Caso Clínico

Queratoacantoma Subungueal: Uma Variante Rara do Queratoacantoma

Alexandre Miroux Catarino[1], Maria Goreti Catorze[2], Isabel Viana[2]
[1]Médico Interno de Dermatovenereologia/Resident of Dermatology and Venereology, Serviço de Dermatologia, Centro Hospitalar de Lisboa Ocidental, Lisbon, Portugal
[2]Assistente Hospitalar Graduada de Dermatovenereologia, Serviço de Dermatologia, Centro Hospitalar de Lisboa Ocidental, Lisboa, Portugal / Consultant of Dermatology and Venereology, Dermatology Department, Centro Hospitalar de Lisboa Ocidental, Lisbon, Portugal

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, vítreo, 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 exofitic 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.[1,2]

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

Correspondência: Alexandre Miroux Catarino
Serviço de Dermatologia - Hospital Egas Moniz
Rua da Junqueira 126
1349-019 Lisboa, Portugal
E-mail: alexandre_catarino@hotmail.com
DOI: https://dx.doi.org/10.29021/spdv.76.4.922

Recebido/*Received*
23 Março/*March* 2018
Aceite/*Accepted*
16 Junho/*June* 2018

Caso Clínico

6 months after a nail avulsion with mathricectomy due an ingrown nail. A second lesion progressively developed within 8 months. The patient referred no pain and denied trauma preceding the lesions.

Physical examination revealed two lesions in the first left toe: a 2 cm large, yellowish and hard, exophytic nodule with a verrucous hyperkeratotic central area localized on the nail bed and proximal nail fold, and a smaller nodule with similar features on the dorsal aspect of the first phalanx of the same toe (Fig.1).

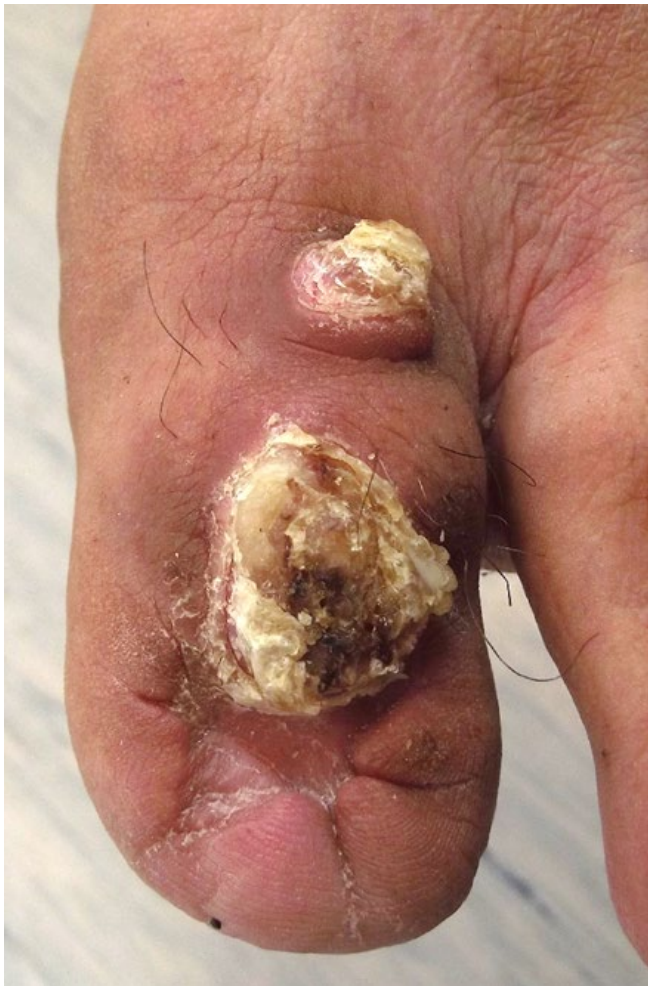

Figure 1 - Subungual keratoacanthoma. Clinical aspects: Large, yellowish exophytic nodule with a verrucous hyperkeratotic central area on the nail bed and a satellite nodule.

