Surgery for Radiation Induced Lymphedema of the Periorbita: a case report

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ABSTRACT

Objective: To present a surgical approach to a patient with radiation associated lymphedema of the periorbita causing near complete visual field obstruction.

Methods: A 47 year old male with a history of T2N2M0 squamous cell carcinoma of the epiglottis was treated with surgery and radiation; he then developed unilateral, severe lymphedema of the periorbita causing near complete visual field obstruction. A surgical approach was utilized to alleviate his visual obstruction.

Results: Upper and lower lid skin flaps were elevated and the majority of pronounced lymphedematous tissue was excised. Improvement of visual field obstruction and aesthetic improvement were noted.

Conclusion: A surgical approach can achieve an improvement in function and cosmesis in the treatment of periorbital lymphedema.

INTRODUCTION

Chronic facial edema is a characteristic of various inflammatory, infectious, congenital, malignant, and iatrogenic processes (Table 1). Specifically, radiation induced lymphedema of the periorbita is an iatrogenic cause occasionally seen in patients having undergone radiation therapy. The dermatology literature proposes that chronic inflammation results in 1.) the destruction of elastin around small and medium sized blood vessels leading to transudation, and 2.) the obstruction of lymphatic channels of the dermis, leading to accumulation of fluid. The result is lymphedema, or excess fluid within the tissue itself.

METHODS AND MATERIALS

A 47-year-old male with a history of T2N2M0 squamous cell carcinoma of the epiglottis underwent partial glossectomy, epiglottectomy, neck dissection, and post operative radiation therapy. He later developed acute airway distress and required an emergent tracheotomy. He has been without evidence of disease for four years.

A lower lid incision was made along the inferior skin crease of the lower periorbital edema. A superiorly based flap was developed. In a similar way, upper lid edematous tissue was excised. Closure was performed with 6.0 nylon suture.

RESULTS

The patient was very pleased with his improvement in his visual fields and overall cosmesis. He will return for future steroid injections to further decrease any recurrence of lymphedema.

CONCLUSIONS

One of the many unwanted side effects of radiation is damage to the lymphatic system. In the region of the periorbita this can cause lymphedema so severe that it obstructs vision. Surgical resection of the obstructing lymphatic tissue can be a viable option for a visual and aesthetic improvement.

REFERENCES


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