



Enucleation and Evisceration - certainly not the end of the road!!

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Dear Friends,

Greetings!!!!

Enucleation and evisceration traditionally brought up visions of a destructive procedure.... a virtual end of the road. However, the procedures in their present form, begin a journey, where a long term close relationship between the patient, the oculoplastic surgeon and a skilled ocularist is critical to ensuring a gratifying long term outcome for the patient. Enucleation and evisceration have evolved from being a simple step to alleviate suffering or cure a potentially devastating disease, to a skilled surgery for providing a gratifying outcome which has a profound bearing on the physical, aesthetic and social well-being of the individual.

When I started my ophthalmic career in late seventies, enucleation or evisceration was generally allotted to the junior most residents, with little guidance or supervision. Use of implants was uncommon and stock prosthesis were used for rehabilitation. There were very few centers for customized prosthesis. It has taken a few decades for the things to change.

The efforts to provide a superior aesthetic outcome by better understanding of the pathophysiology of the anophthalmic socket^[1], discovery of newer techniques, implants^[2], integration, coupling devices, prosthesis and tools for managing the problems associated with anophthalmic sockets, portend an even better future in the times to come.

Enucleation started early in the nineteenth century without any volume replacement. Changes in the socket in the absence of volume replacement and the post enucleation socket syndrome associated with deepening of upper lid sulcus, upper lid dysfunction (lagophthalmos or ptosis), stretching of lower lid with ectropion and reduction in inferior fornix came to be recognized^[1,3]. This brought in the use of implants. Efforts at attachment of recti to the implants or integration of implants to the prosthesis were increasingly made in an effort to improve the motility. The term integration meant different things to different people. The partially exposed implants (exposed integrated) and Allen or Iowa implants (buried integrated) became popular at different times. Integration, in its most acceptable current definition refers to the fit between prosthesis and implant.

The introduction of porous biointegrable implants by Dr. Perry (Coral hydroxyapatite) (FDA approval in 1989) brought in a new dimension^[4]. Besides hydroxyapatite, porous polyethylene (medpore) and aluminium oxide implants have gained variable acceptability. However, problems associated with porous implants including those with pegging have meant that they have not quite lived up to their promise. Simple PMMA or silicone implants used with myoconjunctival technique for enucleation seem to offer as good a motility as the porous implant with lower complication rates^[5].

Evisceration has gained acceptance as the procedure of choice in the management of painful blind eyes over the last couple of decades as its potential benefits were realized. The procedure allows the sclera with attached muscles to be retained as a coat to the implant with least disruption of the orbital anatomy. A critical appraisal of the available literature suggests that the sympathetic ophthalmia rarely if ever occurs as a result of evisceration. The concern regarding possible malignancy must be addressed by imaging. The possible disadvantage of being able to use a smaller implant has been overcome by a number of modifications, which allow the implant to be placed partially or totally behind the scleral coat allowing as large an implant as required. I have over the last two decades shifted almost entirely to evisceration in painful blind eyes with enucleation being confined to cases of ocular tumours and severe non-salvageable open globe injuries with a risk of sympathetic ophthalmia.

A close co-ordination with a meticulous, well trained ocularist is important to provide a pleasing aesthetic outcome. This is also important for the long term health of the socket after evisceration/ enucleation. Maintenance of a satisfactory long term aesthetic result also necessitates a good care of the socket and the prosthesis by the patient, frequent observation by the ophthalmologist and a continued rapport with the ocularist.

An improved understanding of the dynamics of anophthalmic socket, increase in the choice of evisceration for management of painful blind eyes, improvements in implant materials and designs, improved surgical techniques and better prosthesis have contributed to the evolution of the present day techniques. These have lead to the improved aesthetics that the patient today expects and receives. The future is likely to bring in many more advancements to provide an even better outcome to our patients.

References

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