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Case Report / Olgu Sunumu

Basal Cell Carcinoma Appearing As a Suture Reaction Along The Incision Line

İnsizyon Hattında Sütür Reaksiyonu Görüntüsü Veren Bazal Hücreli Karsinom

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Özet

Derinin en sık görülen malign neoplazmi bazal hücreli karsinomdur (BHK). En sık baş ve boyun bölgesinde görülür. Predispozan faktörler arasında; Ultraviyole radyasyon (UV), travma, kronik yaralar, immun disfonksiyon, inorganik arsenik ve sebace nevüs gibi lezyonlar sayılabilir. Kronik yaralar, ipek fistülü ve skar formasyonu sonucunda sıklıkla squamöz hücreli karsinom görülmekte olup. BHK oldukça nadirdir. İnsizyon hattından gelişen BHK olgularında tedavi geniş cerrahi eksizyondur. Cerrahi kliniklerinde ameliyat edilen olgularda insizyon yeri problemleri sık karşılaşılan durumlar olup en sık sebebi sütür reaksiyonlarıdır. Takiplerinde kronik ülserasyon ve akıntı görülen olgularda BHK da akla gelmeli ve biopsi mutlaka alınmalıdır.

Anahtar kelimeler: Bazal hücreli karsinom, umblikus, kronik yara

Abstract

The most frequently occurring malignant neoplasm of the skin is basal cell carcinoma (BCC). It is seen most often around the head and neck area. Predisposing factors include exposure to ultraviolet radiation (UV) and inorganic arsenic, trauma, chronic wounds, immune dysfunction and plaques, such as sebaceous nevus. While squamous cell carcinoma is frequently encountered as a result of chronic wounds, silk fistulas and scar formation, cases of BCC are very rare. In incidences of BCC developing along the incision line, the treatment involves making a large surgical excision. Problems related to the incision site are most often observed in operations conducted at surgical clinics, with the most common cause being suture reactions. In cases of chronic ulceration and discharge, a diagnosis of BCC should be considered and a biopsy should be conducted.

Key words: Basal cell carcinoma, chronic wound, umbilicus

Introduction

Malignant tumors of the skin include basal cell carcinoma (BCC), squamous cell carcinoma (SCC), malignant melanoma and cutaneous

adnexal tumors. Half of the diagnosed cancer cases occurring every year in the USA are malignant cutaneous tumors^{1,2}. Basal cell carcinoma constitutes the majority of cases

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among these types of tumors, which are distinguished by their variety of biological behaviour. Regarding the incidence rate, squamous epithelial cell carcinoma, malignant melanoma and cutaneous adnexal tumors follow respectively³.

BCC is characteristically common in sun-exposed areas such as the head and neck. In the etiology of BCC, UV radiation, X-ray radiation and arsenic exposure and sebaceous nevus, scar tissue and immunosuppression play leading roles as predisposing factors¹⁻⁴.

While SCC often develops after chronic wounds and scar formation, BCC development due to scar formation is very rare⁵⁻⁸.

In malignant cutaneous tumors, the diagnosis is made with the pathological evaluation of the incisional or excisional biopsy result. Tumor excision margins vary according to pathological type and location and treatment is performed through the total excision of the lesion, with adequate surgical limit and defect repair^{3,4}.

In this article, we present a case, together with its relevant literature, occurring five years ago involving an operation performed for an umbilical hernia, then biopsied on suspicion of malignancy due to the development of chronic ulceration on the incision scar during follow-ups and concluding with the diagnoses of BCC.

Case report

A 46-year-old male patient was admitted to our polyclinic with a non-healing scar in the umbilical area. In his history, the patient, who had undergone an operation five years ago for an umbilical hernia, had been receiving continuous treatment after surgery due to discharge from the operation site. The physical

examination revealed a small incision scar above and below the umbilicus and an approximately 2x1 cm ulcerated lesion in the umbilical area over the surface of the scar (Figure 1). A punch biopsy taken from this area revealed a basal cell carcinoma, and patient was admitted to the general surgery ward. The absence of lymphatic retention and distant metastasis was detected with abdominal CT scan and USG. A wide excision was performed under general anesthesia (Figure 2). The patient did not experience any problems in post-operative follow-up and was discharged after recovery on the third day. No tumor within surgical limits was seen in the pathological evaluation of the specimen.



