CASE REPORT

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Oral Mucosa Graft in Palpebral Conjunctiva Malignant Melanoma

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ABSTRACT

Introduction: Conjunctiva malignant melanoma is a rare but potentially fatal ocular surface tumor, easy to bleed because of increased vascularization. Mucous membrane transplants have been used for a century in the reconstruction posterior lamella conjunctiva palpebra tissue and give good result combine with amnion membrane transplantation.

Case Description: A 65 years old male complained of ocular discomfort and a black pigmented mass over conjunctiva of right eye and easy to bleeding. The patient noticed the black pigmented mass since 2 months. The mass was initially small and gradually increase in size. The histopathology examination show melanoma maligna palpebral conjunctiva.Wide surgical excision with *cryotherapy* and oral mucosa and amniotic membrane graft done to this patient.

Discussion: Oral mucosal and amniotic membrane replace posterior lamella inferior palpebra grafting grow well and give good cosmetic in post wide excision melanoma maligna palpebral conjunctiva patient. A broad variety of techniques, materials and grafts have been used to replace ocular surface tissue. These combinations technic are suitable procedure for the replacement of the posterior lamella conjunctiva palpebral inferior in the treatment of conjunctival malignant melanoma.

Keywords: oral mucosa graft, conjunctiva melanoma, malignant

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INTRODUCTION

Conjunctival melanoma (CM) is malignant tumour of melanocyte cells that is very rare but can potentially cause death.[1,2] In United States, the incidence of conjunctival melanoma is only around 2% of all cancer of the eye. Predilection to men and women is said to be the same.[3,4] CM is usually unilateral, generally found in middle age or elderly adults. And occurs more in white races.

Clinical manifestations of CM are varied, it can be a pigmented lesion of conjunctiva with melanocyte, but it can also be a non-melanocyte type. It is easy to bleed due to its increased vascularity. Lesions appear thickened and have fixation to underneath tissues. Diagnosis of CM is based on patient clinical and histopatological examination.[5]

CM management is by surgery, with widespread excision of tumors followed by additional cryotherapy, chemotherapy, radiotherapy, or eyeball enucleation of Orbita.[6,7] The defects of the eyelids after excision are fixed with various techniques. Other than primary closure of defects, flap can be used. Selection of techniques depends on size of the defect, condition of healthy tissues around tumour, vision of opposite eye, age, health status of the patient, as well as operator experiences.[8,9]

Variations in techniques to replace eye tissues are considered based on healing of scar tissue of conjunctiva. The scar tissue formed may cause diplopia or other disorders.[8,10] Mucosa of lips have been used in cases of reconstruction of various organ defects.[11] The advantages are its availability, cheap, easy to graft, have characteristics of good tissue, minimal contracture and its ability to adapt to humid environment.[12] The combination of using dried amnion membranes and lip mucosa has been developed in recent years. It has been recently applied to the reconstruction of the corneal surface, but its uses for the reconstruction of the conjunctival tissue is a possibility too.[12]

Author would like to present a case of CM due to its rarity. In addition, the treatment of this case uses graft from mucosa of the lips and dried amnion as a substitute for posterior lateral inferior lamela.

CASE REPORT

Male 65 years old, came to RSUP Sanglah on with a lump on his right eye since 2 months ago. The

lumps were felt to be enlarged since 1 month ago. History of disease in the family is denied. General condition of patient is good with vital sign within the normal limit.

There is no enlargement of preauricular and submandibular lymph glands in patients. For ophthalmological examination we found right eye vision to be 6/7.5. At Palpebra Inferior we found a mass of 20x10x5mm, oval shaped, the boundary is not firm, lobulated, blackish colored, easy to bleed, fragile consistency, attached to its base, difficult to be moved, with the surrounding tissues appear to be oedematous. Patient have clear cornea, normal anterior chamber, round regular pupil, normal pupillary reflex, clear lens, and clear vitreous. Funduscopic examination shows round and firm N II with CDR 0.3, A/V = 2/3, good retina, positive macular reflecs. Right eyeball movement is obstructed towards the lateral, medial and inferior directions. While patients left eye examination is all within normal limit in all examination. Position of eyeball is symmetrical between right eye and left eye.

