

CRC8: Sectional Impression for a Total Maxillectomy Patient Reconstructed with Free Flap: A Clinical Report

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Introduction: With increased prevalence of oral cancer, demand for prosthesis to improve chewing function and aesthetics for survived patients has also increased. Reconstruction using free flap for surgical defects resulting scar tissue formation and overlying unsupported and fluctuant tissue increases difficulties in complete denture rehabilitation. The sectional impression method was employed for conventional impression in the healthy side and minimal pressure impression for the flap side to reduce compression of the tissues.

Case Description: A total maxillectomy patient who has received anterolateral thigh flap reconstruction required complete denture rehabilitation. Preliminary impression for base plate and occlusal rim fabrication was made with irreversible hydrocolloid with tissue displacement in the flap side. Centric relation was taken after the optimal vertical dimension has been determined. The base plate in the flap side was sectioned off and undercuts created in the remaining periphery of the base plate. Border molding used heavy-bodied polyvinylsiloxane for the healthy edentulous ridge, then final impression with light-bodied polyvinylsiloxane with mouth closed. While the baseplate was resealed in the secured position, plaster was painted onto the mobile free flap region with the patient opened and closed her mouth. A master cast was then poured and dentures fabricated accordingly.

Discussion: The purpose of sectional impression is to gain maximal retention of the denture with unavoidable movement of the free flap attached to perioral muscles during mandibular movement. Free flap without bony support also results in poor denture support and stability with high risk of denture fracture.

Conclusion: Careful selection of impression methods helps to avoid compression of free flap, therefore improve the retention of complete denture.

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