Figure 1. Ulcerated lesion in the incision scar on the umbilical region.

Discussion

BCC is the most frequently encountered malignancy of the skin and is seen most often in the sun exposed head and neck area. Exposure to UV light is an important factor in the development of BCC. In recent years, the incidence rate of malignant cutaneous tumors has gradually increased. Malignant cutaneous tumors constitute approximately more than half of all diagnosed cancers¹⁻⁴.



Figure 2. Wide local excision of the lesion

Many factors are involved in the etiology of these tumors, including the mutation of the P53 tumor suppressor gene by UV light, toxins released from damaged tissues, immunological disorders, co-carcinogenesis, irritation, poor lymphatic regeneration, antibodies, or DNA mutations. However, the pathogenesis has not been completely clarified⁴⁻⁶.

The risk of skin cancer is known to increase in chronic wounds and scar tissues caused by conditions such as burns, trauma, hidradenitis suppurativa, diabetes or radiotherapy. In 1828, post-traumatic tumor growth was defined by Jean-Nicholas Marjolin and designated using his name. Squamous cell carcinoma develops frequently and is more common after burns⁵⁻⁷.

Our case can be included in the Marjolin ulcer group due to the patient's low exposure to the sun, his status as a farmer, the accompaniment of chronic inflammation and the fact that examination of the local wound was performed several times for a presumed silk fistula.

The etiology of scar-related carcinomas has not been fully explained. Scar tissue resulting from the healing of damaged tissue is structurally less organized than normal tissues.

It can be easily damaged by minor trauma, and its ability to repair is very low. Connolly et al. argued in their article published in 1960 that the decreasing blood build-up and the scar tissue remaining after atrophy in the epidermis layer become susceptible to the harmful effects of radiation⁴.

While some authors have suggested that HLA antigens play a role in the development of basal cell carcinoma, Rompel et al. determined a weak correlation between HLA and basal cell carcinoma⁶.

The average duration of carcinoma development with Marjolin ulcer is 25 to 40 years. In our case it occurred after five years. It has been noted that repetitive injury and inadequate repair mechanisms leading to prolonged inflammation can lead to the development of the malignant clone^{6,7,9}.

In our case, scar tissue was formed after surgery, and low resistance of the scar tissue caused non-healing ulcerous wounds by minor traumas. The whole process seems to support the development of the above-mentioned carcinoma. Apart from these, Mustoe et al. reported in paraplegic and tetraplegic patients squamous cell carcinoma related to chronic compression⁶.

In addition, Black and Walkden suggested that changes during chronic venous stasis induce irregular epidermal hyperplasia and lead to the development of BCC. It is not clear if chronic venous hypertension is a predisposing factor for the development of BCC⁶.

Chronic wound-induced skin lesions occur over a long period of time, making the differential diagnosis difficult. A punch biopsy is sufficient for making a definite diagnosis and the earlier the biopsy is performed, the more accurate the

diagnosis will be and thereby a better treatment can be performed. In the study of Barr and Menard, lower limb localization has been reported to be a poor prognostic factor, as it causes a high distant metastasis rate and a low 5-year survival. In addition to these, the absence of recurrence in the first three years in patients monitored after the completion of primary therapy has a positive impact on survival⁸.

Screening of distant metastases at diagnosis is detrimental to treatment. In the treatment of BCC, cryotherapy, laser therapy, photodynamic therapy, 5-fluorouracil and interferon therapy may be used depending on lymph node involvement and distant metastases. However, surgery is the most efficient method. Wide excision was performed in our case^{3,6-8}.

To conclude, chronic wounds and scar tissue can develop into malignant neoplasms.

Therefore, they should be monitored for a long period time and biopsied as early as possible. It should be noted that patients be called for follow-up due to the risk of recurrence after treatment.

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