Figure 1. Melanoma Maligna of Inferior Conjunctiva Palpebra (Division of ROO, Sanglah Ophthalmology Department 2014)

Figure 2. Surgical technique
A. Identification of tumor mass, **B,** Pehakain injection, **C., D., E.** Broad excision of tumors, **F.** Mucosa of the lips, **G.** Suturing the mucosa of the lips, **H.** Cryotherapy, **I.** Dried amnion membrane, **J.** Sewing dried amnion membrane, **K., L.** Post Operation,
(Division of ROO Sanglah Ophthalmology Department , 2014)

Histopatological examination from right eyelid biopsy concluded that the tumour to be Melanoma Maligna. While results of Multiple Slice Computerized Tomography (MSCT Scan) obtained impression of a solid mass in palpebra inferior oculi dextra with suspicion of malignancy. Complete blood test result are within normal limit. Internal Medicine consultation stated no abnormalities or pathological changes in association with the tumour. Patient treatment would be widespread excision of the tumor followed by implantation of graft in general anesthesia.

First, the tumour tissue is freed from the palpebra inferior conjunctiva. Excision used with margin of 5 cm from healthy tissues. Mucosa of the lips is taken from the inner mucous of the lower lip. A graft is made with 30x10mm size which is equal to 70% of the area of the tissue that is excised before. Stitches with Vicryl 8.0 interuptus technique were used. After that, cryotherapy is performed on the conjunctival area of the palpebra and conjunctiva bulbi. Amnion is then stitched to bulbi conjunctiva with a 8.0 Vicryl interruptus technique. Lastly, canthus lateral of superior palpebrae is stitched with Prolene 6

Post operation examination on the next day shows edema palpebra on the right eye, with stitches and shows no sign of bleeding. Patients are allowed to go home with Betadine, Amoxan tablets 3x500mg, mefinal tablets 3x500mg and gentamicin eye ointment applied 3x on the right eye. Post operations 1 week and 3 weeks after operation examination also appear well. Patients administered with methylprednisolone pills 3x12mg and Floxa eye drops 6x1.

Seven months postoperative examination on patient right eye are visual acuity of 6/6 with anterior segments of the eyeball within normal limits. Visible position of the eye is symmetrical, movement of the eyeball is unrestricted in all directions, and no lagophthalmos when the patient close his eye. Palpebra looks healthy and pink colored. There appears to be minimal simblefaron in the temporal part of the eyelid. Segment posterior eyeball also within normal limit. Patients are given Lubricen

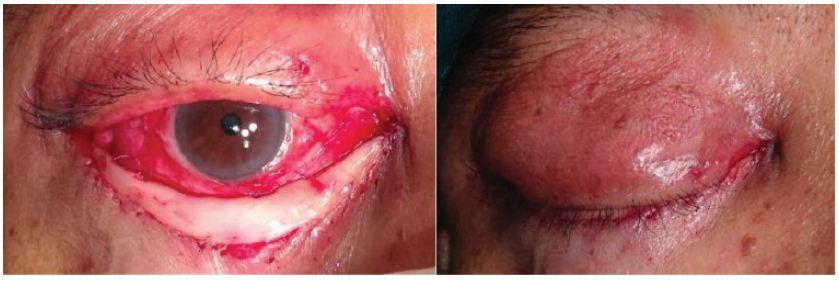

Figure 3. Post operation day I
(Division of ROO Sanglah Ophthalmology Department , 2014)

Figure 4. Seven months post-operative excision (Division of ROO Sanglah Ophthalmology Department , 2014)

drops 4x1 eye drops and eye ointment of oculenta 3x1 for his right eye. He is suggested to be examined again only if there is a complaint.[9,10,11]

