CASE REPORT

SURGICAL THERAPY OF UNUSUAL CONGENITAL CORNEAL FIBROMA

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Surgical removal of left congenital limbo corneal mass by peripheral lamellar keratoplasty (LKP) using preserved remaining corneasclera graft from other recipient was effective for the treatment of limbocorneal fibroma. A case of 17 year old Chinese girl with a corneal mass since her birth on 4:00 'O clock position showed a size of about 2–3 mm. The patient was treated with total resection of the mass with part of Corneascleral Limbus and partial cornea with adjacent tissue and was diagnosed as fibroma after histopathology examination. After follow-up for 6 month, the vision and eye ball movements were normal and the graft was in normal position.

Keywords: Congenital, Lamellar Keratoplasty, Fibroma, Refraction, Cosmetic

INTRODUCTION

Fibromas are reactive proliferation of sub-mucosal fibrous tissues covered by benign epithelium. Fibroma is a rare conjunctival tumour that appears as a white stromal mass, either unifocal or multifocal.[1] Surgical resection is advised.

CASE REPORT

A 17-year-old Chinese girl wearing glasses was admitted at the School of Medicine, Xi'an Jiao Tong University No. 1 affiliated Hospital in China with obvious congenital tumourous formation with a small lump at the left limbal cornea at 4:00 O clock position showed a mass of about 2–3 mm, with clear border. The surface was smooth, no swelling or discharge was noted (Figure-1).

She was the second born of healthy parents, without any evidence of genetic liability to ophthalmologic diseases. Her mother stated that the pregnancy had been normal and she was not ill during pregnancy; she took no medication and she was not exposed to x-rays. The child was born on time in Xi'an, the delivery was spontaneous and uneventful. At birth the body weight and length of the baby were 4.2 kg and 51 cm respectively. Ophthalmoscope and slit lamp findings of the left eye were normal with vision right eye=0.4 left eye=0.3 without glasses, and intraocular pressure was 14 mm Hg. Right eye was normal. The left eye findings were also normal except for the cornealimbal region at 4 O clock where a dome like solid mass was present adhering firmly to the cornea shows a mass of about 2–3 mm, with clear border, so it was possible for close eye and movements of eye ball was normal in all direction, so it was clear that the mass was not reach to left lateral rectus muscle. The anterior and posterior segment of both eyes appeared normal. This echo graphic finding suggested of the first grade of severity Fibroma. After getting written consent from patients and patients family and making clear about Intra-operative and postoperative possible, complications. Operation method and procedure, the Left eye corneal mass resection + lamellar keratoplasty by using surgical microscope. By applying septic method, Eyelid-open with device, conjunctiva sac washed with gentamicin 40,000 units of diluted 5 ml.

After injection of lidocaine under the microscope around the corner edge of cyst, the incision was made with sharp surgical blade from 4 to 6 pm and cut the bulbar conjunctiva (Figure-2). Complete separation of mass from adjacent tissues was done by using trephine mouth drill at ½ depth of cornea and planting bed was prepared (Figure–3, 4). After complete removing mass with all tissues send it for histopathological analysis. The mass was subjected to histopathologic assessment, which revealed a well-circumscribed mass composed of typical spindled fibroblasts closely packed with abundant collagenous stroma consistent with fibroma.

Cornealscleral graft preparation from preserved cornea, which was remained after cornea grafting on other patients. Angular round organized by the 6mm in diameter trephine grafts were prepared then fixed and interrupted suture by monofilament 10–0 suture was applied in the planting bed (Figure-5). After completing the lamellar keratoplasty Gentamicin 20,000 IU + injection dexamethasone 2.5 mg was applied, pressure bandage applied on operated eye.

No bleeding from the surrounding tissue occurred, the operation ended with no hyphaema or any other complication. At the end of the operation the eyeball had normal shape and size.

The postoperative therapy included instillation of dexamethason solution, and chloramphenicol solution once a day, before bedtime. The Postoperative course was uneventful, and the suture was removed after two weeks. Graft transparency was maintained for four postoperative weeks and there was no sign of cornea opacification and vascularisation.

Postoperative complications were not observed in this patient, especially there were no signs of tear insufficiency, astigmatism, Double vision, or dry eye.

