SUBUNGUAL VERRUCOUS CARCINOMA. CASE REPORT

ALEXANDRU OANȚĂ*, TIBERIU TEBEICĂ**, GABRIELA STOLERIU***, IOANA VLAS*, SMARANDA ȚĂREAN*, TRAIAN CONSTANTIN****

Summary

Introduction: *Verrucous carcinoma is a tumor of old age. Diagnosis is usually delayed, requiring repeated, multiple, wide and deep biopsies.*

Clinical case: *A 68-year-old patient is consulted for a subungual keratosis nodular mass with involvement of the left nail fold of the right index finger, with an evolution of several months. X-ray of the right index finger shows periosteal reaction and lack of bone substance in the distal phalanx. At the histopathological examination hyper-keratosis, parakeratosis, papillomatosis and invasion of the underlying dermis with squamous neoplastic cell masses with nuclear pleomorphism and occasional mitosis appear. Amputation of the distal phalanx of the right index finger was performed.*

Discussions: *The subungual location of verrucous cancer is rare, and can affect the nail bed, dorsal or proximal fold of the nail. Histologically, there are few cellular atypias. The pathogenesis is unclear with the incrimination of chronic inflammatory factors, repeated microtraumas, HPV. The differential diagnosis must be made with Bowen's disease, keratoacanthoma and vulgar wart. The treatment of choice consists of complete and wide surgical excision, sometimes amputation. Recurrences are common.*

Keywords*: verrucous carcinoma, subungual, multiple biopsies, recurrences common*

Received: 1.02.20021 *Accepted: 3.03.2021*

Introduction

Verrucous carcinoma is a tumor of old age. Subungual localization is rare, requiring repeated, wide and deep biopsies to establish the diagnosis. The differential diagnosis must be made with Bowen's disease, keratoacanthoma, vulgar wart, acral melanoma, tuberculosis verrucosa cutis. We present a case of a patient diagnosed with subungual localized verrucous carcinoma.

Clinical Presentation

A 68-year-old patient is consulted for a hyperkeratotic nodular mass, with a diameter around 1 cm, located subungually with the grip of the left periungual fold of the right index finger, with the modification of the nail plate (Figure 1). This lesion appeared about 1 year ago, gradually increasing in size.

Radiography of the right index showed a visible periosteal reaction on the palmar side, parallel to the bone cortex and lack of bone substance with a clear contour in the distal phalanx. Histologically the epidermis shows hyperkeratosis, parakeratosis, papillomatosis and diskeratosis. The underlying dermis is invaded by nodular masses formed by squamous neoplastic cells with nuclear polymorphism, with individual cell keratinization, keratin beads and occasional mitosis. In the dermis there is inflammation and peritumoral fibrosis (Figure 2,3,4,5)

* S.C. DERMAMED S.R.L., Brașov.
** Dr Leventer Centre, Bucharest.
*** Faculty of Medicine and Pharmacy, "Dunărea de Jos" University, Galați.
**** U.M.F. Carol Davila, "Prof. Dr. Th. Burghele" Clinical Hospital - Urology Discipline.

Figure 1. Hyperkeratotic nodular mass located subungually with the invasion of the periungual fold of the right index finger.

Based on the histopathological aspect correlated with the clinical appearance and the slow evolution of the lesion, the diagnosis of subungual verrucous carcinoma was established. Treatment consisted of amputation of the distal phalanx of the right index finger.

Figure 2. Well-differentiated proliferation of squamous epithelium with verrucous architecture, papillomatosis, prominent keratinization with parakeratosis and well-defined contour in relation to the underlying dermis (H&E, x20).

