Basal Cell Carcinoma in Young Patients

Genç Yaşlarda Bazal Hücreli Kanser

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42

Abstract

Basal cell carcinoma (BCC) is the most common type of skin cancer and has a direct relationship with chronic sun exposure. Other risk factors include fair skin and eyes, freckling, family history, genetic disorders, immunosuppression, ionizing radiation, arsenic, and polycyclic aromatic hydrocarbons. BCC usually progresses slowly. Lesions are usually seen over sun-exposed areas, which are most commonly on the face and neck. Local invasion may occur, but it rarely metastasizes. The incidence of BCC peaks in the seventh decade of life. BCC is an uncommon lesion during childhood, youth, and pregnancy. It has rarely been reported during childhood. BCC seen during childhood can be inherited with diseases such as xeroderma pigmentosum, albinism, Bazex syndrome, and basal cell nevus syndrome or after high-dose radiotherapy. In this study, we present the cases of a 14-year-old girl with BCC on the right popliteal region and a 23-year-old pregnant woman with BCC on the nasal tip. Both patients underwent total excision, and there were neither recurrence nor any complication during the follow-up.

Keywords: Basal cell carcinoma, young age, incidence

Öz

Bazal hücreli kanser (BHK) uzun süreli güneş hasarı ile direkt ilişkili olan derinin en sık görülen kanseridir. Açık cilt rengi, pozitif aile hikayesi, baskılanmış immünite, iyonize radyasyon, arsenik ve poliaromatik hidrokarbonlar bilinen diğer risk faktörleridir. Genellikle yavaş büyüme eğiliminde olan lezyonlar sıklıkla güneş gören vücut bölgelerinde özellikle de baş boyun bölgesinde görülür. Çocukluk ve gebelik döneminde bazal hücreli kanserler nadir olarak görülebilmektedir. Çocukluk döneminde bazal hücreli nevüs sendromu, albinizm, kseroderma pigmentosum ve Bazex sendromu ile ilişkili olarak görülebilmektedir. Bu çalışmamızda 14 yaşında sendromik olmayan kız çocuğunda sağ popliteal çukurda ve 23 yaşında hamile hastada burun ucunda görülen bazal hücreli kanser olguları sunulmaktadır. İki hastada da total cerrahi eksizyon uygulanmış olup ameliyat sonrası takiplerinde komplikasyon ya da rekürrens bulgusu saptanmamıştır.

Anahtar Sözcükler: Bazal hücreli kanser, genç yaş, sıklık

INTRODUCTION

The most common type of skin cancer and the most common type of cancer found in people is basal cell carcinoma (BCC), which peaks in the seventh decade.¹⁻¹¹ It was first described in 1827 and was called "ulcus rodens".^{3,4} It originates from the basal layer of the epidermis or hair follicle keratinocytes.^{3,4} It grows slowly and rarely metastasizes, but it may cause local tissue destruction.^{4,9} It may present in different ways such as an ulcerated lesion with indurated edges; red patches; non-healing ulcers; papules or nodules with a pearly aspect, often with telangiectasia; or a depressed plaque. The most common subtype is the nodular-ulcerative form.³ The most important structural risk factors are family history, fair skin, and light eyes and hair.^{3,4} Ultraviolet (UV) light is the main risk factor associated with the development of BCC.^{2-4,9-11} Fair-skinned individuals have 10–20-times higher risk than dark skinned individuals in developing BCC while living in the same area.³ Its high frequency significantly burdens the health system, thus making the disease a public health issue.³ Men are more affected than women.³ It is uncommon during childhood, youth, and pregnancy.^{1-5,9} Sporadic BCC in children and cancer occurring during the gestational period have rarely been reported.^{1,2,4,7} Surgical excision is the usual treatment during childhood.^{1,2} In this study, we present

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Figure 1. Preoperative view of the lesion in patient 1

the cases of a 14-year-old girl with BCC on the right popliteal region and a 23-year-old woman with BCC on the nasal tip that exhibited growth during pregnancy. Both lesions were uncommon given the young ages of the patients. Further, the first lesion was in an atypical location and the second was in a pregnant woman.