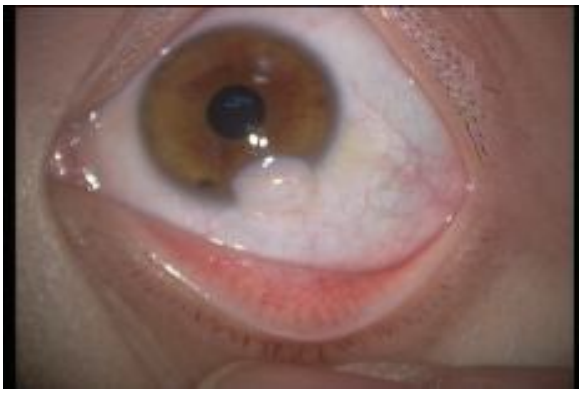

Figure-1: Pre-Operative Corneo limbal Dermoid

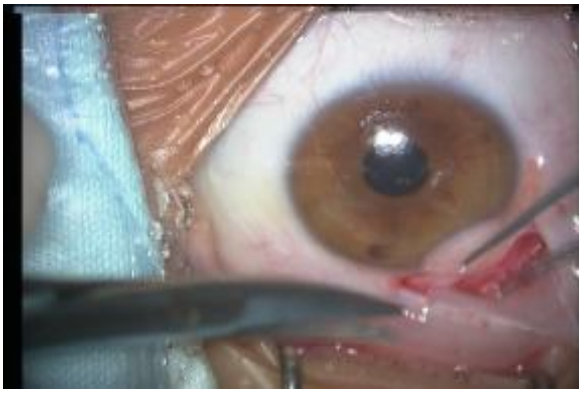

Figure-2: Removal of Corneo Limbal Dermoid

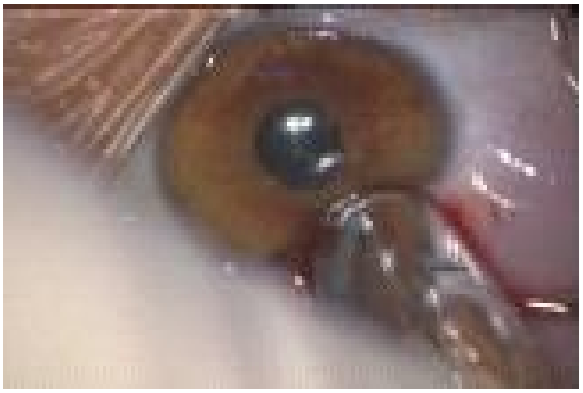

Figure-3: Trephining of the affected limbal cornea

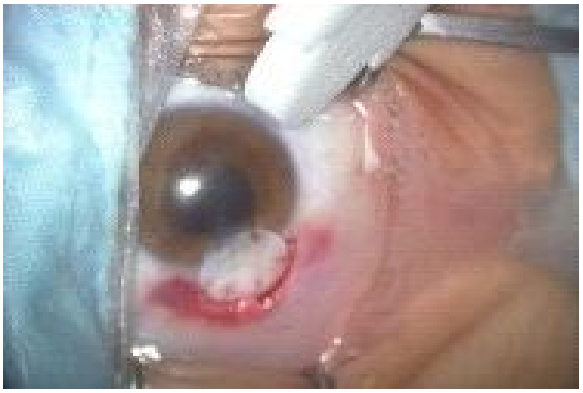

Figure-4: Grafting Bed Ready for Graft

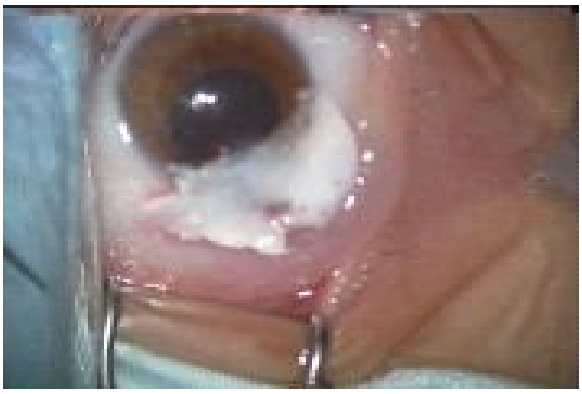

Figure-5: Corneo-Scleral Allograft Fixation on the Planting Bed

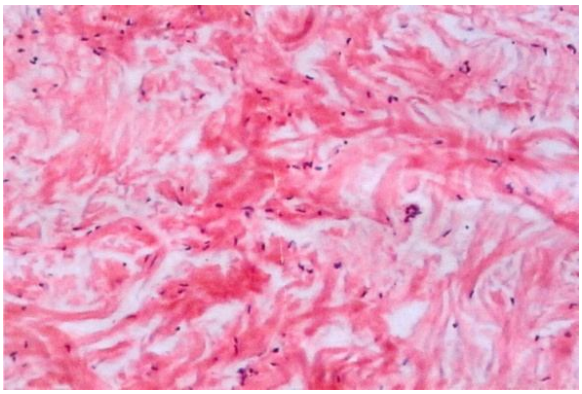

Figure-6: Histopathologic finding shows spindled fibroblasts closely packed with abundant collagenous stroma (haematoxylin and eosin stain)

DISCUSSION

Fibroma is a benign neoplasm composed of fibrous connective tissue.[2] At least 3 distinct forms of fibroma, characterised by dense, paucicellular collagen and benign behaviour, have been described as being present within the skin and subcutaneous tissue.[3] Fibroma was the most prevalent lesion in the benign neoplasm group, followed by squamous papilloma, nevus, and haemangioma. Most cases reported in the literature are described along with fibrous tumours of cornea. Musical[4] attributed them to undifferentiated hyperplasia of opaque corneal and scleral tissue of developmental origin. Smith[5] ascribed it to inflammation, injury or surgery preceding such overgrowths of cornea. In this case, the patient's only symptom was progressive cosmetic problem, irritation in eye, and she had no other vision complaints. The diameter of fibroma may vary from 1 mm to 2 cm. The surface may be hyperkeratotic or ulcerated, owing to repeated trauma.

Differential diagnosis of this tumour includes keloid and Fibromatosis. Keloid of the cornea is also a rare condition. It has always been included among the fibrous tumour of the cornea, which from time to time have been designated as fibroma, keloid, scar and

hypertrophic cicatrix.[5] Several studies have dealt with conjunctival tumours as a whole in Medline ophthalmic literature but only limited information is available regarding neoplasms arising from the limbus.[6]

Surgical treatment is always indicated, and it is needed to remove the effected part of the conjunctiva, limbus and sclera. First the make sure that all affected tissues have been removed then make the bed until the depth of stroma of cornea for plantation of graft. In our case, the tumour might arise from the epithelium of the limbo-corneal portion. This tumour caused astigmatism, irritation, and cosmetic problems, so surgical resection were performed. After getting lamellar keratoplasty, patients were not complaining of vision problem with no recurrence of the tumour 5 month postoperatively. Conclusively, fibroma may arise in the limbal region of cornea and should be regarded as a possible cause of the mass of the limbo cornea.

CONCLUSIONS

Lamellar Keratoplasty (LKP) using preserved effective for the treatment of all kind of corneal benign and malignant lesion.

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