differential diagnosis is extensive. Seborrheic keratosis, epidermal nevi, chronic nipple eczema, frictional hyperkeratosis, Darier's disease, CBC, Bowen's disease, etc. should all be considered.[15,16]

So far, there is no established consensus on treatment. Modalities with variable results have been reported, often unsuccessful. Recurrence manifests when they are suspended, which requires them to be continued intermittently.[17]

Conservative treatments, such as steroids,[17] topical retinoids, calcineurin derivatives,[18] lactic acid, salicylic acid, urea, hydroquinone, isotretinoin,[3] minocycline[19] have been used. Moreover, invasive measures, such as CO2 laser, cryotherapy,[3] radiofrequency ablation,[20] curettage, excision, shaving,[21] skin graft reconstruction, have been considered.[11,22] They have been associated in many cases with post-inflammatory hypo or hyperpigmentation and scars in this delicate area that may generate greater cosmetic concern.[3,20]

CONCLUSION

NHNA is a rare, or underdiagnosed, entity with less than 150 cases reported in the literature. Despite its benign nature, it generates great emotional consequences due to its cosmetic appearance. With or without treatment, it can persist indefinitely.

Although there are no currently defined dermoscopic criteria, dermoscopy plays a fundamental and developmental role as a diagnostic tool in the differentiation of pathologies that may affect this area, especially in patients who do not accept the performance of a biopsy due to concern for scars and greater cosmetic involvement. These cases presented with dermoscopic characteristics previously described in the literature. They could eventually be found as dermoscopic patterns facilitating diagnosis.

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