Queratoacantoma Subungueal: Uma Variante Rara do Queratoacantoma

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RESUMO – O queratoacantoma subungueal é uma variante rara do queratoacantoma, caracterizada por um comportamento mais agressivo. Os autores apresentam o caso de um homem de 49 anos que recorre à consulta por nódulo exofítico duro localizado no leito ungueal do primeiro dedo do pé esquerdo, com cerca de 2 cm de diâmetro, hiperqueratósico, amarelado, com 1 ano de evolução. A radiografia óssea mostrava osteólise parcial da falange distal do respetivo dedo. O exame histopatológico revelou uma proliferação epitelial conectada com a epiderme com padrão crateriforme, constituída por lóbulos de queratinócitos de citoplasma amplo, vitreo, com presença de muitas células disqueratósicas, escassa atipia citológica e pouca atividade mitótica. Ausência de invasão linfovascular, perineural ou óssea. Marcação imunohistoquímica p53 e Ki67 exclusivamente focal ao nível da camada basal. Foi feito o diagnóstico de queratoacantoma subungueal. O principal diagnóstico diferencial, tanto clínico como histológico, é com o carcinoma espinocelular. É importante considerar esta entidade para evitar atrasos diagnósticos e tratamentos mutilantes desnecessários.

PALAVRAS-CHAVE – Doenças da Unha; Queratoacantoma.

Subungual Keratoacanthoma: A Rare Variant of Keratoacanthoma

ABSTRACT – Sungungual keratoacanthoma is a rare and more aggressive variant of keratoacanthoma. The authors present a case of a 49-year-old male with a one year history of a growing exophytic nodule on the nail bed of the left first toe. Physical examination revealed a two centimeters large exophytic nodule with a verrucous hyperkeratotic central area on the nail bed. A plain radiograph showed a cup-shaped lytic defect in the underlying distal phalanx. Histopathologic analysis revealed a large crater-like squamoproliferative lesion, connected to the epidermis and consisting of lobules and nests of glassy epithelium with numerous dyskeratotic cells, very little degree of cytological atypia and low mitotic activity. Lymphovascular, perineural or bone invasion were not found. Immunohistochemistry with p53 and Ki67 showed exclusive focal basal staining. The diagnosis of subungual keratoacanthoma was made. The main differential diagnosis, both clinical and histological, is with squamous cell carcinoma. It is important to consider this entity to avoid unnecessary diagnostic delays and mutilating treatments.

KEYWORDS – Keratoacanthoma; Nail Diseases.

INTRODUCTION

Sungungual keratoacanthoma (SKA), also designated solitary distal digital keratoacanthoma, is a rare and aggressive variant of keratoacanthoma. There is a predilection for the first three fingers of the hand, usually in middle-aged Caucasian males.¹²

CASE REPORT

A 49-year-old Caucasian male, known as HIV positive for 2 years before completely controlled with highly active antiretroviral therapy, presented to the consultation with a growing exophytic nodule localized on the nail bed of the left first toe. He reported the lesion was present for one year and began...
Caso Clínico

6 meses después de un arrancamiento del dedo con acetazolamida debido a un uña ingrown. Se desarrolló una segunda lesión en 8 meses. El paciente no refirió dolor ni trauma previos a la lesión.

La exploración física reveló dos lesiones en el primer dedo del pie: un nódulo de 2 cm de tamaño, amarillo y duro, exofítico con un área central verrucosa hiperkératósica localizada en el nódulo del talón y el pliegue proximal de la uña, y un nódulo menor con características similares en el dorso del primer falange del mismo dedo (Fig. 1).

Una radiografía simple reveló una lesión destructiva en forma de copa en la base de la falange distal, pero el resto del hueso parecía normal, sugiriendo erosión ósea por presión de la lesión, pero no una lesión invasiva que afectara el hueso (Fig. 2).

Se consideraron cuatro diagnósticos diferenciales principales: queratoacantoma subungueal, carcinoma escamoso, verruga viral y dermatomycosis profunda.

Se realizó una biopsia quirúrgica y la histopatología reveló una lesión escamosoproliferativa de gran tamaño (Fig. 3a), conectada con la epidermis que consistía de lóbulos y nidos de epitelio de vidrio con numerosas células dyskeratoticas, muy poco atipia citológica y baja actividad mitótica (Fig. 3b). La lesión se extendió profundamente en la dermis y estaba asociada con fibrosis y una reacción linfoides focal pero moderada. No se encontró infiltración linfática, perineural o ósea. La inmunohistoquímica mostró un marcado p53 y Ki67 en la capa basal (Fig. 4).

