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# Carcinoma In Disguise-Atypical Presentation of Squamous Cell Carcinoma

## Kılık Değiştirmiş Karsinom-Skuamöz Hücreli Karsinomun Atipik Sunumu

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### ABSTRACT

Squamous cell carcinoma (SCC) of the nail unit is a rare malignant subungual tumor. There is often a delay in diagnosis and treatment as it can be often misdiagnosed as chronic paronychia, onychomycosis, pyogenic granuloma, subungual wart, or glomus tumor.

Here, we present a case of an elderly man who was brought to the out-patient department with a deformed appearance of the right fourth finger of his hand after 1 year. With a preceding history of trauma and two sessions of excision of the finger nail showing onychomycosis, the patient was admitted for further evaluation. Imaging in form of X-ray of the hand and Magnetic resonance imaging of the finger showed bony destruction of middle and distal phalanges, thereby favoring fungal osteomyelitis. However, incisional biopsy from the nail unit revealed suspicious of SCC. A multimodal approach to the tumor is required; however, surgical excision is the definitive treatment.

**Keywords:** Squamous cell carcinoma, nail bed, onychomycosis

### ÖZ

Tırnak ünitesinin skuamöz hücreli karsinomu (SCC) nadir görülen malign bir subungual tümördür. Çoğunlukla kronik paronişi, onikomikoz, piyojenik granülom, subungual siğil veya glomus tümörü olarak yanlış tanı konulabildiğinden tanı ve tedavide sıklıkla gecikme olur.

Burada 1 yıl sonra sağ el dördüncü parmağında şekil bozukluğu şikayetiyle polikliniğe getirilen yaşlı erkek olguyu sunuyoruz. Daha önce travma öyküsü olması ve onikomikozu gösteren iki seans tırnak eksizyonu yapılması nedeniyle hasta ileri değerlendirme için yatırıldı. Elin röntgeni ve parmağın Manyetik rezonans görüntülemesi şeklindeki görüntüleme, orta ve distal falanjların kemik tahribatını gösterdi, bu da mantar osteomiyelitini destekledi. Ancak tırnak ünitesinden alınan insizyonel biyopside SCC şüphesi ortaya çıktı. Tümöre multimodal bir yaklaşım gereklidir; ancak cerrahi eksizyon kesin tedavidir.

**Anahtar Sözcükler:** Skuamöz hücreli karsinom, tırnak yatağı, onikomikoz

## INTRODUCTION

Malignant tumors of the hand are rare, and squamous cell carcinoma (SCC) is the most common malignancy involving the nail unit (1,2). It can have various clinical presentations from nodules, papules, to ulcerated lesions, unusual presentations like warty growth, of this tumor have been reported. SCC typically has an indolent course and presents with mild symptoms. Most common site within the nail unit where it arises, most commonly from the subungual region (nail bed) (57.4%), rarely from the proximal or lateral nail folds (31.5%), and exceptionally from the hyponychium (finger pulp skin) (3). Compare to SCC onychomycosis of the hand represents about 30% of mycotic cutaneous infections with dermatophytes being the most common causative agent. However, bony involvement as fungal osteomyelitis is a rare condition with few reports involving the digits (4). In this case report, we outline a previous report of candidial onychomycosis in which the patient was suspected to have recurrence of the infection. SCC is known to have atypical presentations, and one must always suspect this tumor, especially in chronic cases.

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## CASE REPORT

An 80-year-old man presented with complaints of an elongated right fourth finger of his hand since 1 year. A history of trauma to the finger by the rachis of coconut tree leaf 5 years back, following which he underwent excision of the nail. He underwent excision of the same deformed elongated nail again 1 year back, which on histopathology showed a cutaneous horn of the nail bed with candida infection. When he returned after the second recurrence, he experienced no fever or discharge from the nail. There was no history of skin malignancy. Examination revealed deformed right fourth finger with firm 3x3 cm irregular shaped swelling at the base of the nail and an elongated, pigmented nail with a hypertrophied nail bed and loss of flexion at distal interphalangeal joint (Figure 1). No local rise in temperature, tenderness, or axillary lymphadenopathy was noted. X-ray of the right hand was performed, which showed destruction of the distal phalanx terminal aspect of fourth finger (Figure 2,3) This was followed by MRI of the right fourth finger, which showed a deformed fourth digit with an ill-defined irregular heterogeneous altered signal intensity lesion (T1 hypointense T2 iso to hypointense heterogeneous STIR hyperintense signal with patchy areas of diffusion restriction) measuring 1.8x2.5x3.3 cm causing bony destruction and acro osteolysis of middle and distal phalanges and the intervening distal interphalangeal joint. The lesion was infiltrating the tendons of the flexor digitorum profundo's, flexor digitorum superficialis, and extensor digitorum and into the skin, subcutaneous tissue in the palmar and extensor aspects, and nail bed. Features favored fungal osteomyelitis/actinomycosis. (Figure 4). Incisional biopsy suggested suspicious of SCC. Ultrasound of right axilla showed no lymphadenopathy. Chest X-ray was not suggestive of pleural effusion or mass lesions. The full blood count was within normal limits. Amputation of the digit at the level of the proximal interphalangeal joint under brachial block (Figure 5). Gross swelling of size 3x2x1.5 cm was present near the proximal resected margin, with keratinous growth of size 6x2.5x1 cm at the distal end. Histopathology revealed

