

## COMPARATIVE ANALYSIS OF SURGICAL TECHNIQUE IN LARGE LOWER LID TUMOUR EXCISION - LAISSEZ FAIRE VS CONVENTIONAL LID RECONSTRUCTION

Gyan Bhaskar<sup>1</sup>, Anita Ambastha<sup>1</sup>, Bibhuti P. Sinha<sup>1</sup>, Nilesh Mohan<sup>1</sup> and Deepak Mishra<sup>2\*</sup>

<sup>1</sup>Regional Institute of Ophthalmology, IGIMS, Patna, Bihar.

<sup>2</sup>Regional Institute of Ophthalmology, IMS, BHU, Varanasi, UP.

Article Received on  
21 Nov. 2018,  
Revised on 11 Dec. 2018,  
Accepted on 01 January 2019  
DOI: 10.20959/wjpr20191-14003

### \*Corresponding Author

Dr. Deepak Mishra

Regional Institute of  
Ophthalmology, IMS, BHU,  
Varanasi, UP.

### ABSTRACT

**Aim:** A Retrospective analysis was done to compare the functional and cosmetic outcome of patients treated by laissez faire technique with conventional excision and lid reconstruction technique like Tenzel rotation flap for Lid defects where primary closure would not have been possible. **Methods:** Skin defects following excision of large lid tumour in 21 patients (Group A) was allowed to heal by granulation. This was compared with 23 patients (Group B) in whom excision of lid tumour was done with advancements flap like Tenzel rotational flap, to cover the lid defects. All patients had tumour size more than 10-14 mm

involving lower lid margin. The size of the initial defects, time taken to heal, discomfort during healing, functional and cosmetic results were studied and follow up was done up to 6 months. **Results:** A good functional and cosmetic results were obtained in 18 out of 21 patients with laissez faire (Group A). In (Group B) 2 patient had poor cosmesis with narrow palpebral aperture and rest functional and cosmetic outcome was satisfactory. **Conclusion:** Healing by secondary intention of large defects following excision of lower lid tumour is an effective alternative to excision with conventional lid reconstruction.

**KEYWORDS:** Laissez faire, secondary, granulation, palpebral aperture.

### INTRODUCTION

Healing by secondary intention has been a time-honoured method of wound management in plastic surgery but its application in lid reconstruction has been less popular. The fear of sub-optimal cosmetic and functional outcome in lesions involving the lid has dampened the

enthusiasm for this technique. The objective of this study was to examine the role of secondary intention in the healing following excision of lower lid tumours in cases that would have normally required extensive flaps or skin grafts to close the defect by comparing Laissez fair technique with Tenzel rotational graft for lower lid masses. Literature search didn't show similar study.

**AIM:** To compare the functional and cosmetic outcome of patients treated by laissez faire technique versus Tenzel rotational graft technique for lower Lid defects.

## **MATERIAL AND METHODS**

This was a retrospective Comparative analysis of 44 patients who had undergone Lower lid surgery for lid mass by Laissez fair(n=21) and Tenzelsemicircular rotational flap(n= 23). Study was done at RIO IGIMS Patna from Jan. 2015 to Jan. 2017. Follow up was done on day 7 and at the end of 2 week, 1month and 6 month respectively. Comparison of functional, cosmetic outcome and recurrence was done at the end of 6 month. Statistical analysis was done on Epi Info 7 while variables were analysed by chi square test. Informed and written consent were taken. Proper explanation of surgical procedure and outcome was done. Ethical clearance was taken and tenets of Helsinki adhered to.

### **Inclusion Criteria**

- Tumour involving more than two third of Lower lid including lid margin.
- Incision biopsy confirmed malignant cases
- Clinically localised tumour
- Size of defects -Length- 14-23 mm, Width -5-7mm.

### **Exclusion Criteria**

Sebaceous Cell Carcinoma tumour with pagetoid spread were excluded.

### **Surgical technique**

**In Laissez Fair technique (Grp A)**, after local anaesthesia , incision was given 4 mm away from the clinically indurated area. The mass was excised till 4 mm away from clinically visible extent of tumour and left to granulate by secondary intention. All excised tissue was labelled and sent for Histopathological examination (HPE) to confirm diagnosis and to assess tumour clearance.



fig.(1a): Pre operative



fig.-(1b) Incision marking



fig.(1c)After excision



fig.(1d)Day-7 on eye opening



fig.(1e)Day -7 on closure of eye



fig.(1f) At one month.

Fig.-(1) Laissez Fair technique.

