

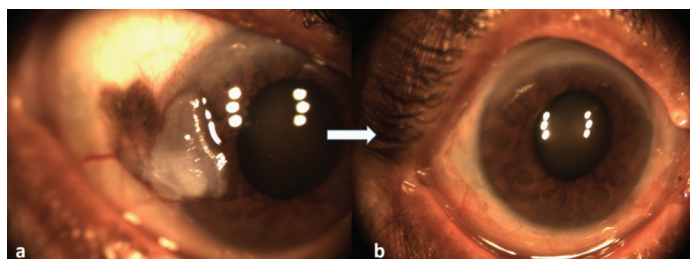
Topical Mitomycin-C Chemotherapy in Ocular Surface Squamous Neoplasia

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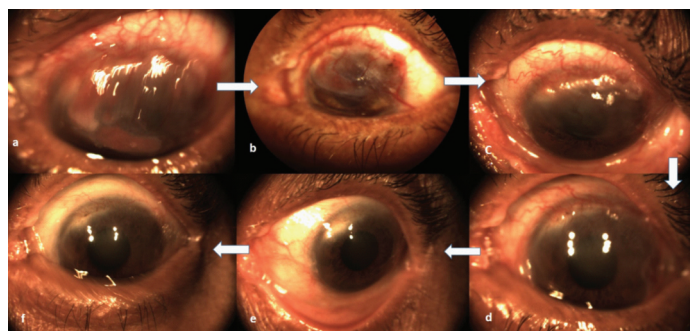
A 60-year-old male patient presented with slowly growing mass lesion in both eyes. Best Corrected Visual Acuity (BCVA) was 6/60, N18 in Right eye Oculus Dexter (OD) and finger counting 1 meter, <N36 in left eye Oculus Sinister (OS). Examination revealed localized gelatinous mass lesion at temporal limbus in OD [Table/Fig-1a] and diffuse mass lesion involving more than 9 clock hours of cornea in OS [Table/Fig-2a]. Biopsy of the lesion was done and diagnosis of localized Ocular Surface Squamous Neoplasia (OSSN) in OD and diffuse OSSN in OS was made.

Treatment

Localized OSSN in right eye was managed by surgical excision: no touch wide excision + lamellar keratectomy + partial sclerectomy + cryotherapy on conjunctival side under local anesthesia. it was followed by 2 cycles of topical chemotherapy with mitomycin-C (MMC) 0.04%.



[Table/Fig-1]: Right Eye.
(a) Pre-treatment: a localized gelatinous OSSN involving temporal Limbus
(b) At 1 year post-treatment: lesion free eye with no recurrence



[Table/Fig-2]: Left Eye.
(a) Diffuse OSSN involving more than 9 clock hours of limbus, (b) Post 1st cycle topical chemotherapy with MMC, (c) After 2nd cycle, (d) After 3rd cycle, (e) After 4 cycle, (f) 1 year follow-up: lesion free eye with no recurrence

Diffuse OSSN in left eye was treated by monotherapy with topical MMC (0.04%) QID. Four cycles of topical MMC were given [Table/Fig-2b-e], each cycle consisting of 1 week on and 1 week off treatment. Follow-up at 1 year revealed no recurrences in OD [Table/Fig-1b]. OS was also lesion free without any recurrence [Table/Fig-2f].

Informed consent was obtained from the patient and Institution Review Board clearance was taken. The treatment was in accordance with the tenants of the Declaration of Helsinki.

DISCUSSION

OSSN is an umbrella term used for all pre-malignant and malignant epithelial lesions of the conjunctiva and cornea. OSSN is most commonly found in the interpalpebral area at or near limbus. They can be localized or diffuse with varying appearances: gelatinous, leukoplakic, and nodular.

OSSN needs to be differentiated from benign conditions like pterygium, pannus and dyskeratosis or malignant pathologies like amelanotic conjunctival melanoma.

Localized well defined tumours are treated by surgical excision with no touch technique with lamellar keratectomy with partial sclerectomy (if sclera is involved) with cryotherapy on conjunctival side [1]. Diffuse lesions are difficult to treat and have higher chances of recurrence [2].

MMC (0.04%) in form of topical chemotherapy is used as an adjuvant after surgical excision or as monotherapy for treatment of diffuse lesions. A 2 to 4 cycles of postoperative MMC has been shown to decrease the rate of recurrences [3,4].

REFERENCES

- [1] Sarici AM, Arvas S, Pazarli H. Graefes. Combined Excision, Cryotherapy, and Intraoperative Mitomycin C (EXCRIM) for localized intraepithelial and squamous cell carcinoma of the conjunctiva. *Arch Clin Exp Ophthalmol.* 2013;251(9):2201-04
- [2] Rudkin AK, Dempster L, Muecke JS. Management of diffuse ocular surface squamous neoplasia: efficacy and complications of topical chemotherapy. *Clin. Experiment Ophthalmol.* 2015;43(1):20-25.
- [3] Gupta A, Muecke J. Treatment of ocular surface squamous neoplasia with Mitomycin- C. *Br. J Ophthalmol.* 2010;94(5):555-58.
- [4] Besley J, Pappalardo J, Lee GA, et al. Risk factors for ocular surface squamous neoplasia recurrence after treatment with topical mitomycin C and interferon alpha-2b. *Am J Ophthalmol.* 2014;157(2):287-93.

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FINANCIAL OR OTHER COMPETING INTERESTS: None.

Date of Submission: Jun 11, 2016
Date of Peer Review: Jul 02, 2016
Date of Acceptance: Jul 04, 2016
Date of Publishing: Sep 01, 2016