Malignant tumors mimicking fingertip infections: Report of two consecutive cases

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ABSTRACT
Malignant tumors in fingertips have similar findings with fingertip infections. Malignancies should be considered in patients with consistent swelling and erythema of the fingertip, and who exhibit resistance to infection treatments. In this study, two patients with malign fingertip tumors, who were treated under the misdiagnosis of fingertip infections, are presented.

Key words: Felon, malignancy, metastasis, lymphangitis carcinomatosis, paronychia

Introduction
Fingertip infections are common problems, mostly seen in the nail bed and pulp of the fingers. In a patient with a swollen, erythematous and tender finger, paronychia, felon, herpetic whitlow and tenosynovitis should be considered as differential diagnoses. Antibiotics and surgical debridement are the treatments of choice according to diagnosis. Although most infections regress with these basic treatments, there is no regression in some patients. In these cases, chronic infections, dermatological conditions and benign tumors like candidiasis, dermatitis and pyogenic granuloma are possibilities as well as malignancies [1, 2]. Malignancies can exhibit similar signs as infections, leading to a delay in diagnosis. In this study, two case reports with malignancies that are misdiagnosed as fingertip infections are presented.

Case Report 1
A 58-year-old male patient was referred to our clinic with a swollen and tender finger. The swelling had first manifested 40 days before. There was no history of trauma. In another clinic, a drainage incision was performed on the pulp of the second finger; the patient was administered an antibiotic for two weeks; but there had been no regression of the symptoms. During physical examination, erythema and swelling were noted in the distal and middle phalanx and in a drainage incision on the pulp of the second finger. Flexion in the distal interphalangeal joint was lost. A total lysis of the distal phalanx was seen in x-ray (Figure 1). The patient had hypertension and chronic obstructive pulmonary disease. Also, he was monitored for lymphangitis carcinomatosis for three months.
An incisional biopsy was taken from the pulp of the second finger. The pathologic diagnosis was malignant epithelial tumor. An amputation from the middle phalanx was performed, with the pathologic examination revealing squamous cell carcinoma. No lymphadenopathies were detected in the extremity or axillar region during either physical examination or ultrasonography. The patient was transferred to the oncology department and died three months postoperatively.

Case Report 2

An 83-year-old male was referred to our clinic with an erythematous and swollen finger. He self-administered antibiotics without medical intervention, then consulted his primary care physician and was administered antibiotics multiple times. After six months, his symptoms gradually progressed. During physical examination, erythema in the distal phalanx of the left thumb with fluctuation on the pulp was noted. The nail was thickened and discolored. There was an ulcerated lesion under the nail. Flexion was lost in the interphalangeal joint of the thumb. The distal phalanx was lytic in x-ray (Figure 2). The patient had coronary artery disease, hyperlipidemia and chronic obstructive lung disease.

An incisional biopsy was taken from the nail bed, which confirmed the presence of squamous cell carcinoma. An amputation from the interphalangeal joint was performed on the thumb. He refused any screening for metastasis and declined follow-up.

Discussion

Malignant tumors of the hand are rare [3]. These rare tumors can mimic benign conditions when located in the fingertip and nail bed [2]. Similar signs and symptoms make their diagnosis difficult and lead to the progression of untreated malignancy. The incidence of primary tumors of the finger is squamous cell carcinoma; basal cell carcinoma; and malignant melanoma in decreasing order [4]. Metastatic tumors of hand are extremely rare [5].

The most common malignant tumor of the finger and perionychial region is squamous cell carcinoma (SCC). SCC manifests itself with erythema, swelling
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and sometimes ulceration of the fingertip. Chronic radiation, Human Papilloma Virus or repetitive traumas are predisposing factors for these malignancies [2]. SCC progresses slowly on the fingertip [6]. These tumors masquerade as chronic infections because of similar symptoms, slow progression and small ulcers under the nail bed.

Metastatic tumors of the hand and finger region are very rare. If there is a metastatic tumor detected in the subungual region, there is a 44% likelihood that it is the first manifestation of an internal malignancy [2]. Lung malignancies are the most common of internal malignancies that metastasize to the subungual region [7]. Similar to primary tumors of the finger, they can mimic infectious symptoms; their diagnosis can be delayed even in patients with known internal malignancies.

In our first presented case, the patient was referred to our clinic relatively early. Despite the fact that these malignant tumors are confused with chronic infections, our patient’s tumor was diagnosed at a sub-acute stage. Symptoms refractory to antibiotics, history of an internal malignancy and the image of a lytic bone in x-ray were strong indicators of metastasis. The patient did not have palpable lymph nodes in physical examination. Sentinel lymph node biopsy and lymph node dissections are controversial in these patients. There is no available evidence showing that sentinel lymph node biopsy is beneficial to a patient’s outcome in primary or metastatic SCC [8]. The patient was referred to the oncology department, but the primary tumor that causes lymphangitis carcinomatosis and metastatic fingertip tumor could not be found. The second presented case was introduced to our clinic at a chronic stage. A careful physical examination, in addition to an image of a lytic bone in x-ray, seemingly corroborated our diagnosis of malignancy of the subungual region. Easily accessible roentgenograms were very helpful in these cases.

In a case with a swollen and erythematous fingertip, patient history is very important. In suspected cases, radiographic and histopathologic examinations should be performed. When a disruption in the structure of fingernail is seen, perionychial region should be examined carefully and dermatoscopy should be performed when necessary. Benign tumors, infections, dermatologic conditions, systemic diseases as well as primary and metastatic tumors should be considered in differential diagnosis.

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