**Figure 1.** Clinical image

**Figure 2.** X-ray of right hand at initial presentation one year back

**Figure 3.** X-ray of right hand after recurrence

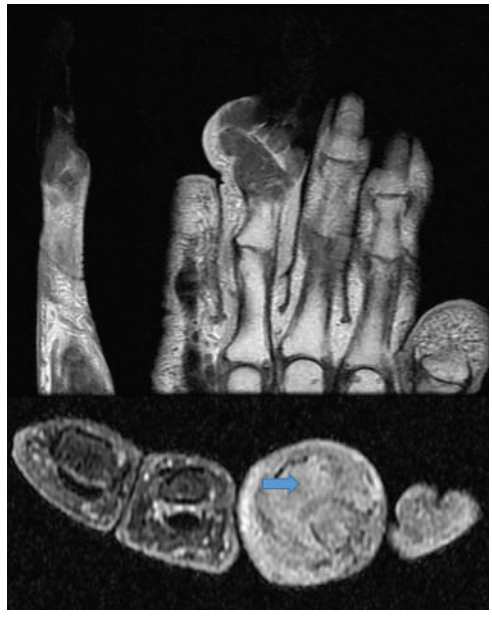

**Figure 4.** MRI images showing the lesion with bony destruction

*MRI: Magnetic resonance imaging*

well-differentiated SCC involving the dermis, subcutaneous tissue extending to the distal and middle phalanges (Figures 6-9). Resected margins, including the deep margin, were free from the tumor at distances of 1.5 cm from the skin, 1 cm from the soft tissue, and 1.5 cm from the proximal bone. The patient recovered well after surgery and was discharged. The patient was followed up after 2 weeks for suture removal. The stump was healthy (Figure 10) and the patient had no new complaints. He was called back after 1 month, and ultrasound imaging of the ipsilateral axilla revealed no lymph nodes. He is currently on follow-up for regular ultrasound of the axilla and clinical evaluation of stump for recurrence. Patient informed consent was taken about the disease and surgery, also explained about the complications and prognosis of disease. Informed consent was taken for the research publications.

