

Successful Obturator Solutions

Presenter

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INTRODUCTION

Many intraoral defects in the maxilla are in the form of an opening into the antrum and nasopharynx resulting from malignancies, congenital malformations and acquired defects resulting from surgery for oral neoplasms. Surgery creates anatomical defects between the oral and nasal cavity. The opening produced maybe quite small or it may include any portion of the hard and soft palate, the alveolar ridges, and the floor of the nasal cavity.



Postsurgical maxillary defects result in exposing the patient to hyper-nasal speech, and impaired masticatory function. Patients have difficulties while performing normal functions such as swallowing and speaking, due to these difficulties. Obturators rehabilitate the intra-oral and extra-oral structures and aid in the normal function of mastication, speech and esthetics.

Temporary Obturator Stage 1

The Temporary Obturator

The temporary obturator is constructed from the postsurgical impression cast which has an artificial palate and artificial ridge and generally has no teeth. The closed bulb extending into the defect area is hollow. The patient is usually seen every two weeks because of the rapid soft tissue changes that occur within the defect during healing. A new lining material is then processed. It is best to remove the entire old interim lining material because of porosity, leading to bacterial contamination and precipitation of undesirable odors and mucosal irritations.

Often the temporary obturator will need to function comfortably for as long as six months. The timing will vary depending on the size of the defect, the progress of healing, the prognosis for control of the tumor, the effectiveness of the present obturator, and the presence or absence of teeth.

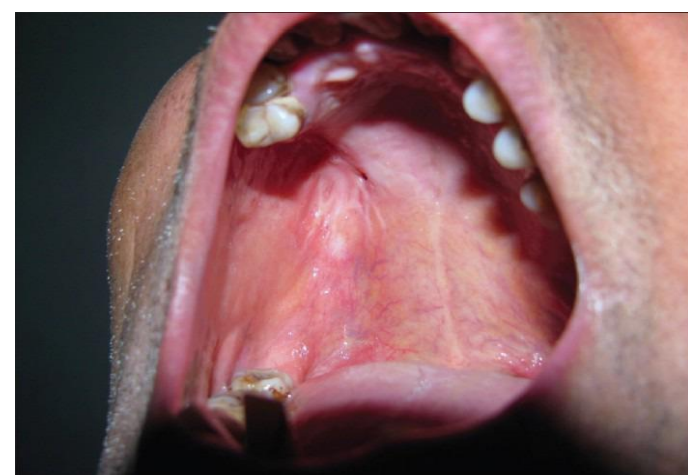
IMPRESSION PROTOCOL

- 1) Preliminary impression of defective area is taken
- 2) Custom tray is fabricated
- 3) Border molding is performed on defect margins
- 4) Impression is taken inside custom tray utilizing medium and light body VPS
- 5) A pick-up impression utilizing alginate is taken
- 6) A model is poured in Type IV stone for stability



Patient Challenges

- 1) Facial asymmetry and deformity
- 2) Tooth loss
- 3) Alveolar bone resorption
- 4) Changes to the hard palate
- 5) Decreased quality of life
- 6) Psychological disorders
- 7) Hyper-nasal Speech



Obturator Prosthesis Solutions

- 1) Digital Technology utilizing Mesh manipulating software
- 2) Overdenture Attachments
- 3) Acrylic full denture with hollow bulb
- 4) Cast partial framework with hollow bulb and denture teeth attached



Final Obturator Stage 2

The Final Obturator

A final or definitive obturator is not indicated until the surgical site is healed and dimensionally stable and the patient is prepared physically and emotionally for the restorative care. Changes associated with healing will continue to occur in the border areas of the defect for at least one year. Dimensional changes are primarily related to the peripheral soft tissues.

Approximately six months after surgery, the planning can start for the definitive obturator prosthesis. The final obturator may have a metal framework or acrylic which acts as the palate and supports the teeth and the closed bulb which is hollow.

Relining Existing Obturator Cases

Relining the final obturator prosthesis is at times necessary at regular intervals. These intervals rely solely on the condition of the soft tissue and if there are any additions of denture teeth added to the existing obturator after the final insertion. The procedure below has proven very successful.



Relining Existing Obturator Cases continued

- 1) Border mold margin areas of obturator by applying adhesive and heavy body VPS material
- 2) After border molding, apply adhesive and a light body VPS material and then take a wash impression
- 3) Take a pickup impression with alginate
- 4) Pour a model out of Type IV stone
- 5) Remove impression material and prepare obturator for soft liner
- 6) Process a high quality soft liner material where impression material was present
- 7) Finish and polish

Goals for Final Outcome

- 1) Improve Speech
- 2) Aid in proper airflow
- 3) Improve eating capabilities
- 4) Reduce regurgitation
- 5) Preserve remaining dentition
- 6) Preserve Tissue
- 7) Provide comfort, function and esthetics



CONCLUSION

To overcome the problems encountered by the patient, obturators are fabricated. The basic principles of the design of removable partial dentures should be reviewed when designing the framework for an obturator. This poster presentation describes simplified solutions of the fabrication of a definitive obturator for rehabilitation of a maxillary defect and the post care including successful relining of the prosthesis. The proper usage of materials including a high impact acrylic with proper flexural strength is essential. It is also necessary to understand the importance of capturing accurate maxillo-mandibular records, vertical dimension, and centric relation for the ultimate goal of patient acceptance.

References

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