TENZEL'S Technique of Upper and Lower Eyelid Reconstruction and it's Outcomes

Professor ***Dr Jayashree Dora****, Associate Professor* ***Dr K.C.Tudu****, Associate Professor* ***Dr S. Behera***
Assitant Professor ***Dr P.K.Sharma****, Assistant Professsor* ***Dr S. Sahu****,* ***Dr Ashok Kumar Khamari***

Aim of the study

- o lid reconstruction using TENZEL'S procedure
- o The vertical, horizontal, and depth dimensions of the eyelid injury or defect to be determined, and availability of regional tissue for reconstruction evaluated.
- o Eyelid reconstruction depends on the extent of involvement of the anterior and posterior lamella.
- o The goals of eyelid reconstruction are 3-fold:

(1) to provide adequate eyelid function,

(2) to afford globe protection, and

(3) to achieve acceptable aesthetic results.

Exclusion criteria

- * Defect confined to medial canthus region.
- * Small defects (< 1 cm) lower eye lid.
- * Small defects of the upper eyelid (< 5 mm) that do not involve the lid margin or the canthus.
- * Perioperative cardiopulmonary complications.
- * Defect involving more than half of lid involvement and full involvement. ?

Materials and methods:

- o Prospective , interventional case series of all of the patients requiring reconstruction of upper or lower eyelids.
- o Prior to surgery full written concent and all possible measures are explained to all patient.
- o Approval for the study is taken from institutional review board.
- o We have analyzed the use of TENZEL'S flap for the lamella recreation after post malignancy defects in nine patients with certain modifications in the existing techniques.
- o Anterior lamella was reconstructed using the semicircle flap skin in four cases of traumatic skin loss.
- o All cases semi-circular flaps sutural release was done at two weeks.

Discussion

- o Semicircle flap technique of eyelid reconstruction is a modified lateral advancement rotation flap=TENZEL'S procedure.
- o Procedure combines use of selective lysis of limbs of lateral canthal tendon with a semicircular skin-muscle flap confined to region of the lateral canthus within the boundary established by lateral eyebrow and the arc it defines.
- o Reconstruction of one half to more than three fourths of the lower or upper eyelid can be accomplished without borrowing tissue from the eyelids, nose, ear, or mouth. Large forehead & brow flaps are eliminated, as is the need for closure of the palpebral fissure during the early healing course.
- o The usual indication for this reconstruction of a central, marginal lid defect following the excision of a neoplasm. However, it may also be useful in cases of tissue loss caused by trauma.
- o By mobilizing the remaining lower lid preseptal orbicularis oculi muscle over the tarsoconjunctival flap by leaving it bipedicled at the medial and lateral canthi to provide a vascular bed for the full-thickness skin graft.
- o Adequate mobilization of the flap is achieved by dissection the flap up to the LPS insertion on the tarsal plate. Sustained traction with skin hooks was provided on the transected edges of the

Tarsoconjunctival flaps, which lead to minimal stretching of the flap.

- Successfully reconstruction of layers include the posterior lamella, consisting of conjunctiva and the tarsal plate, and anterior lamella, consisting of the pretarsal orbicularis oculi muscle and lower eyelid skin.
- All the flaps did well. None of the patients had evidence of tumour recurrence at the time of follow up. The early and long term cosmetic and functional results have been gratifying.
- The Tenzel's flap was successfully executed in 13 patients over a period of two years.
- Primary repair using preserved tissue was carried out in the case of traumatic avulsion . Following tumor excision ,bilamellar repair was performed using tarso-conjunctival flap for the posterior lamella and skin muscle flaps for the anterior lamella.
- All the flaps did well. None of the patients had evidence of tumour recurrence at the time of follow up.
- There were one each cases of flap ischemia, or necrosis after division.

  Responded well on re- surgery.

Conclusion

- In spite of all the advances, the Tenzel's flap till date remains the good option for lid reconstruction where like is replaced by like.
- Tenzel's flaps are easy to execute and give good aesthetic and functional outcomes, and must be considered as one of the primary options for post oncologic reconstruction & traumatic reconstruction lid defect.
- Adequate corneal protection achieved by using lamellar repair principles and local tissues; however , poor vascularity demands careful planning , with vascularized flaps favored over free grafts . Reconstructed eyelids have poor function in the setting of upper and lower eyelid loss, and revision surgery is often required to improve eyelid structure and function .
- Tenzel's technique is an good alternative to repair defect with full function.

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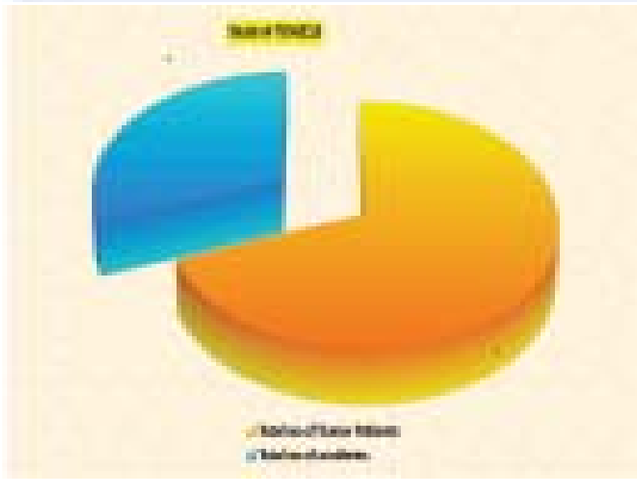
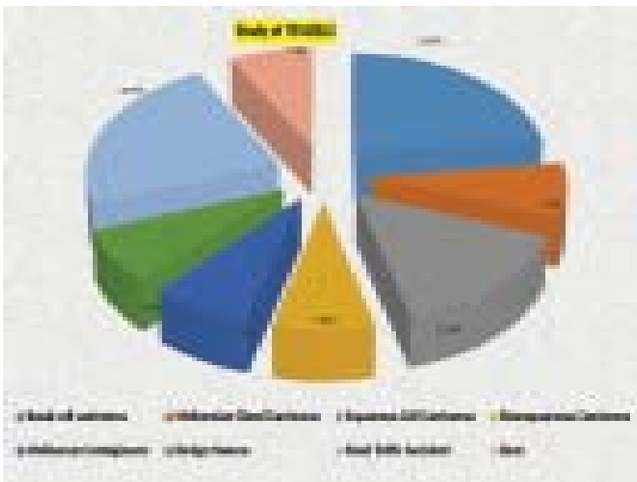
PATIENT PARTICULARS





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