A plain radiograph revealed a cup-shaped lytic defect in the underlying distal phalanx, but the remaining bone appeared normal, suggesting bone erosion by lesional pressure rather than an invasive lesion affecting the bone (Fig. 2).

Four main differential diagnoses were considered: subungual keratoacanthoma, squamous cell carcinoma, viral wart and deep mycosis.

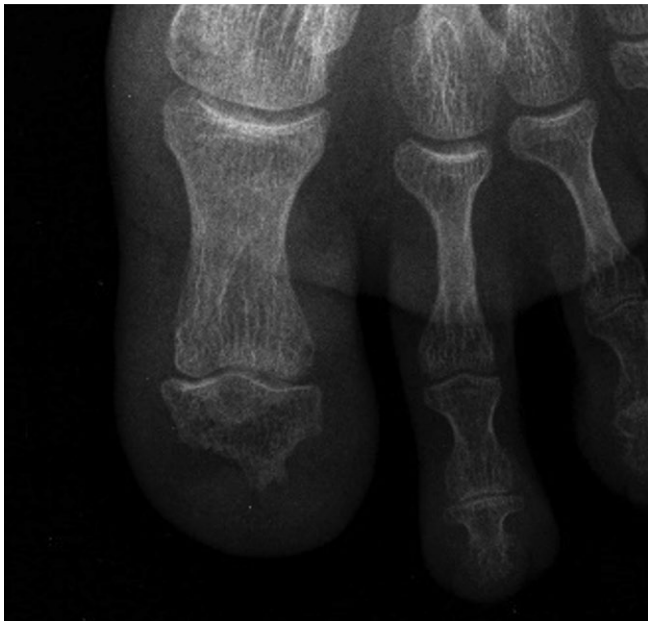

Figure 2 - Subungual keratoacanthoma. Radiography of the left foot: Cup-shaped lytic defect in the underlying distal phalanx.

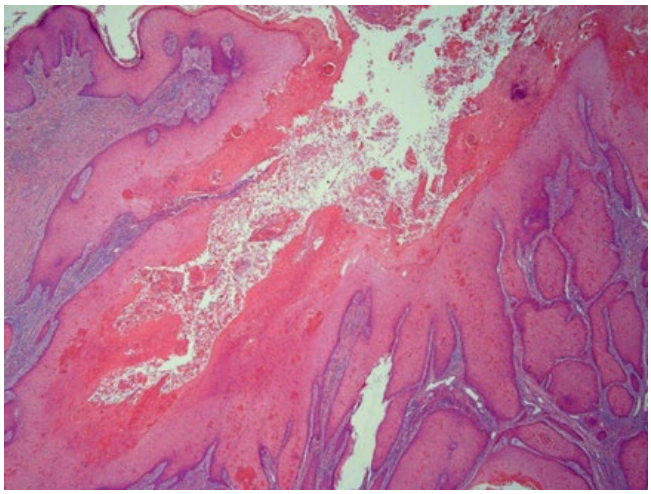

Figure 3a - Subungual keratoacanthoma. Skin biopsy: Large crater-like squamoproliferative lesion connected to the epidermis (H&E, 40x).

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).

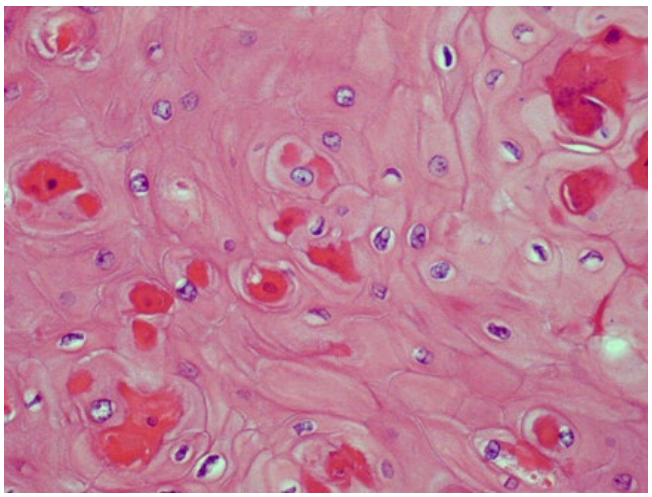

Figure 3b - Subungual keratoacanthoma. Skin biopsy: Presence of numerous dyskeratotic cells, very little degree of cytological atypia and low mitotic activity (H&E, 400x).

