

Delay In Diagnosis of Subungual Melanoma: A Case Report

Subungual Melanom Tanısında Gecikme: Bir Olgu Sunumu

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Abstract

Subungual melanoma is a rare subtype of melanoma. Subungual melanoma usually presents as a discoloration of the nail, nail splitting, or nail bed bleeding and may easily be misdiagnosed as onychomycosis or bacterial infection. Furthermore, secondary infections are possible, which could lead to late diagnosis. For this reason, most subungual melanomas are diagnosed in advanced stages and are associated with a poor prognosis. We present the case of a 90-year-old man with a 6-year history of black discoloration in the left big toe and a 1-year history of coexisting purulent discharge, with a delayed diagnosis of subungual melanoma.

Keywords: Subungual melanoma, geriatric, misdiagnosis, onychomycosis

Özet

Subungual melanom, melanomun nadir bir alt tipidir. Subungual melanom genellikle tırnakta renk değişikliği, tırnak yarılmaması veya tırnak yatağı kanaması olarak ortaya çıkar ve kolayca onikomikoz veya bakteriyel enfeksiyon olarak yanlış teşhis edilebilir. Ayrıca, geç tanıya yol açabilecek sekonder enfeksiyonlar da mümkündür. Bu nedenle, subungual melanomların çoğu ileri aşamalarda teşhis edilir ve kötü prognozla ilişkilidir. Sol ayak başparmağında 6 yıldır siyah renk değişikliği ve 1 yıldır eşlik eden pürülan akıntı öyküsü olan 90 yaşında erkek hasta, gecikmiş subungual melanom tanısı ile sunuldu.

Anahtar Kelimeler: Subungual melanom, geriatrik, yanlış tanı, onikomikoz

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1. Introduction

Subungual melanoma (SUM) is a subtype of melanoma that arises from the nail matrix and commonly affects other areas of the nail unit (1, 2). The disease may clinically mimic more common and benign health conditions, such as infections and haematoma. Since SUM presents with nonspecific symptoms, diagnosis delays, lead to a more advanced stage at diagnosis and cause worse prognoses (3).

We present the case of a 90-year-old man with SUM that was misdiagnosed as onychomycosis and bacterial infection and treated accordingly.

2. Case

A 90-year-old man presented with a 1-year history of drainage from the left big toe, which led to the spotting of his socks (Figure 1). He reported a 6-year history of color change and thickening of the first nail, which was treated unsuccessfully with systemic terbinafine and ciclopirox nail lacquer several

times, given the prediagnosis of onychomycosis. In the last year, he had been repeatedly treated with antibiotics for the drainage. He was otherwise healthy. On examination, the left toenail was covered with serous and haemorrhagic crust with a small serous draining area (Fig. 1a), and a black discoloration of the nail plate (Fig. 1b) were noted. After cleaning the crusts, we observed a central longitudinal defect in the nail plate and a change in the black color of the underlying nail bed (Fig. 1c). The color change was broader proximally and extending to the distal nail fold with a positive Hutchinson's sign (HS) (Fig. 1c). Dermoscopic examination of the patient is shown in figure 2. Histologic examination revealed an ulcerated invasive SUM with a Breslow thickness exceeding 2.0 mm (Figure 3). Systemic examination was normal, and no lymphadenopathy was detected. The patient was informed about the disease, treatment choices, and prognosis. The patient remained in denial and was lost to follow-up.



Figure 1. Subungual melanoma of a 90-year-old male: (a) The left toenail is covered with serous and haemorrhagic crust along with a small serous draining area; (b) black discoloration of the nail plate (yellow arrow); (c) cleaning the crusts revealed a central longitudinal defect in the nail plate, and change to black color and ulceration (blue arrow) of the underlying nail bed; (d) the color change was broader proximally and extended to the distal nail fold with a positive Hutchinson's sign (red arrow).

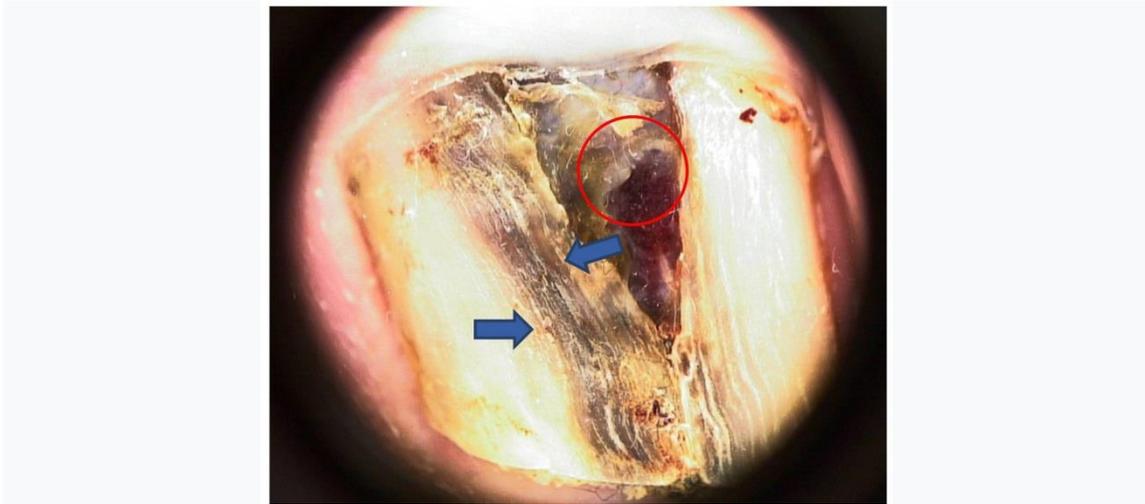


Figure 2. Dermoscopy examination view: It is revealed longitudinal black lines with irregular thickness and spacing (blue arrows). The pigmentation increases in width proximally with pigmentation at proximal nail fold. Partial nail plate destruction is observed (red circle) (FotoFinder Dermoscope; TeachScreen Software GmbH, Bad Birnbach, Germany).