An incisional biopsy was performed and histopathology revealed a large crateriform squamoproliferative lesion (Fig. 3a), connected to the epidermis that consisted of lobules and nests of glassy epithelium with numerous dyskeratotic cells, very little cytological atypia and low mitotic activity (Fig. 3b). The lesion extended deep into the dermis and was associated with fibrosis and focal but moderate lichenoid tissue reaction. Lymphovascular, perineural or bone invasion were not found. Immunohistochemistry showed focal p53 and Ki67 staining exclusive on the basal layer (Fig. 4).
Based on clinical, radiological, and histopathological findings, the diagnosis of subungual keratoacanthoma was made, and total excision of the two lesions was performed.

The smaller lesion showed histopathologic features typical of a common keratoacanthoma.

**DISCUSSION**

Subungual keratoacanthoma usually presents as a rapidly growing lesion that causes destruction of the underlying bone and unlike keratoacanthoma elsewhere, affects hairless skin, may invade deep tissues and rarely resolves spontaneously. Sometimes it is preceded by trauma, which in our case could have been related with previous nail surgery.

At an early stage SKA causes onycholysis that can mimic other entities such as onychomycosis and lead to incorrect treatments. The main differential diagnosis, both clinical and histological, is with squamous cell carcinoma (SCC). SKA occurs more frequently in middle-aged and young adults, grows rapidly and becomes exophytic soon in the tumour evolution, whereas SCC is mainly observed in older patients, grows insidiously and its appearance may not suggest a tumour for a longer period. Osteolysis in SKA has sharp limits and is caused by pressure, and in SCC it has ill-defined borders caused by direct bone invasion associated with periosteal thickening and reactive sclerosis. Typical histological findings in SKA include hyperkeratosis and parakeratosis, central keratin-filled crater, dyskeratotic eosinophilic cells and little nuclear atypia. In SKA the architectural criteria are more relevant to the diagnosis, while in the SCC cytological abnormalities with mitotic figures are more relevant and marked cellular and nuclear atypia are the main criteria. P53 and Ki67 expression pattern may be useful to distinguish between these two skin tumours. Expression tends to be focal and in the basal layer in SKA, contrasting with a more diffuse epidermal staining pattern in subungual SCC.

SKA is considered a benign lesion and conservative treatment is advised. Local excision is usually performed, with cases treated with local infiltration of methotrexate. Amputation should be reserved for cases with multiples recurrences or when a clear differentiation from SCC is not possible.

It is important to consider this entity to avoid diagnostic delays and mutilating treatments. The presence of a second lesion could be HIV-related, since immunodeficiency is a known risk factor for keratoacanthoma development. In this case, the association with HIV could lead to a more aggressive clinical course, advising close follow-up.
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REFERENCES
1. Perello-Alzamora MR, Gonzalez-de Arriba M, Fernandez-Lopez E. Painful, rapidly growing tumor in the subungual area of the first digit of the right hand. Actas Dermosifiliogr. 2013;104:347-8. doi: 10.1016/j.adengl.2012.09.021.
2. Baran R, Mikhail G, Costini B, Tosti A, Goettmann-Bonvallot S. Distal digital keratoacanthoma: two cases with a review of the literature. Dermatol Surg. 2001;27:575-9.
3. Gonzalez-Rodriguez AJ, Gutierrez-Paredes EM, Montesinos-Villaescusa E, Burgues Gasion O, Jorda-Cuevas E. Queratoacantoma digital distal: importancia del diagnostico diferencial con el carcinoma escamoso subungual. Actas Dermosifiliogr. 2012;103:549-51. doi: 10.1016/j.ad.2011.08.012.
4. Cribier B, Asch P, Grosshans E. Differentiating squamous cell carcinoma from keratoacanthoma using histopathological criteria. Is it possible? A study of 296 cases. Dermatology. 1999;199:208-12.
5. Connolly M, Narayan S, Oxley J, de Berker DA. Immunohistochemical staining for the differentiation of subungual keratoacanthoma from subungual squamous cell carcinoma. Clin Exp Dermatol. 2008;33:625-8. doi: 10.1111/j.1365-2230.2008.02785.x
6. Kwiek B, Schwartz RA. Keratoacanthoma (KA): An update and review. J Am Acad Dermatol. 2016;74:1220-33. doi: 10.1016/j.jaad.2015.11.033.