

Eyelid Basal Cell Carcinoma Arising on the Site of a Congenital Port Wine Hemangioma

Jianhua Yan*, Yongping Li

State Key Laboratory of Ophthalmology, Zhongshan Ophthalmic Center, Sun Yat-sen University, Guangzhou 510060, China

Abstract

Purpose: Only one previous case of eyelid basal cell carcinoma arising in a facial port wine stain without previous local radiotherapy has been reported. We now report a second case.

Methods: A 42-year-old female patient with eyelid basal cell carcinoma developing within a facial port wine stain underwent incisional biopsy, surgical excision and repair.

Results: The patient had a mass at the inner canthus of the left eye for two years. She had a left facial congenital port wine hemangioma involving the left eyelid, for which no topical treatment had been given. Clinical examination disclosed a 1.5×1.2 cm ulcerated skin mass with irregular borders in the medial canthal region involving the medial aspect of both upper and lower left eyelids. Incisional biopsy revealed basal cell carcinoma. She underwent surgical excision by Mohs' technique and subsequent reconstructive eyelid surgery. The wound healed well postoperatively. At 2 years of follow up the patient showed no recurrence.

Conclusion: Patients with congenital facial port wine stain may develop basal cell carcinoma, and should be regularly monitored. (*Eye Science* 2012; 27:44–46)

Keywords: basal cell carcinoma; skin cancer; port wine hemangioma; eyelid; surgery

Introduction

Basal cell carcinoma is the most common type of eyelid cancer¹. However, it rarely occurs on the site of a congenital port wine hemangioma. A few cases of basal cell carcinoma occurring in a port wine stain have been reported after receiving topical radiotherapy treatment for the skin lesion¹⁻⁷. To the present authors' knowledge, there has been only one reported

case of eyelid basal cell carcinoma arising in a facial port wine hemangioma involving eyelid without any previous local treatment⁸. The present paper described a Chinese female patient with eyelid basal cell carcinoma developing in a facial hemangioma.

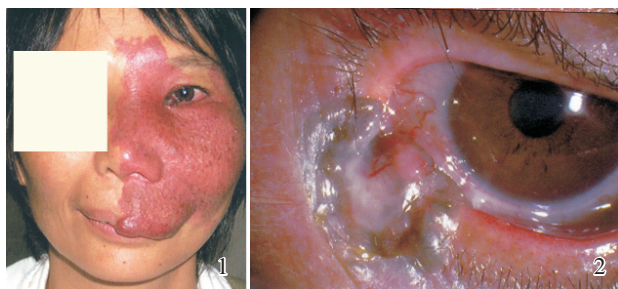
Case report

A 42-year-old Chinese woman presented with a mass on the site of inner canthus of the left eye including the inner edge of both upper and lower eyelid for two years. She had a congenital port wine hemangioma on her left face affecting the left eyelid. She had not received any local treatment in the area. Familial basal cell carcinoma and port wine hemangioma were absent. General physical examination was unremarkable. Examination of the skin revealed a large reddish purple port wine stain on the left side of the face in the region innervated mainly by the second division of the trigeminal nerve. Ophthalmic evaluation showed that the visual acuity was 20/200–2.25DS 20/20 in the right and 20/30–0.50DS 20/20 in the left. Intraocular pressure was 14 mmHg in the right and 18 mmHg in the left. A ulcerated, solid skin mass of 1.5×1.2 cm with irregular borders was found in the inner canthus region involving the inner part of both upper and lower left eyelids on the site of the port wine stain (Figures 1 and 2). Slit lamp and fundus examination of two eyes showed normal results. No enlarged lymph nodes were found. Incisional biopsy specimen revealed basal cell carcinoma (Figure 3).

The basal cell carcinoma was excised with Mohs micrographic surgery. The left lacrimal sac, upper and lower canaliculi, and lacrimal puncta were destroyed. No excessive bleeding was observed during eyelid surgery. Tumor-free margins were obtained. The second day, the patient had plastic eyelid surgery.

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* **Corresponding author:** Jianhua Yan, MD, PhD, Zhongshan Ophthalmic Center, Sun Yat-sen University, 54 Xielie Nan Road, Guangzhou 510060, China. Tel: 086-020-87331539; E-mail: Yan2011@tom.com



Figures 1 and 2 The patient had a 1.5×1.2 cm ulcerous, solid, skin mass with irregular borders in the inner canthus region involving the inner part of both upper and lower eyelids.

