

**Eyelid Reconstruction at a Tertiary Eye Centre in Nigeria: Case Series of an Eight Year Review**

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**Introduction:** Lid defects are a source of disfigurement, visual dysfunction with resulting psycho-social issues.<sup>1</sup> A variety of standard techniques are called into play to provide safe, reliable outcomes when approaching different degrees of eyelid defects. Consideration of the role of the lid in ocular protection, determination of the anatomical defect, lid/bony anchor, anatomy and vasculature and availability of tissues from other sites for reconstruction are all points to be noted.<sup>2,3</sup> Procedures are done to correct lid deformities resulting from tumour resection, congenital as well as traumatic defects. Reconstruction of both upper and lower upper eyelid defects include:

- i. Primary closure with or without lateral canthotomy or superior cantholysis.
- ii. Semicircular flap
- iii. Adjacent tarso-conjunctival flap and full-thickness skin graft
- iv. Free tarso-conjunctival graft and skin flap.

The upper eyelid has an additional option of full thickness lower lid.<sup>3</sup> while the lower eyelid has an option of tarso-conjunctival flap from upper eyelid.<sup>4</sup> The of this study aim is to report the types of surgical techniques in use for eyelid reconstruction from a tertiary hospital in Nigeria.

**Methods:** A retrospective review of the clinical case notes over an eight year period between May 2010 to May 2018. All oculoplastic patients signed a consent form both for clinical photography and clinical research on assessment at the department. Five case notes were selected and summarized to represent the common surgical techniques used for eyelid reconstruction. Due ethical clearance was obtained from the institution.

**Results:** A total of 831 oculoplastic surgeries were done over the period. About 40% (339) were

eye lid surgeries which included repairs and reconstruction, ectropion, tarsorrhaphy, ptosis and tarsal rotation among others.

Repair and reconstruction constituted 19.23% (65 patients) of all eyelid surgeries involving either full thickness or partial thickness upper lid and/or lower lid defects.

A case-series summary of five patients that had lid repair and/or reconstruction are presented below:

- i. Full thickness upper eyelid defect following tumour excision.
- ii. Full thickness upper eye lid defect following trauma.
- iii. Full thickness congenital upper eyelid defect.
- iv. Full thickness lower lid defect.
- v. Full thickness lower lid defect involving canaliculus.

**Case 1:** Full thickness upper eyelid defect following tumour excision.

A 27 year old retroviral positive patient with an ulcerated upper lid mass. Diagnosed Kaposi Sarcoma.



Surgery: Excision Biopsy with Cutler-Beard 1(CB1) procedure.



**CASE 3:** Full thickness congenital upper eyelid defect.

A 3 month old child with upper eyelid coloboma.



**CASE 2:** Full thickness upper eyelid defect following trauma.

A 33-year-old with upper lid defect at junction of medial and lateral third.



Had upper lid reconstruction with Tenzel rotational flap.



Had CB1 and CB2 procedures.

**CASE 4:** Full thickness lower lid defect

A 36 years old with lower lid avulsion injury. Had Hughes Tarsconjunctival flap with full thickness skin graft (FTSG) repair.





**CASE 5:** Full thickness lower lid defect involving canaliculus.

A 9 year old with lower lid and canalicular injury



Repair done with improvised stent



**Discussion:** Lid trauma and tumours are significant indications for eyelid surgeries. Asian studies show similarity<sup>5</sup>. Proportion of eyelid surgeries are similar to other studies<sup>1</sup>. Multiple trauma, late presentation and cost increase the management challenges with eyelid reconstruction. Various surgical procedures abound in managing differing eyelid conditions and defects, varying in extent & complexity, each determined by parameters of wound defect, patient general health, available expertise and technology; all geared towards achieving to a optimum clinical outcome and patient satisfaction.

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