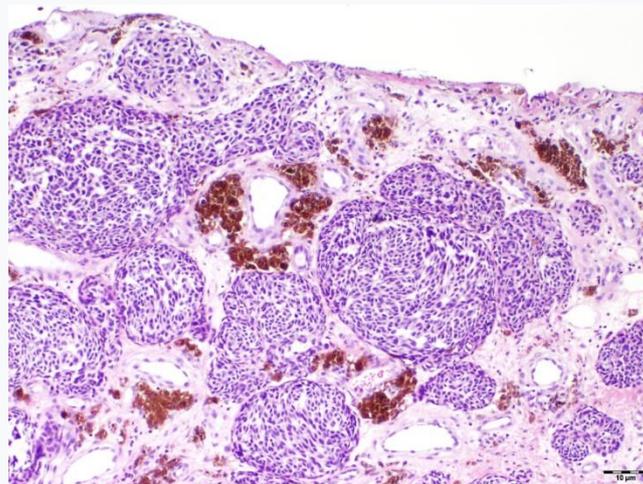


Figure 3. Histopathological examination of incisional biopsy: An ulcerated tumor infiltrating the dermis and clusters of melanocytes occupying the dermis. Extensive proliferation of sheets of atypical melanocytes and spindle-shaped tumor cells with occasional cell showing atypical mitoses (Hand E, $\times 100$).

3. Discussion

SUM accounts for 0.7-3.5% of all cutaneous melanomas. It was demonstrated that the big toe was generally affected in SUM (4). Average tumor thickness has been estimated to be between 3.1 mm and 6 mm in the literature (3-6), and the tumor thickness was approximately 2.0 mm in this case. Often, it first appears as longitudinal melanonychia, which may progressively extend or progress to thickening, splitting, or destruction of the nail plate with pain and inflammation (1, 2).

The clinical appearance may mimic benign and more common diseases, such as subungual hematoma, pyogenic granuloma, bacterial infections, and onychomycosis. Furthermore, bacteria and fungi may superinfect and mask the underlying SUM. As in this case, it is observed that the patients were followed up and treated for a long time with the diagnosis of onychomycosis. SUM presents with nonspecific symptoms and delayed diagnosis, it is more advanced at

diagnosis, leading to a worse prognosis (3). Also, in studies conducted with a large number of patients, it was determined that there is a high risk of lymph node metastasis with increased tumor thickness (4, 6). There was no LN metastasis in this case.

The nail-specific ABCDE rule (7) was designed to facilitate physicians in the early detection of nail unit melanoma.

A – Age: SUM peaks between the fifth and seventh decades.

B – Band of the nail plate with brown-black pigmentation: The breadth of the band is usually ≥ 3 mm and presents an irregular/blurred border.

C – Change: Rapid increase in size and/or growth rate or failed improvement in nail dystrophy despite adequate treatment of the alternative cause is observed.

D – Digit(s) involved: Thumb, hallux, and/or index finger, and single digit or multiple digits may be involved.

E – Extension of discolouration: HS (extending of the pigment beyond the nail to adjacent skin) or involvement of the free edge of the nail plate is observed.

F – Family or personal history of previous melanoma or dysplastic nevus.

When we applied the ABCDE rule to our patient, his age, width of the band, treatment failures, involved digit, and the presence of HS all pointed to the diagnosis of SUM. Other suspicious signs in our patient included lifting off the nail from the nail bed and ulcerating lesions that did not heal.

In the literature, the delay between the patient's awareness of the tumor and the time of diagnosis varies between 1 month and 10 years. The vast majority of patients wait more than 1 year after noticing the skin lesion before seeking medical help (3, 4). Also, it has been observed that the lesions on the feet are difficult to diagnose, especially by primary care specialists. Factors contributing to the delay may include patients' age and/or cognitive state, latent location, unusual clinical presentation, and low public awareness (3, 4). In addition, misdiagnosis and treatment by healthcare professionals is the most important contributor. It has been determined that the most crucial factor determining poor survival in these patients is due to diagnostic delay. In studies with a large number of patients, 5-year survival for SUM ranges from 25% to 91% (1, 4, 6); It is emphasized that the most important factor in survival is early diagnosis.

In conclusion, since SUM may present in a disguised manner, increased vigilance and awareness with regard to evaluation are required. The only way to reduce high mortality is to perform an early biopsy. In cases of presumed infection of the nail unit, especially in geriatric patients, it may be appropriate to obtain a biopsy if the condition fails to respond to treatment. Follow-up visits should be adhered to for assessment of possible treatment unresponsiveness.

The key to diagnosis and early treatment is awareness. Therefore, it is necessary to emphasize the importance of early diagnosis of SUM by increasing disease awareness through education and prevention programs for both physicians and citizen.

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