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Letter to the Editor Open Access

Unexpected Presentation of a Twenty Year Old Orbital Floor Reconstruction

Ioan Davies* **and Paul Chambers**

Department of Head and Neck Surgery, Bradford Teaching Hospitals, UK

***Corresponding author:** Ioan Davies, BDS, MFDS (RCSed), Department of Head and Neck Surgery, Bradford Teaching Hospitals, UK, Tel: 07891705189; E-mail: ioan.davies@nhs.net

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Introduction

A thirty-nine year old man presented with a six month history of persistent infra-orbital infection which had failed to resolve following multiple courses of oral antibiotics.

Examination revealed an erythematous swelling with an associated discharging sinus within the right infraorbital crease alongside diplopia in strained upward gaze. Pupillary levels were equal however the lower right eyelid was depressed and exhibited a historical scar.

Further questioning revealed a history of post-traumatic orbital floor reconstruction twenty years prior to presentation.

Computed tomography imaging unexpectedly revealed two separate orbital floors (Figure 1) thought to have formed secondary to a silicone sheet reconstruction. Both the new orbital floor (Figure 2) and the implant were removed and histopathological results revealed only chronic suppurative granulation tissue. Post-operatively the infection had resolved, however no improvement was seen regarding his diplopia.

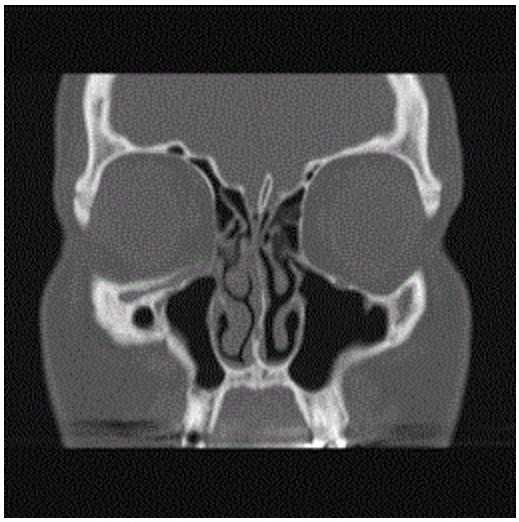

Figure 1: Coronal view of pre-operative CT scan showing right sided neo-orbital floor encasing the silastic sheet.

Figure 2: Post-operative image of the neo-orbital floor following it's removal from the right orbital floor.

Several materials are available for reconstructing orbital floor defects, including autologous bone grafts, silicone elastomer, porous polyethylene, titanium mesh and more recently PEEK.

Although cheap and easily accessible, silicone elastomers are associated with a higher complication rate making their current use controversial [1].

Frequently reported complications include persistent pain, chronic infection, migration, and extrusion of the implant [2]. Other reported complications include dacryocystitis, skin fistula, orbit maxillary communications and cyst formation [3].

Morrison et al reviewed 311 patients reconstructed with silastic implants and found that implant removal was necessary in 13.2% of patients due to persistent infection, pain, extrusion, and diplopia [2] Yun et al conducted a review of 115 patients treated with silastic sheets; 4.3% needed implant removal due to infection, hematoma, displacement, or extrusion, with a mean removal time of 23.3 months [4].

The majority of post-implantation silicone complications become evident in the early post-operative phase, but complications have been reported up to 31 years later [2,5] However, to our knowledge no report of a secondary orbital floor formation has ever been made.

This case highlights the importance of being vigilant of potentially rare underlying causes of infection whilst having an awareness of historical treatment methods and how they can still impact upon current practice.

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