Eyelid Basal Cell Carcinoma in a Healthy Child

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ABSTRACT
Basal cell carcinoma is rare in children and usually is associated with genetic or immune predisposing factors. A 14-year-old otherwise healthy boy who had an eyelid basal cell carcinoma is presented. The tumor was in the subciliary area in the lateral part of the lower eyelid, was ulceronodular with some pigmentation, and had grown over the past 6 months. The patient’s medical history was unremarkable. Systemic and immunologic studies did not find any abnormality that could present a predisposition to skin cancer. The tumor was excised and the resulting eyelid defect was repaired with a semicircular flap. During a follow-up period of 44 months, the patient did not develop any recurrence, de novo tumor, or extracocular disease of any significance. [J Pediatr Ophthalmol Strabismus 2014;51:e82-e84.]

INTRODUCTION
Basal cell carcinoma is the most frequent tumor of the skin and eyelids. It occurs rarely in children and usually arises in association with a genetic or immune predisposition or exposure to radiotherapy.1 Herein, a child with eyelid basal cell carcinoma without any predisposing factor is presented with a review of relevant literature.

CASE REPORT
A 14-year-old boy presented with a mass in his eyelid of 6 months’ duration (Figure 1A). He had no other skin problem. He had no history of trauma, systemic disease, radiotherapy, or drug use. His family had no history of skin cancer.

The patient had a fair skin tone. He had an ulcerated and pigmented nodule in the lateral lower eyelid, 6 × 5 mm in diameter (Figure 1B). Other ocular examination findings were normal. Findings on blood and urine tests, chest x-ray, and abdominal ultrasonography were also normal. Neck ultrasonography showed several enlarged lymph nodes. Pediatric immunology consultation found no abnormality.

The tumor was totally excised with a safety margin of 3 mm and frozen section control of the defect margins. The eyelid defect was repaired primarily with a semicircular flap (Figures 1C-1D). On histologic examination, the lesion was diagnosed as basal cell carcinoma (Figure 2). No recurrence, new tumor, or any other disease occurred during 44 months of postoperative follow-up. The periocular skin scar was visible at the last examination (Figure 1E).

DISCUSSION
The major predisposing factors for basal cell carcinoma are light skin complexion and sunlight exposure.1 The tumor most frequently occurs in the head and neck region, which is the most exposed to the sun. Among eyelid basal cell carcinomas, 95% of cases are diagnosed between the ages of 40 and 80 years, with a mean of 65 years.2 Sun exposure during childhood may be related to the development of basal cell carcinoma dur-
ing adulthood. Use of ultraviolet-blocking creams during the first 18 years of life may reduce the risk of development of non-melanoma skin cancers in adulthood by 78%.

In children, basal cell carcinoma occurs in association with genetic disorders, such as albinism, basal cell nevus syndrome (Gorlin–Goltz syndrome), xeroderma pigmentosum, or nevus sebaceous. Rarely, it may also develop without any risk factors. In a detailed literature review, Griffin et al. found idiopathic basal cell carcinoma in 107 pediatric patients, including one of their own cases. The tumor occurred in the head and neck region in 90% of children, similar to the rate seen in adults. It was of nodular type in 50% of patients and histologically aggressive in 20%. The tumor recurred in 20% of patients during follow-up. According to the authors, development of idiopathic basal cell carcinoma in children may be related to sun exposure.

Eyelid basal cell carcinoma in children has been reported in a few cases. The youngest patient in the literature was a 27-month-old girl who had no predisposing skin disease, described by Keramidas and Anagnostou. The nevus-like lesion in her left lower eyelid became ulcerated within 4 months. One of 3 patients described by LeSueur et al. was an 8-year-old child who had an idiopathic, nodular basal cell carcinoma in the lower eyelid. The lesion did not recur after excision during 4 years of follow-up. Al-Buloushi et al. described 3 patients seen at three different centers. The patients were 8, 14, and 17 years of age, with two of them being female and one male. Two patients had a history of excessive sun exposure. The lesion was in the lower eyelid in all patients and of the nodular type in 2 patients and morpheaform type in 1 patient. No information was given about the prognosis after surgical excision. The patient in the current study

Figure 1. (A and B) Ulceronodular basal cell carcinoma in the right lower eyelid of a 14-year-old healthy boy. (C and D) The excisional eyelid defect was reconstructed with a semicircular flap. (E) There was no tumor recurrence or any other disease at 44 months after surgery, but the periocular scar was still visible.
had no predisposing factor for the development of basal cell carcinoma except fair skin color. After surgical excision, the tumor did not recur during a follow-up of 44 months.

The preferred treatment in children with basal cell carcinoma is surgical excision, with histologic control of surgical margins. In children, the elasticity of the skin in the periocular area that can be used for the reconstruction of the defect with a flap is limited, and the risk of obvious skin scarring is high. Therefore, the earlier the tumor is diagnosed, the smaller the defect and the more successful the flap repair will be.

REFERENCES

Figure 2. Basal cell carcinoma, nodular type. The islands of basaloïd tumor cells show peripheral palisading and mitotic and apoptotic figures. A cleft is also present at the interface with the dermis. (A) Hematoxylin–eosin, original magnification x100. (B) Hematoxylin–eosin, original magnification x200.