Discussions

Verrucous carcinoma is a rare condition. Subungual localization remains uncommon, affecting especially men, most commonly in the

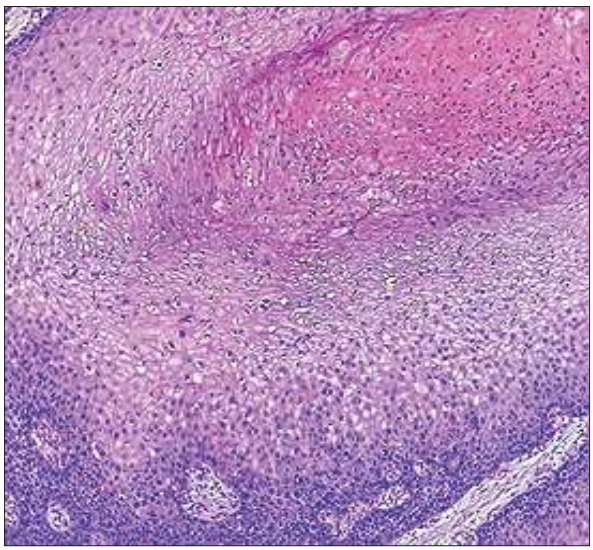

Figure 3. Progressive transition of atypical keratinocytes to cells with perinuclear vacuolations and small nuclei, similar to coilocytes, with parakeratosis (H&E, x100).

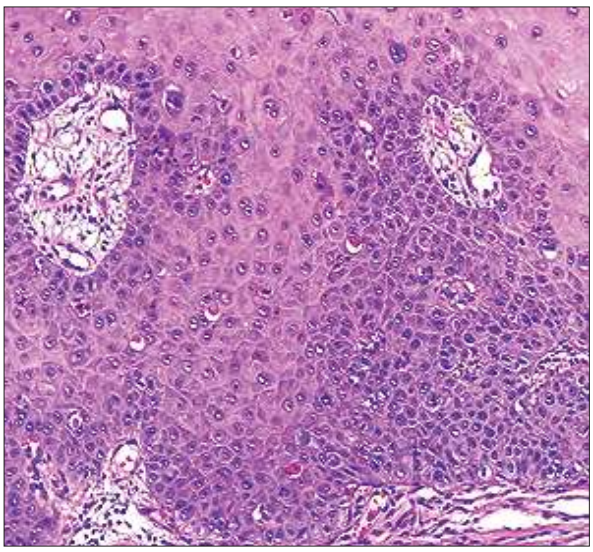

Figure 4. Net delimitation of the tumor in relation to the underlying dermis, without infiltrative aspects. The presence of numerous dyskeratosis cells is observed (H&E x200).

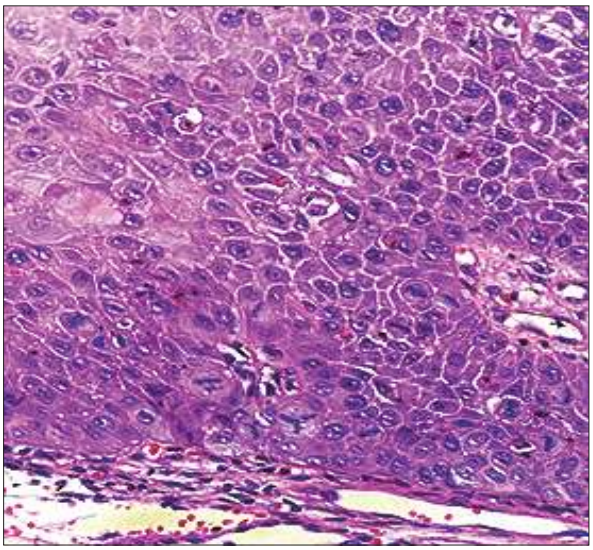

Figure 5. Nuclear atypia and atypical mitosis, some tripolar, predominantly in the basal and parabasal layers. The presence of desmosomes is observed, an aspect characteristic of well-differentiated squamous cell carcinomas (H&E x400).

thumb. Clinically, the typical appearance is of exophytic tumor with irregular surface, hyperkeratotic with cauliflower appearance. The tumor is located on the nail bed, the dorsal or proximal fold affecting in the majority of cases the nail plate that shows changes such as onycholysis or onychotosis (1,2,3). Histological examination is difficult to interpret due to the high degree of differentiation of this tumor, with the presence of few cellular atypia, requiring multiple biopsies, thus leading to delayed diagnosis that can last 7-13 years (2,4).