**Tenzelsemicircular flap procedure(Group B):** Under local nerve block a supero-temporalsemicircular flap was fashioned from the lateral canthal area. The flap was elevated in sub-orbicularis plane up to the orbital rim and subcutaneously beyond this so as to avoid the zygomatic branches of the facial nerve. The flap is raised up to the periosteum and moved medially. The conjunctiva in the lateral fornix is dissected and advanced to suture to the margin. thus forming the lower lid.



Fig.(2a)Preoperative



fig(2b)After removal of mass



fig.(2c)After completion of operation



fig(2d)At 6 month on eye closure.



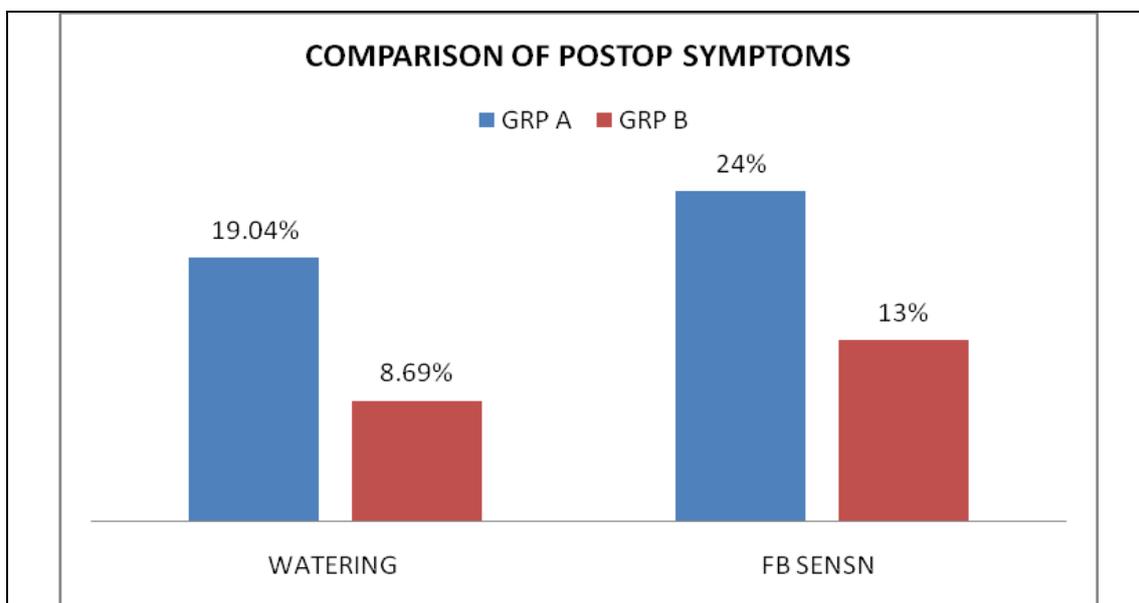
fig.(2e) At 6 on eye opening.

Fig 2- Tenzel graft rotation.

## RESULTS

Group A had 9 female and 11 male patients while Group B had 12 male and 11 female patients respectively. Mean age was (61±15years) in Group A while it was (59±12years) in Group B. Group -A had 12patients with Sebaceous cell carcinoma, 5 with Squamous cell carcinoma and 4 patients with Basal cell carcinoma. Group -B had 13 patients with Sebaceous cell carcinoma, 7 with Squamous carcinoma and 3 patients with Basal cell carcinoma. Mean Size of lower lid defect in group A was Length- (20.34±3.3mm) and Width-(5.50 ±2.5mm). Lateral Canthal involvements was there in 1patient. There was no canalicular involvement in any patient. In Group-B mean size of defect was Length(-21.25 ±3.9mm) and Width-(5.64 ±2.8mm). Outer canthal involvement was present in 2patients while medial canthal with canalicular involvement was present in 2patients.

All tumours in Grp -A showed tumour free margins on HPE while one patient underwent re-surgery for involvement of tumour margin in Grp. B .No recurrence was seen at the end of 6 months in both groups. More patients in Group A had complaints of foreign body sensation and watering then Group B ( $p>05$ ). Scarring with ectropian was seen more in Group B patients while more patients with granulation tissue were seen in Group A( $p>05$ ). None of the postoperative patients showed hypertrophied scar. 81% patients in Group. A were satisfied with the cosmetic results post operative as compared to 89% patients in Grp. B( $p>05$ ).



**Fig 3** Chi square test has been used to find out difference between the groups'- value less than 0.05 was considered statically significant.

