

Conjunctiva Limbal Autograft with Fibrin Glue for Capillary Hemangioma

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ABSTRACT

To present reversal of sensation of conjunctival limbal autograft. A 48-year-old female presented with red-colored mass in the left eye involving the temporal bulbar conjunctiva and limbus. It was vascular, elevated, compressible and immobile. Excisional biopsy, and conjunctiva limbal autografting with fibrin glue was performed, and histopathologic examination confirmed the diagnosis of capillary hemangioma of conjunctiva. Sensation of conjunctival autograft was measured at each month with Cochet-Bonnet esthesiometer for six months. Sensation of conjunctival autograft was none at first month and reached to normal level at fourth month. Conjunctiva limbal autograft with fibrin glue obtained good cosmesis for management of capillary hemangioma. Conjunctival autograft had no sensation at first month. Its sensation gradually increased and returned to normal level after 4 month.

Key words: Conjunctival autograft, cochet, bonnet esthesiometer, capillary hemangioma

Kapiller Hemanjiyom Nedeniyle Fibrin Yapıştırıcı ile Konjonktiva Limbal Otogreft

ÖZET

Konjonktival limbal otogreftte hissin geri dönüşünü sunmak. 48 yaşında kadın hasta sol göz temporal bulber konjonktivada kırmızı renkli kitle ile başvurdu. Kitle vasküler, kabarık, komprese edilebilir ve immobile idi. Eksisyonel biopsi ve fibrin yapıştırıcı kullanılarak konjonktival otogreft ameliyatı yapıldı ve histopatolojik inceleme konjonktivanın kapiller hemanjiomu olduğunu gösterdi. Konjonktival otogreftin hissi Cochet-Bonnet esthesiometer ile 6 ay boyunca ayda bir kez ölçüldü. Konjonktival otogreftin hissi ilk ay yoktu ve 4. ayda normale döndü. Fibrin yapıştırıcı kullanılarak yapılan konjonktiva limbal otogreft ameliyatı kapiller hemanjioma tedavisinde iyi bir kozmetik sonuç sağladı. Konjonktival otogreft ilk ayda hiç bir his yoktu. Hissi giderek arttı ve 4. ayda normal değerine ulaştı.

Anahtar kelimeler: Estezyometre, konjonktival otogreft, kapiller hemanjioma

INTRODUCTION

Hemangioma is a developmental malformation of blood vessels, rather than a true tumor, and is an example of a hamartoma (1). Management of this tumor includes local excision, systemic use of propranolol (1), and cryotherapy (2). We report a case of a conjunctival vascular tumor successfully managed with excisional biopsy and conjunctival autografting with fibrin glue.

CASE

A 48-year-old woman presented with eye redness and a mass in the left eye temporally since childhood. The patient had first noticed the growth of a red lesion in this area 1 year before the examination. It had progressed, causing secretion, foreign body sensation and pain despite topical corticosteroid, cyclosporine and antibiotic treatment. The patient was a healthy individual and not immunosuppressed. On examination, vascular,

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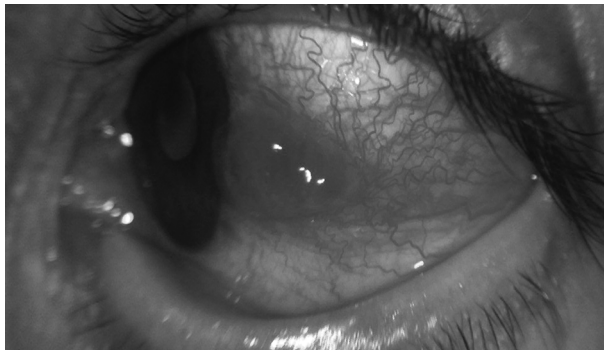


Figure 1. Conjunctival hemangioma in temporal bulbar conjunctiva with limbal involvement.

round, red-colored mass measuring 7x5x3 mm appeared to involve both limbus and temporal bulbar conjunctiva (Figure 1). It was soft, vascular, elevated, and immobile. There were no ciliary body and retinal lesions present.