CASE PRESENTATIONS

Patient 1

A 14-year-old girl presented with a lesion in the right popliteal region. It was first noticed almost one year ago, as a small papule. The lesion developed over time, its color became more violaceous with telangiectasias. It was translucent and showed episodic bleeding (Figure 1). The patient had neither a precursor lesion nor a family history for skin cancer. The lesion was 0.8×0.5 cm and was excised with 3-mm surgical margins. A histological diagnosis of BCC was made. There was no recurrence after a three-year follow-up.

Patient 2

A 23-year-old pregnant woman presented with an erythematous, firm, and irregular lesion on the nasal tip, with no specific history (Figure 2). It first appeared two years ago, as a small blister. The lesion had a rapid growth period and showed episodic bleeding with an atypical border and color changes during pregnancy. It was excised with 3-mm surgical margins, and the defect was reconstructed with a local flap. A histological diagnosis of BCC was made. There was no recurrence after a two-year follow-up.

Figure 2. Preoperative view of the lesion in patient 2

The latest amendments to the Helsinki Declaration have been applied in accordance with the procedure and the patient's consent has been obtained.

DISCUSSION

Although etiology unclear, lesions may be related to intense, unprotected sun exposure during childhood.^{4,9} In the absence of further trigger factors, these come into play only after decades of latency. Tumors are rarely seen in childhood and in young people.¹⁻³ During pregnancy, cancers are unusual and BCC has a very low incidence.⁵ Cervical cancer, breast cancer, malignant melanoma, and lymphoma are the most commonly reported cancers during pregnancy.⁵ Fisher et al.⁵ reported a 42-year-old woman who had a rapid growth of BCC during multi-gestational pregnancy, but it did not have a rapid growth during mono-gestational pregnancy.

In this study, we have two unusual cases, one in a girl in her childhood and the other in a young gestational woman. In patient one, the lesion was seen on an atypical location that was not directly related to sun exposure and without a syndromic disease. In patient two, the lesion appeared before pregnancy, but it grew rapidly during the gestation period. Tumors that appear during childhood are usually related to a syndromic disease because malignant epithelial skin tumors in children are mostly observed based on predisposing genodermatoses such as xeroderma pigmentosum, albinism, Bazex Syndrome, and basal cell nevus syndrome.^{1,2,4} The inactivation of a gene at the 9q22 chromosome may have an association with the development of tumors.⁶

Idiopathic BCC in children is rarely seen, and its reasons are not well known.^{2,4} Despite its uncommon frequency, isolated BCCs have been reported without genetic disorders.^{1,2} Griffin

et al.¹ searched the literature, including their patients, and observed that 107 children had BCC; 90% of these were in the head. Levi et al.⁸ considered second primary cancers in 776 patients with first primary cancer diagnosed before the age of 20, and BCC was observed in 5 patients.⁸ All BCCs were located in the radiation field, and they stated that radiation were the key etiological factor even in the absence of a meaningful interaction with UV light.⁸ Chinem et al.³ described that the habit of sunbathing is associated with a 5-fold increased risk in the development of BCC on the trunk, which is a reason why adolescents show more lesions on the trunk. Margaret et al.¹⁰ reported that indoor tanning with UV radiation-emitting lamps is common among adolescents and young adults; additionally, to prevent skin cancers, a US preventive service task force recommended that children, adolescents, and young adults (10–24 years) with fair skin be consulted to minimize UV radiation exposure, including from indoor tanning.¹⁰ Excision, Mohs' surgery, curettage with or without electrodesiccation, radiotherapy, cryotherapy, or topical agents can be chosen for the treatment of BCC.^{1,4} Trichoepithelioma, basoid follicular hamartoma, and post-traumatic wounds are differential diagnoses during childhood.^{2,4} Because of the low incidence of BCC in the pediatric population, making a diagnosis is usually delayed.^{4,6,9} Increase in BCC incidence during childhood in recent years should be associated with high-level UV radiation exposure.^{4,9} Deady et al.⁹ said that socioeconomically gradient in risk applies to urban populations only.

CONCLUSION

We may say that diseases associated with increased UV radiation exposure will rise in the future. The incidence of BCC is increasing in the young population, which is related to unprotected recreational sun exposure. BCC has a clear impact on patients' quality of life, which tends to become an occupational and environmental disease because of its increasing incidence and high frequency. Therefore, awareness of skin lesions may help in the early diagnosis and treatment of tumors in the young population. A close follow-up is essential in children and young people because the lifetime risk of developing a subsequent BCC is greater than in the general population.

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