DISCUSSION

The growth of melanoma malignant in this case is likely to be derived from conjunctival nevus. The patient said that there were small moles in his right lower eyelid area before, which then grew bigger as they are today. The continuous exposure to sunlight is thought to be the risk factor for this tumour growth as his work exposed him to a lot of sunlight.[11,12]

Histopatological overview of tumor biopsy indicates presence of displastic melanocyte cells that invade from the epithelium into substantia propria. The presence of epithelial cells with pleomorphic nuclei, prominent, atypical mitosis and numerous cytoplasm were all corresponds to melanoma maligna.[13,14,15]

Management of conjunctival melanoma malignant depends on various factors such as size, location and spread of the tumour. Extensive surgical excision of tumours with cryotherapy in the area surrounding the tumor is selected in this case.[16,17] Cryotherapy is a method of therapy that is aimed to kill tumor cells with a tool that secretes very cold liquid nitrogen (around -200 ^{0}C). This is performed after surgical excision, at the edges of the conjunctival incision. Cryotherapy is sensitive in the destruction of atypical melanocyte cells. The advantage of this technique is ability to eliminate subclinical microscopic tumour cells and also prevent recurrence of malignant tumours.[18,19]

Membrane grafts used in this case is harvested from inner part of mucosa lips. The advantage is its considerable amount of availability so that it is possible to do repeated procedures later on. And because the epithelium of lip mucosa is in the form of non keratinized stratified squamous cell, it is very well received by the conjunctival area.[19,20]

Meanwhile, the amnion membrane physiological functions are to stimulate the healing of epithelium and stroma by suppressing inflammatory processes, fibrosis and vascularity even if the mechanism is not clearly known.[21,22] The basal membrane of the amnion membrane consists of laminin, fibronectin and collagen type IV and VII, which are similar to the basal membrane of the conjunctiva. This will results in adhesion stimulation, migration and differentiation of epithelial cells and preventing apoptosis of epithelial cells as well. Another advantage of amnion membrane is its minimum rejection reaction properties.[23,24]

In our case, the patient appears to have no new formation of lesions or tumor spread after 7 months of follow up. This case demonstrates a successful usage of lips mucosa in conjunction with dried amnion membrane in a patient post-excised due to melanoma malignant of inferior conjunctival palpebra to his right eye. Surgery is done early before the spreading of the tumour, so as to save the patient from the conjunctival melanoma malignancy.[24,25]

CONCLUSION

CM is a relatively rare malignancy. Nevertheless, all pigmented lesions of the eye should be considered as a melanoma malignant. Early diagnosis can decrease morbidity and mortality of conjunctival melanoma malignant.

The usage of lips mucosa with dried amnion membrane as substitute tissues for post excised tissues appear to be successful in our case. Reconstruction gives good cosmetic results and no complaint from patient.

REFERENCE

1. Alqahtani J.M., 2013. *Conjunctival Melanosis*: review of the literature. Vol. 35(4). Bahrain Medical Bulletin. p.1-7.
2. Albreiki DH., Gilberg SM., Farmer JP., 2012. *Conjunctival malignant melanoma A rare variant and review of important diagnostic and therapeutic consideration* in: Ophthalmic Pathology Update. Saudi Journal of Ophthalmology.p 151-6.
3. American Academy of Ophthalmology Staff, 2012-2013. *Neoplasia* in : Fundamentals and Principles of Ophthalmology. Basic and Clinical Science Course. Section 4. San Fransisco. p. 61-75.