Given the clinical appearance, and past ocular history, a presumptive diagnosis of conjunctival hemangioma was made. Excisional biopsy and conjunctiva limbal autograft with fibrin glue surgery was performed. The mass was excised under local anesthesia and sent for histopathologic examination. Conjunctiva limbal autograft was harvested from superior bulbar conjunctiva and sealed with fibrin glue (Tisseel VH, Baxter AG) to bare sclera. Histopathology confirmed the diagnosis of capillary hemangioma of bulbar conjunctiva (Figure 2). The postoperative period was uneventful. Superior conjunctival defect disappeared in one month. Conjunctival autograft healed completely within first month and ob-

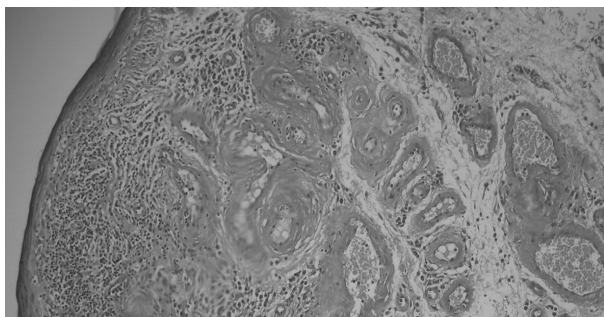


Figure 2. Photomicrograph of histopathological section, showing thick-walled lobular capillaries filled with blood, separated with scant connective tissue stroma. (PAS x 200)

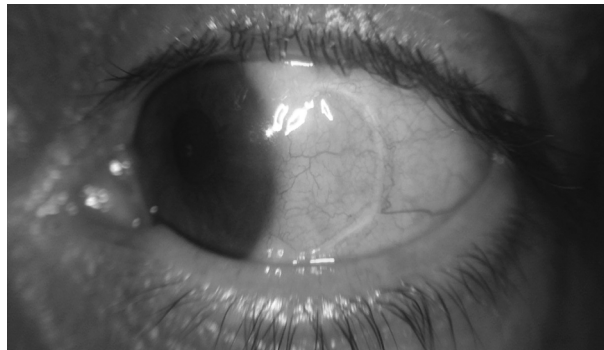


Figure 3. Conjunctival autograft obtained good cosmesis at 1 year.

tained good cosmesis during the first year (Figure 3). The tumor did not recur in the first year.

Conjunctival sensation was measured approximately 3 mm away from limbus in superior, nasal, inferior quadrants and at center of conjunctival autograft with Cochet-Bonnet esthesiometer (Luneau, Chartres, France) at 1 month and every month for 6 months. This device contains a nylon filament with a 0.12 mm diameter, and its length could be adjusted from 0 to 62 mm. The pressure applied to the cornea thus ranged from 11 to 200 mg/0.0113 mm (3). Each area was tested three times with each filament length, which was sequentially reduced in 5-mm steps starting from 60 mm. Two positive responses in three attempts at each filament length were regarded as a positive result. The longest filament length resulting in a positive response was considered sensation threshold. Preoperative sensitivity of nasal, inferior and superior conjunctival area was 20mm, 25 mm, and 25 mm respectively. Postoperatively, sensitivity of nasal and inferior conjunctiva did not change. Sensitivity of superior conjunctiva was 10 mm in 1 month, 25 mm in 2 months, and 25 mm for the next 4 months. Sensitivity of conjunctival autograft was not measurable in 1 and 2 months, and 10 mm in 3 months, 25 mm in 4 months, 25mm for the next 2 months.

DISCUSSION

Hemangiomas of bulbar conjunctiva are relatively rare tumors (4). Frequently, they remain asymptomatic for a long time and exhibit a benign clinical behavior. Management of this tumor includes local excision (1) and cryotherapy (2). Case reports of amniotic mem-

brane (5-7) and conjunctival autograft (8) transplantation for conjunctival tumor was also reported. However, use of fibrin glue for this purpose was not reported before. Since both the limbus and temporal bulbar conjunctiva were involved in our case, we decided to use conjunctiva limbal autograft with fibrin glue.

Ever since the introduction of fibrin glue in ophthalmology, its major use has been in pterygium surgery (9). Fibrin glue is also used for conjunctival closure in strabismus, vitrectomy, and trabeculectomy surgeries, treating leaking blebs following glaucoma surgery, treating corneal perforations, performing amniotic membrane transplantation, and sutureless lamellar keratoplasty (10). We are unaware of prior reports of conjunctival hemangioma managed with conjunctival autograft with fibrin glue. This surgery is easy to perform under local anesthesia and provides comfortable postoperative period and good cosmesis. In our patient the tumor did not recur in the first year and the patient was satisfied with the cosmetic result. Reversal of corneal sensation after LASIK, PRK, keratoplasty, and epikeratophakia were studied extensively (11). However, return of sensation of conjunctival autograft was not investigated before. In our case, we found that sensation of superior bulbar conjunctiva returned to normal level at 2 month, and sensation of conjunctival autograft returned to normal level at 4 month. Further basic and clinical research studies are needed to increase our knowledge on reinnervation of conjunctival autograft.

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