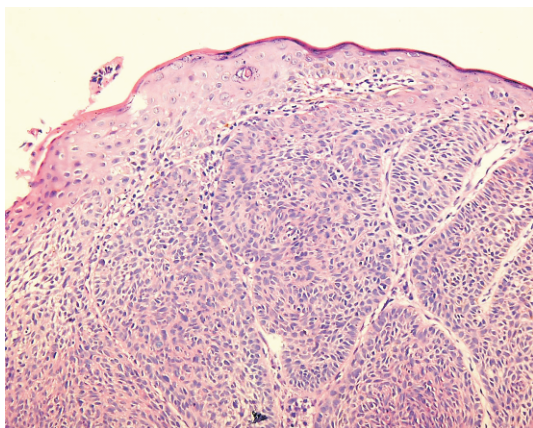


Figure 3 Pathological examination confirmed the diagnosis of basal cell carcinoma.

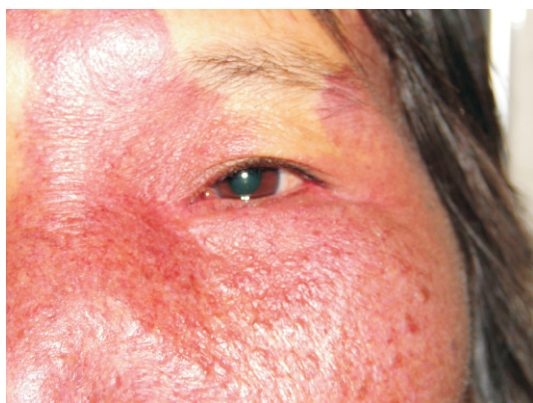


Figure 4 At 2 years of follow-up the patient remained free of recurrence. A facial wound was observed.

The upper and lower eyelid tarsi were attached to the posterior lacrimal crest with permanent 1–0 silk sutures. The skin defects were repaired by direct approximation. To maintain the medial canthal curvature, we sutured the skin to the deep tissue and placed a cotton ball conforming to the medial canthal contour at the time of the dressing. The lacrimal

drainage system was sacrificed. The wound healed well after surgery. No carcinoma recurrence was noted at 2 years of follow-up. A good clinical appearance was obtained (Figure 4).

Discussion

The authors reported a case of eyelid basal cell carcinoma arising and confined within a facial port wine hemangioma. Previous studies reported approximately 20 cases of basal cell carcinoma occurring in port wine stain^{1–11}. The majority of basal cell carcinoma developed in port wine stain have associated the tumor appearance with previous radiotherapy treatment^{1,5–7} and the localized radiotherapy was thought to be the most likely cause of basal cell carcinoma. However, few cases of basal cell carcinoma in port wine stain with no previous radiotherapy have been reported yet. In this study, we reported a female patient developing a typical basal cell carcinoma at the site of hemangioma at a relatively young age, having not received any local treatment of the facial port wine hemangioma.

Several investigators suggest that either the elevated temperature induced by the increased dermal vascular or an oncogenic factor produced by the ectatic vessels makes the overlying epidermis more susceptible to ultraviolet or ionizing radiation^{8,9}. Feinmesser et al. proposed that the blood flow irregularities in the lesion induce reactive changes in the vasculature of the superficial dermis, which may simulate the specific stroma of basal cell carcinoma and, possibly via elaboration of specific growth factors, induce or modulate tumor development¹⁰. However, the underlying mechanism of basal cell carcinoma in port wine stain remains to be determined.

Basal cell carcinoma occurring in port wine stain indicates that patients with congenital skin port wine stain tend to easily develop basal cell carcinoma. Whether the patient had a positive history of radiotherapy or not, the facial port wine hemangioma should prompt physicians to actively monitor the area for the development of basal cell carcinoma.

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Declaration

We hereby certify that the article entitled “Clinicopathological Analysis of 39 Patients with Corneal Tumor” has been published on page 148–153 of *Eye Science* 2011,26(3).

The author information should be corrected as:

Authors: Jianhua Yan, Haijiang Qiu, Yongping Li

Corresponding author: Jianhua Yan. E-mail: Yan2011@tom.com