4. Brownstein S., 2004. *Malignant Melanoma of the Conjunctiva.* Vol. 11(5). Cancer Control, p.310-16.
5. Choi Jungbum MD., Kim Min MD., Park Hae Song., Lee Sang Yeul MD. 2005. *Clinical Follow-up of Conjunctival Malignant Melanoma.*Vol. 19, No.2. Korean Journal Ophthalmology. p.91-5.
6. Cohen V., Papastefanou VP., Tsimpida M., 2011. *Conjunctival Melanocytic Lesions.* Last update: April 22, 2015. Available : http://www.optometry.co.uk
7. Damato B & Coupland SE., 2009. *Management of Conjunctival Melanoma.* Vol. 9(9). Expert Reviews.p. 1227-39.
8. Ekawati NP., 2014. Instalasi Patologi Anatomi RSUP Sanglah Denpasar.
9. Finger PT. & Yousef YA., 2012. *Conjunctival Tumors.* Vol. 119. Ophthalmology. p. 233-40.
10. Furdova A., Pesko K, Strmen P., Kobzova M., 2007. *Conjunctival Nevus and Melanoma.* Vol.108(7). Bratisl Lel Listy. P. 287-91.
11. Jay V. & Font RL., 1998. *Conjunctival Amelanotic Maligna Melanoma arising in Primary Acquired Melanosis sine pigmento.* Vol. 105(1). Ophthalmology. p. 191-4.
12. Karcioglu Zeynel A., 2004. *Conjunctival Tumors* in: Orbital Tumors. New York. Springer, p.245-56.
13. Kanski JJ., 2007. *Conjunctiva* in : Clinical Ophthalmology. A Systematic Approach. Sixth edition. Philadelphia. Elsevier, p. 215-8.
14. Kim EC., Kim MS., Kang YK., 2012. *Excision with Corneoscleral Lamellar Keratoplasty and Amniotic Membrane Transplantation of a Corneal Displaced Recurrent Conjunctival Melanoma.* Vol. 26(5). Korean Journal Ophthalmology. p. 383-7.
15. Lim Li-Anne., Madigan MC., Conway RM., 2013. *Conjunctival Melanoma* : a review of conceptual and treatment advances. Vol. 7. Clinical ophthalmology. p. 521-31.
16. Mai Christian.,Bertelmann Eckart. 2013. *Oral Mucosal Grafts: Old Technique in New Light*. Ophthalmic Research Mini Review.p. 91-8.
17. Mamota N., Salam I., 2014. *Conjunctival Melanoma in situArising Over Conjunctival Nevus-* a case report. Vol. 13(2). IOSR journal. p. 1-4.
18. Roa Frances Marie DC and Agahan Archimedes Lee D.2013. *A Case of a Corneal Melanoma with Superficial Stromal Involvement.*Vol. 4.Journal Clinical Experimental Ophthalmology.p.1-2.
19. Roque MR., 2013. *Conjunctival Melanoma.* Last uptade: October 9, 2013. Available: http://emedicine.medscape.com/article/1191840-overview
20. Seregard Stefan, 1998. *Conjunctival Melanoma.* Vol. 42(4). Survey of Ophthalmology. p. 321-50.
21. Shields Carol L., Shields Jerry A., Gunduz K., Cater J., Mercado GV., Gross N., Lally B., 2000. *Conjunctival Melanoma.* Vol. 118. Arch Ophthalmology. p. 1497-507.
22. Shields Carol L., Shields Jerry A., 2004. *Tumors of the Conjunctiva and Cornea*. Vol. 49(1). Survey of Ophthalmology. p. 3-24.
23. Shields Jerry A., Shields Carol L., 2008. *Conjunctival Melanocytic Lesions in : Eyelid, Conjunctival, and Orbital Tumors.* An Atlas and Textbook. Second edition. United States of America. Lippincott William&Wilkins. p. 307-48.
24. Sivkova N., Chokoeva AA., Dobrev H., Staribratova D., Belovezhdov V., Tchernev G., Wollina U., 2014. *Malignant Melanoma of The Conjunctiva-Successful Surgical Excision of The Primary Tumor and Reconstruction by Conjunctival Auto Transplantation from The Contralateral Eye.*Vol. 27, no.4,0-0. International Journal of Immunopathology and Pharmacology. p 629-34.
25. Yang Yesa., Lee Seung-Hyun., Lee Jun-Sung., Park Yeoung-Geol and Yoon Kyung-Chul. 2010. *Correction of Postoperative Lower Eyelid Retraction by Buccal Mucosal Graft Combined with Retroauricular Skin Graft*. Vol. 46, No. 3.Chonnam Medical Journal. p 199-201.