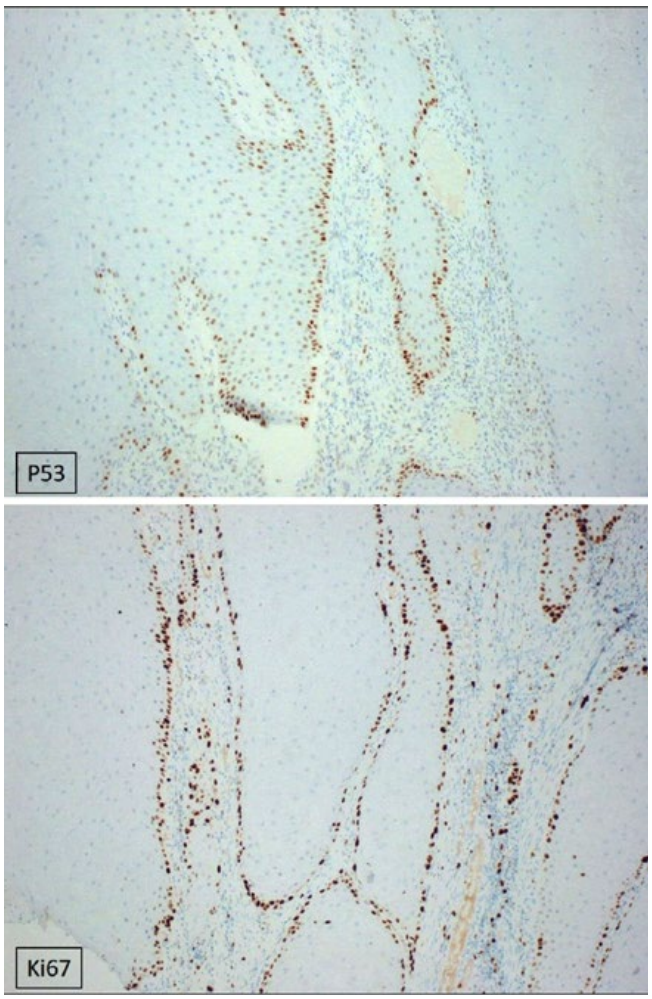

Figure 4 - Subungual keratoacanthoma. Immunohistochemistry: P53 and Ki67 showing limited focal basal staining.

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.[3] 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.[2] 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.[4] 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.[5]

SKA is considered a benign lesion and conservative treatment is advised. Local excision is usually performed, with cases treated with local infiltration of methotrexate.[1] Amputation should be reserved for cases with multiples recurrences or when a clear differentiation from SCC is not possible.[2]

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.[6] In this case, the association with HIV could lead to a more aggressive clinical course, advising close follow-up.

Caso Clínico

Conflitos de interesse: Os autores declaram não possuir conflitos de interesse.
Suporte financeiro: O presente trabalho não foi suportado por nenhum subsídio ou bolsa.
Confidencialidade dos dados: Os autores declaram ter seguido os protocolos do seu centro de trabalho acerca da publicação dos dados de doentes.
Protecção de pessoas e animais: Os autores declaram que os procedimentos seguidos estavam de acordo com os regulamentos estabelecidos pelos responsáveis da Comissão de Investigação Clínica e Ética e de acordo com a Declaração de Helsínquia da Associação Médica Mundial.

Conflicts of interest: *The authors have no conflicts of interest to declare.*
Financing Support: *This work has not received any contribution, grant or scholarship.*
Confidentiality of data: *The authors declare that they have followed the protocols of their work center on the publication of data from patients.*
Protection of human and animal subjects: *The authors declare that the procedures followed were in accordance with the regulations of the relevant clinical research ethics committee and with those of the Code of Ethics of the World Medical Association (Declaration of Helsinki).*

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 subungueal. 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.