Second Intention Healing after Shave Excision of Benign Tumors on the Lid Margin

Jong Mi Lee, M.D., Hwa Lee, M.D., Ph.D.¹, Tae Eun Lee, M.D.¹, Minsoo Park, M.D., Ph.D.², Sehyun Baek, M.D., Ph.D.¹

Department of Ophthalmology, Ulsan University Hospital, University of Ulsan College of Medicine, Ulsan, ¹Department of Ophthalmology, Korea University College of Medicine, ²Kong Eye Center, Seoul, Korea

Background: Defects caused by excision of benign lid margin tumors are conventionally repaired by reconstructive surgery. However, second intention healing is another option for managing wounds on the lid margin. Objective: To evaluate the effectiveness of second intention healing after a shave excision of benign tumors on the lid margin. Methods: Lid defects following a shave excision of the lid margin tumor were allowed to heal by second intention in 25 patients (26 lesions). The epithelialization period was calculated, and cosmetic and functional results and complications were evaluated by photographs and ophthalmological examination. Results: The locations of the defects were as follows: upper lid (n = 13), lower lid (n = 11), and both upper and lower lids (n = 1). The mean tumor size was 3.8 x 3.6 mm, and the mean epithelialization period by second intention was 6.1 ± 1.2 weeks. Pathological examinations revealed intradermal nevus (12 cases), compound nevus (five cases), squamous papilloma (five cases), and epidermal cyst (three cases). No patients had a corneal erosion, trichiasis, or hypertrophic scar, except loss of cilia in two cases. The functional and cosmetic results were satisfactory in all patients. Conclusion: Healing by second intention is a safe and effective alternative to surgical reconstruction after a shave excision of benign lid margin tumors.

INTRODUCTION

Defects caused by excision of benign tumors on the lid margin are conventionally repaired by reconstructive surgery. Small lid margin defects are usually repaired by direct closure, and larger defects are usually repaired by flaps or grafts, such as the Tenzel semicircular flap, modified Hughes flap, tarsomarginal graft with skin flap, or free tarsoconjunctival graft with skin-orbicularis muscle flap. However, we propose healing by second intention as another option for managing wounds on the lid margin. Healing of lid defects by second intention was first described in 1957 by Brown and Fryer. These investigators were the first to consider natural healing as an alternative to immediate surgical repair of an excised lower eyelid. Concerns related to this technique include unpredictability and suboptimal cosmetic and functional results associated with prolonged healing time as well as bleeding and infection. However, in other studies, factors such as the anatomical location of the defect, skin color, wound size, and wound depth have been shown to be helpful for predicting the results of healing by second intention. Furthermore, Lowry et al. described that many of the complications associated with periocular second intention healing are similar and comparable to those reported for primary reconstruction.

The objective of this study was to evaluate the effectiveness of second intention healing after shave excision.
of a benign tumor on the lid margin.

MATERIALS AND METHODS

Twenty-five patients with benign lid tumors on the lid margin underwent a shave excision without reconstruction between March 2004 and August 2007. These 25 patients represented 26 lesions (one patient had two lesions). Informed consent was obtained from all subjects. Each shave excision was performed under local anesthesia. The excision margin was marked with gentian violet 1 mm from the clinically visible edge of the tumor. The excision margin was then demarcated with a no. 15 blade, and the tumor was excised with Westcott scissors. Bleeding was controlled with cauterization (Fig. 1).

After tumor excision, the defect was allowed to heal by second intention. The defect was dressed with ointment containing neomycin sulfate, polymyxin B sulfate, and dexamethasone (Forus ophthalmic ointment®; Samil, Seoul, Korea) for proper wound care. Each patient was instructed to apply the ointment twice a day until the defect was fully covered with epithelium. When a corneal erosion was present, gentamicin solution (Ocugenta eye®; Samil, Seoul, Korea) was administered four times a day. The epithelization period, cosmetic and functional results, and complications were evaluated. Epithelization period was defined as the duration between the day of tumor excision and the day when the defect was completely covered with epithelium. Cosmetic and functional results were graded as good, fair, or poor by one ophthalmologist. Cosmetic results were evaluated by comparing preoperative and postoperative photographs. Functional results were evaluated by ophthalmologic examination of eyelid and lid movement. Complications were reported considering patient comments and the ophthalmologic examination results.

RESULTS

We studied 25 patients (11 men and 14 women) (Table 1). The mean age of the patients was 38.2 years (range, 23 ~ 86 years). The follow-up period ranged from 5 to 15 weeks (mean follow-up, 12.4 weeks). The upper lids were involved in 13 cases, the lower lids were involved in 11 cases, and both upper and lower lids were involved in one case. The mean tumor size was 3.8×3.6 mm (range 2×3 ~ 6×5 mm), and the mean epithelialization period by second intention was 6.1±1.2 weeks. Pathological examinations revealed the following diagnoses: intradermal nevus (12 cases), compound nevus (five cases), squamous papilloma (five cases), and epidermal cyst (three cases).