

Zygomatic Implant perforator (ZIP) flaps and Zygomatic implant-based rehabilitation for patients with Maxillary and Mid-facial Oncology Defects.

Brian Martin¹, Edward Cotter², James Paul O'Neill³, Conor Bowe¹, John Edward O'Connell¹

1. National Maxillofacial Unit, St James's Hospital, Dublin; 2. Blackrock Health Hermitage Clinic, Dublin; 3 Department of Otolaryngology / Head & Neck Surgery, Beaumont Hospital, Dublin
Mr, Oral & Maxillofacial/Head & Neck Surgeon, National Maxillofacial Unit, St James's Hospital

Background:

The management of patients with a maxillary tumour is complex with multiple techniques described for obturation of resultant defects. What is less well described is the effective and timely restoration of facial form and dentition, ideally prior to commencement of radiotherapy. The zygomatic implant perforated (ZIP) flap technique and Zygomatic Implant supported prosthesis provides immediate reconstruction and rapid dental rehabilitation.

Methods:

Patients who underwent ZIP Flap/Zygomatic Implant Reconstruction between January 2022 and November 2022 are described. Variables recorded included: age, sex, pathology, ablative defect, number/location of zygomatic implants, median time to prosthesis insertion, and free flap outcomes.

Results:

Four patients were included the study. The mean age at surgery was 68 years. The pathologies were as follows; 3 squamous cell carcinoma and 1 olfactory neuroblastoma. Two patients had a total maxillectomy; 2 had an extended hemi-maxillectomy. Two patients had a ZIP flap including a radial forearm free flap, and 2 had a Zygomatic Implant supported obturator prosthesis. The total number of Zygomatic Implants placed was 10. All had good primary stability. The median time to prosthesis fit was 22 days. All patients underwent adjuvant radiotherapy.

Conclusion:

The ZIP flap and Zygomatic Implant retained prosthesis techniques provide a safe and reliable method for reconstruction of patients with post-ablative mid-face defects.