**Figure 5.** The intraoperative specimen

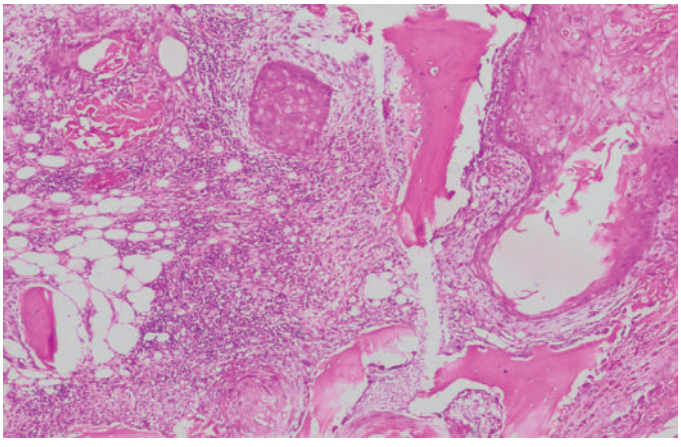

**Figure 6.** Section showing invasion of marrow space with extracellular keratin deposition

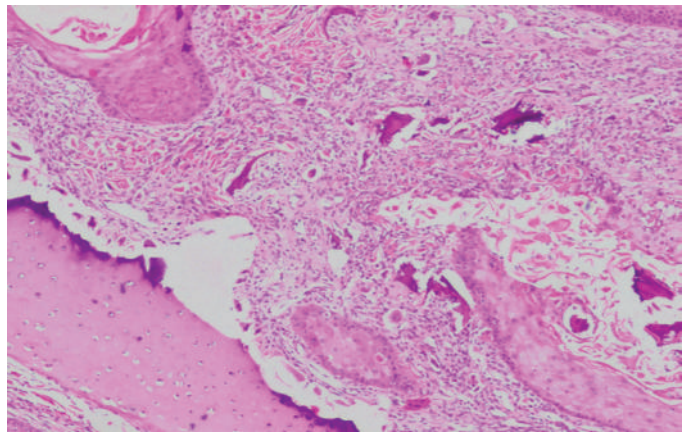

**Figure 7.** Section showing invasion of marrow space with extracellular keratin deposition

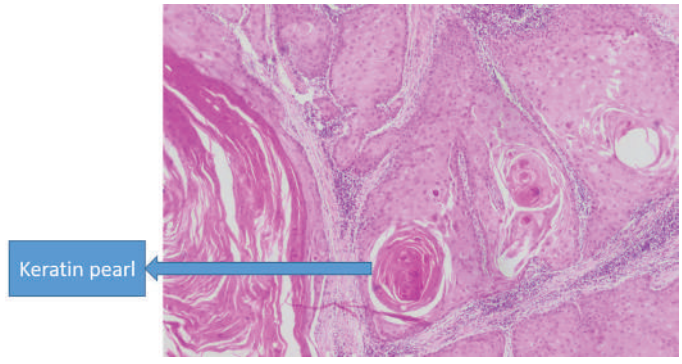


**Figure 8.** Well differentiated SCC with keratin pearl formation

*SCC: Squamous cell carcinoma*

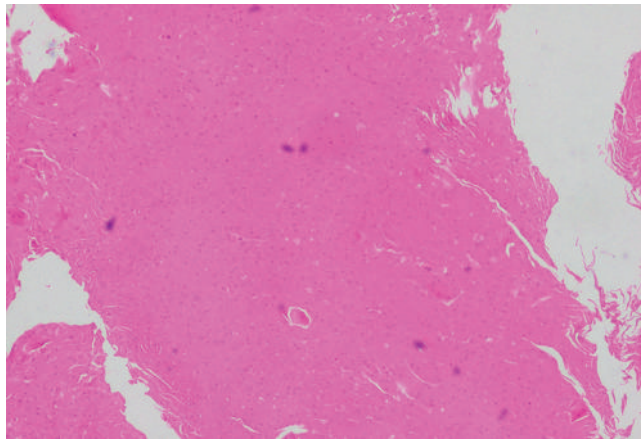

**Figure 9.** Keratinous horn

**Figure 10**. Amputated stump on follow-up

## DISCUSSION

SCC occurs most commonly in men aged between 50 and 70 years and affects fingers more commonly than toes (5). Several causative agents predispose to subungual SCC, which includes human papilloma virus, chronic trauma, chronic inflammation, chronic infection, ionizing radiation, solar radiation, tar, arsenic, or other mineral exposure and immunosuppression (6,7). Bone involvement is seen in >20% of patients, whereas nodal involvement is seen in only 2% of patients (8). Radiological imaging is important in diagnosis and to rule out bony involvement. X-ray and computed tomography are useful in SCC-which appears as a crescent-shaped soft tissue mass with osteolytic defect of the associated phalanx, without periosteal reaction. A heterogeneous hypoechoic mass with irregular contours and posterior acoustic enhancement is the characteristic of SCC. Magnetic resonance imaging is superior to other radiologic imaging methods for soft tissue masses, as it has the capability of identifying the exact location and extension and helps in local staging for SCC (9).

Nail biopsy plays an important role in recurrent and persistent lesions for early detection of SCC and helps in prompt management. SCC has a multidisciplinary approach of management which includes Mohs micrographic surgery, amputation of the distal phalanx, electrosurgery, liquid nitrogen, photodynamic therapy, radiation therapy, intra-arterial infusion with chemotherapy, imiquimod, 5-fluorouracil, and lymph node dissection in case of metastasis which has to be ruled out by performing ultrasound of axilla or sentinel node biopsy. However, amputation of the digit has the highest cure rate and is indicated in case of long-standing carcinoma or bony involvement (10).

## CONCLUSION

Nail unit SCC is a rare presentation and can have similar clinical picture as onychomycosis leading to delayed treatment. Hence, we would like to highlight the importance of performing a biopsy and prompt imaging on a long-standing recurrent nail unit lesion to achieve early diagnosis and appropriate surgical intervention.

**Informed Consent:** Informed consent was taken for the research publications.

**Footnotes**

### *Authorship Contributions*

Surgical and Medical Practices: K.S.R., Concept: A.A., Design: A.G., Supervision: M.V.P., Resources: A.A., Material: A.G., Data Collection or Processing: K.S.R., Analysis or Interpretation: K.S.R., Literature Search: A.G., Writing: K.S.R., Critical Review: M.V.

**Conflict of Interest:** No conflict of interest was declared by the authors.

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