## STATISTICAL ANALYSIS OF POSTOP SYMPTOMS

	GRP A	GRP B	P-Value	95% CI	Significance
<b>WATERING</b>	4 (19.04%)	2 (8.69%)	0.32	-13.2922 to 34.4449	NS
<b>FB Sensation</b>	5 (23.8%)	3 (13.04%)	0.36	-15.0291 to 36.2725	NS
<b>Total</b>	9 (42.85%)	5 (21.73%)	0.13	-9.2919 to 48.2944	NS

Fig 4: Statistical Analysis of Postop Symptoms.

## Complications encountered in Group A and Group B and its significance

	GRP A (N=21)	GRP B (N=23)	P-Value	95% CI	Significant
<b>Scarring with Ectropion</b>	0 (0%)	2 (8.69%)	0.17	-9.1314 to 28.0304	NS
<b>Granulation tissue</b>	4 (19.04%)	3 (13.04%)	0.59	-18.6370 to 31.0577	NS
<b>Hypertrophied scar</b>	0 (0%)	0 (0%)			
<b>Total</b>	4 (19.04%)	5 (21.73%)	0.82	-24.2594 to 28.5216	NS

Fig 5: Complications encountered in Group A and Group B and its significance.

## DISCUSSION

Small peri-ocular skin defects can be closed easily by direct closure aided by lax and redundant tissue, particularly in the elderly. However, larger defects may require reconstruction with a combination of skin mobilisation, skin flaps or free full thickness skin grafts. These techniques are not without cosmetic and functional limitations.<sup>[1]</sup> Allowing the wound to heal by secondary intention is a viable alternative. In our series we obtained a satisfactory functional and cosmetic result in all except 4 cases in group A. None of these lesions (4%), necessitated any form of secondary reconstructive procedure. Lowry *et al*<sup>[2]</sup> presented a series of 59 patients with a satisfactory functional and cosmetic result in 83% of them. Only two of his patients (3.4%) required secondary repair with Laissez faire technique (group A). These results are comparable to our series. Only one among the 11 patients described by Mehta<sup>[3]</sup> needed secondary repair after excision of lesions involving lid margin. He, however, did not describe any involving the lateral canthus or lesions distant from the lid margin. We had one case in group A involving the lateral canthus, which resulted in a satisfactory cosmetic and functional outcome. In our study scarring with ectropion took place in two patients in group B which could be due to graft contraction. They required secondary surgical intervention. None of our cases in group A however had this complication. More patients in Group A suffered from granulation tissue formation which could be because healing per se by secondary intention would mean increased granulation tissue formation. This was managed conservatively and needed no surgical intervention.

More patients in Group A had complaints of foreign body sensation and watering than Group B but the difference was not significant. This could be due to loss of lid margin and subsequent inadequate function. J Shankar *et al*<sup>[7]</sup> reported 92% satisfaction on postop cosmesis in their Laissez fair cases whereas in our study, 83% were satisfied in group A with their postoperative cosmesis and 89% patients were satisfied in group B.

In our study at the end of one year, there was no significant difference in terms of function, cosmesis and recurrence between the two groups ( $p > 0.05$ ). Medline search did not show any results on comparisons of the two techniques. Conventional technique like Tenzel rotation flap has a learning curve as opposed to Tenzel techniques and is more time consuming. It also requires added equipment.

**CONCLUSION:** Healing by secondary intention is an effective, safe, inexpensive easy alternative to primary or staged skin closure in the management of lower lid tumours.

#### REFERENCES

1. Hanake E. *Treatment of skin tumours of the inner canthal region—reconstructing the medial canthal area: a dilemma between doing too much and an aesthetic outcome.* *Facial Plast Surg*, 1997; 13: 101–110.
2. Lowry JC, Bartley GB, Garrity JA. *Ophthalmol Plast Reconstr Surg*, 1997; 13: 174–188.
3. Mehta HK. *Spontaneous reformation of the lower lid.* *Br J Ophthalmol*, 1981; 65: 202–208.
4. Wohlrab TM, Rohsbach JM, Thiel HJ. *Ger J Ophthalmol*, 1996; 5: 246–249.
5. Zitelli JA. *Secondary intention healing: an alternative to surgical repair.* *Clin Dermatol*, 1984; 2: 92–106.
6. Colin JRO. *Eye lid reconstruction & tumour management.* In: Colin JRO (ed). *A Manual of Systematic Eye Lid Surgery* Churchill Livingstone: Edinburgh, 1989.
7. J Shankar, R G Nair and S C Sullivan *Eye* (2002) Management of peri-ocular skin tumours by laissez-faire technique: analysis of functional and cosmetic *Eye*, 2002.