Reconstructive Eyelid Surgery After Tumour Resection

Essay

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List of Contents

List of Figures

List of Abbreviations

AIDS..... **A**uto -immune deficiency syndrome.

BCC..... **B**asal cell carcinoma.

FT ..... **F**ull thickness.

HU ..... **H**yaluronidase .

LCL ..... **L**ateral canthal ligament.

MCL..... **M**edial canthal ligament.

PT..... **p**artial thickness.

PTFE ..... **P**olytetrafluoroethylene.

ROOF ..... **R**etroorbicularis oculi fat.

RSTL ..... **R**elaxed skin tension lines.

SCC..... **S**quamous cell carcinoma.

SGC..... **S**ebaceous gland carcinoma.

SOOF ..... **S**uborbicularis oculi fat.

UV ..... **U**ltra violet.

INTRODUCTION

The major indication for eyelid reconstructive surgery is after the removal of malignant lesions that involve the eyelid and preorbital area. The created defects vary in size and location and are often much larger than anticipated preoperatively. (١)

Eyelid reconstruction constitutes the most challenging and rewarding parts of ophthalmic plastic surgery. (٢)

The eyelid is extremely delicate structure, and exact reconstruction of such complex tissues would of necessity be a difficult matter. (٣)

Basal cell carcinoma is the most common eyelid malignancy and occurs on the lower lid in ٩٠%of the cases, followed in order of frequency by the medial canthus, the lateral canthus, and the upper eyelid. (٤)

Squamous cell carcinoma, Meibomian gland carcinoma, and melanoma are less frequent malignant eyelid lesions, but must be carefully looked for and aggressively treated because they can metastasize. (١)

Reconstruction of the upper lid is more complex than the lower lid and there are several techniques that can be employed, (٢)

The surgeon's ability to perform this type of surgery is based on an accurate knowledge of the normal regional anatomy combined with a proficiency in the fundamental principles and techniques in ophthalmic plastic surgery, in addition, the surgeon should have in mind a stepwise plan for solving increasingly complex reconstructive problems based on the size and location of the defect. [٥]

HISTORICAL ASPECT OF OCULOPLASTIC AND COSMETIC EYE SURGERY

Oculoplastic surgery, began in ١٧٥٥, when Jaques Daviel (who also described the first modern cataract extraction technique) presented a series of patients with tumours which he had successfully treated with resection.(٦)However, repair of the eyelid was tackled later by Montandon. (٧)

Many of the early developments in oculoplastic surgery were made by general surgeons. In ١٨٠٠**s**, Fricke,Landolt, Tripier, the great Dieffenbach(considered by Hughes to be the father of plasic surgery) and others made significant contributions to the treatment of eye lid and orbital disease. (٨)

The new oculoplastic surgeon developed soft tissue techniques to deal with eyelid and periorbital soft tissue problems. Current and previous surgeons gave us an understanding of anatomy, physiology, pathology, and surgical techniques, such that the specially now encompasses reconstructive procedures of the eyelid and orbit, correction of eyelid malpositions, management of lacrimal problems, treatment of orbital diseases including socket deformities, orbito-cranial reconstruction, and cosmetic facial surgery. (٩)

Charles Conrad Miller (١٩٠٧) wrote the first exclusively cosmetic surgery article on ١٣ deformities of lower eyelid, which he treated with ١٣ different lower eyelid incisions. (١٠)

The presentation of these techniques and the publication of the first book cosmetic surgery were not universally welcomed in academic circles. (١١)

Frederick Strange Kolle (١٩١١) published the second book on cosmetic surgery, (Plastic and Cosmetic Surgery)and was the first to recognize the importance of marking the amount of skin to be excised before operation. (١٢)

Adabert Bettman (١٩٨٨) discussed the importance of gentle handling of tissues. Exact apposition of wounds, elimination of tension on all wound edges, and timely surgery about the eyelids. (١٣)

PATHOLOGY OF EYELID TUMOURS

Epidemiology of Eyelid Tumours

Along with the rise in skin cancer rates in recent years, the incidence of eyelid cancers has increased tremendously. The eyelids are prone to various skin cancers because they often remain unprotected from UV radiation throughout a person's lifetime. The limited anatomical area is of significance because lesions can disrupt the functions of the eyelid, as well as create cosmetic concerns for the patient. (١٤)

From several recent large series looking at the frequency of eyelid lesions **benign** lesions account for approximately ٧O% to ٧٥% of all lesions, and **malignant** neoplasm for ٢٥% to ٣O%. (١٥)

Among the **benign lesions** the most frequent diagnoses are ***Squamous papilloma*** (٢٦%), **nevus** (٢٢%), **cysts** (٢٠%), **seborrheic keratosis** (١٣%), **vascular lesions** (٩%), and **neural lesions** (<١%). The most common malignant tumour on the eyelid is the basal cell carcinoma followed in rapidly descending order by Squamous cell carcinoma, sebaceous cell carcinoma, and malignant melanoma. Other rare tumours such as Kaposi's sarcoma, adnexal carcinomas, and Merkel cell