



CONTRACTED SOCKET RECONSTRUCTION AND PROSTHETIC EYE IMPLANTATION FOLLOWING ENUCLEATION: A CASE REPORT

Ophthalmology

Dr Pankaj Baruah

**Dr Srijandeep
Kumar**

Dr Ipsita Das

Dr Baharul Hoque

Dr Anusa Gupta

Dr Semim Sultana

ABSTRACT

This case report presents a complex and challenging case of a 23-year-old female patient with a history of ocular injury resulting in corneal scar and subsequent enucleation. The patient underwent multiple procedures, including artificial eye implantation and socket reconstruction, over a span of 15 years. The report highlights the successful management of a contracted socket through a staged approach involving contracted socket reconstruction and prosthetic eye implantation.

KEYWORDS

Enucleation, contracted socket, conformer implantation, prosthetic eye, ocular prosthesis, ophthalmology, case report.

INTRODUCTION

Ocular injuries can lead to long-term consequences, necessitating a comprehensive approach to restore both function and aesthetics. This case report underscores the importance of multistage socket reconstruction and prosthetic eye implantation in the management of a contracted socket following ocular injury and multiple prior surgeries.

Case Presentation

A 23-year-old female presented with a contracted socket, diminished mobility, and discomfort. The patient's medical history was notable for a significant ocular injury sustained 15 years prior, resulting in corneal scarring and subsequent diminution of vision in the right eye. Four years following the initial injury, the patient underwent enucleation due to intractable pain and compromised visual function. An artificial eye was implanted during the enucleation procedure to restore facial aesthetics.

However, seven years later, the patient experienced recurrent discomfort and limited movement of the artificial eye. A subsequent evaluation revealed persistent fibrosis and contraction of the socket despite the prior interventions. The contracted socket not only affected the patient's ability to move the artificial eye but also led to an asymmetrical appearance and psychological distress.

Upon examination, the contracted socket exhibited restricted motility and significant scar tissue. The patient's visual acuity was assessed in the contralateral eye, which remained unaffected by the previous injuries and surgical procedures. Pre-operative pictures are given in Figure 1 & 2.

Given the patient's history of ocular trauma, multiple surgeries, and the complex nature of the contracted socket, a comprehensive approach was deemed necessary to address the functional and aesthetic concerns.



Figure 1 With Previous Prosthetic Eye



Figure 2 Contracted Socket

Method

To address the contracted socket and restore both functional mobility and aesthetic symmetry, a staged approach was planned under General Anaesthesia. The initial step involved contracted socket reconstruction, which aimed to release scar tissue, create space within the socket, and promote healing. Meticulous dissection was performed to free adhesions and fibrotic tissue. Tenon's capsule release was carried out to enhance the potential mobility of the socket. This was accompanied by careful deepening of the inferior fornix to accommodate the subsequent conformer implantation.



Figure 3 Post-operative Picture

A tailored conformer was then inserted to maintain the socket's volume and shape during the healing phase. This temporary prosthesis played a crucial role in preventing further socket contraction and facilitating the eventual fitting of a prosthetic eye. Attention was given to the precise positioning of the conformer to prevent pressure points, and tarsorrhaphy was performed with utmost care to secure the conformer in place.

After a two-week interval, the patient underwent prosthetic eye

implantation. The conformer was removed, and the socket was evaluated for healing and suitability. Collaborating closely with an experienced ocularist, a lifelike prosthetic eye was custom-crafted to closely match the appearance of the contralateral eye. The fitting process was meticulous, ensuring optimal alignment and natural movement. Post-operative pictures are given in Figure 3.

RESULTS

The staged approach to contracted socket reconstruction and prosthetic eye implantation yielded favorable results. The patient experienced a significant improvement in socket mobility and comfort. The prosthetic eye played a pivotal role in restoring facial symmetry, effectively concealing the asymmetry that had been a source of distress for the patient. The combination of functional improvement and enhanced aesthetic outcomes contributed positively to the patient's self-esteem and psychosocial well-being.

DISCUSSION

Contracted socket following evisceration poses challenges in terms of mobility, appearance, and patient well-being. The staged approach of contracted socket reconstruction and subsequent prosthetic eye implantation proved effective in addressing these challenges. Conformer implantation aided in preserving socket volume and shape, facilitating optimal prosthetic eye fitting.

CONCLUSION

The management of a contracted socket in a patient with a history of ocular injury and multiple prior surgeries necessitates a tailored and systematic approach. This case report highlights the effectiveness of a staged strategy involving contracted socket reconstruction and prosthetic eye implantation in achieving both functional and aesthetic restoration in a complex clinical presentation.

Conflict of Interest: Nil

Financial Interest: Nil

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