The evolution of the tumor is slow with the initial destruction of the underlying soft parts and later of the bone (10% of cases) of osteolysis type as in the case presented or micro-calcifications (5), but without having metastatic potential. The etiopathogenesis of verrucous carcinoma remains unclear with the incrimination of several factors such as chronic inflammatory phenomena, repeated microtraumas and the presence of HPV (6). The differential diagnosis must be made with Bowen's disease, vulgar wart, acral melanoma, tuberculosis verrucosa cutis, deep mycosis, atypical mycobacteriosis (7).

The treatment of choice consists of complete and wide surgical excision, sometimes requiring amputation. Mohs surgery is indicated in the early forms, allowing the total removal of the tumor, preserving maximum healthy tissue (8). Intraarterial infusion of metrotrexate was also attempted (9). The prognosis is usually good, the clinical follow-up being important, the recurrences remaining frequent even after a wide surgery (10).

In conclusion, subungual verrucous carcinoma is a rare and little known condition whose diagnosis often requires repeated, multiple, wide and deep biopsies.

Bibliography

1. Chiheb S, Bouziane K, Azzouzi S, Benchikhi H. Carcinome verruqueux de l'orteil. *Ann Dermatol Venereol* 2010;137:169-70.
2. Martin F, Dalac S, Lambert D. Le carcinome verruqueux. Aspects nosologiques, à propos de 4 cas. *Ann Dermatol Venereol* 1995;122:399-403.
3. Tosti A, Morelli R, Fanti PA, Morselli PG, Catrani S, Landi G. Carcinoma cuniculatum of the nail apparatus report: of three cases. *Dematology* 1993;186:217-21.
4. Schwartz RA. Verrucous carcinoma of the skin and mucosa. *J Am Acad Dermatol* 1995;32:1-21.
5. Durox H, Roux C, Sparsa A, Labrousse F, Bedane C, Bonnetblanc JM. Carcinome verruqueux du membre inferieur. *Ann Dermatol Venerol* 2007;134:543-7.
6. Gallouj S, Harmouch T, Soughi M, Baybay H, Meziane M, Hammas N. Carcinome verruqueus sous-unguéal de l'orteil. *Ann Dermatol Venereol* 2010;137:842-3.
7. El Ouazzani A, Ellouadghiri A, Saidi A, Senouci K, Hassam B. Un carcinome verruqueux sous-ungueal. *Ann Dermatol Venerol* 2014;141:83-4.
8. Coldiron BM, Brown BC, Freeman RG. Epithelioma cuniculatum of the thumb: a case report and literature review. *J Dermatol Surg Oncol* 1986;12:1150-5.

9. Sheen MC, Sheen YS, Sheu HM, Wong TW, Lee YY, Wu CF, et al. Subungual verrucous carcinoma of the thumb treated by intra-arterial infusion with methotrexate. *Dermatol Surg* 2005;31:787-9.
10. Corbin V, Vidal M, Souteyrand P, D'Incan M, Amarger S, Laurichesse H, et al. Carcinome cuniculatum: un diagnostic difficile à évoquer devant une ostéite chronique d'evolution défavorable sous traitement. *Rev Med Interne* 2006; 27:713-6.

Conflict of interest
NONE DECLARED

Correspondance address: Conf. Dr. Gabriela Stoleriu
Faculty of Medicine and Pharmacy, "Dunărea de Jos" University, Galați, Str. Al. I. Cuza nr. 35
"Sf. Spiridon" Hospital, Iași
Derma Clinique, Iași, România
E-mail: stoleriugabriela@yahoo.com

Dr. Ioana-Maria Vlas
Dermamed SRL., Brașov
Sebeș Municipal Hospital, str. Șurianu, nr 41, Alba
Clinica New Life Med, Alba-Iulia
Clinica Medivers; Brașov
E-mail: vlas.ioana@gmail.com