Maxillofacial prosthesis

Date	Title
Day 1 Sunday (15/5/2022)	Clinical Management of Dentate Maxillectomy Patients (Dr. Aseel)
Day 2 Monday (16/5/2022)	1) Removable Partial Denture Considerations in Mandibular Prosthetics (Dr. Bayan) 2) Resection Prostheses (Dr. Shorouq)
Day 3 Tuesday (17/5/2022)	Custom Ocular Prosthesis (Dr. Mustafa)
Day 4 Wednesday (18/5/2022)	Nasoalveolar Molding in Early Management of Cleft Lip and Palate (Dr. Dhuha)

Clinical management of Dentate Maxillectomy Patient

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B.D.S., M.SC., PH.D. PROSTHODONTICS

Preoperative Considerations

Preoperatively, the prosthodontist is concerned with four objectives:

- psychological support of the patient.
- preoperative dental management.
- preoperative impressions.
- suggestions for the surgeon.

Dental Management

Preoperatively

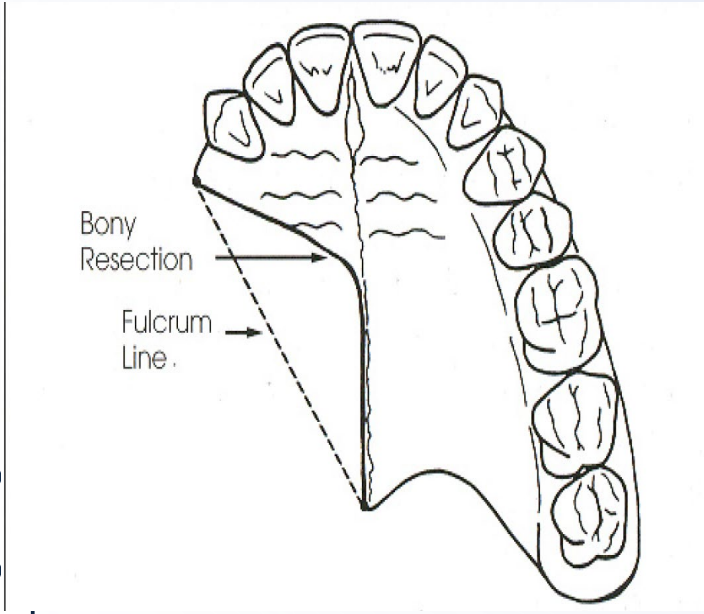
Teeth that would normally be considered nonrestorable or of no value (such as maxillary third molars on the surgical side of the arch that were not removed as part of the tumor resection) may become extremely valuable abutment teeth for an obturator prosthesis.

Periodontal treatment

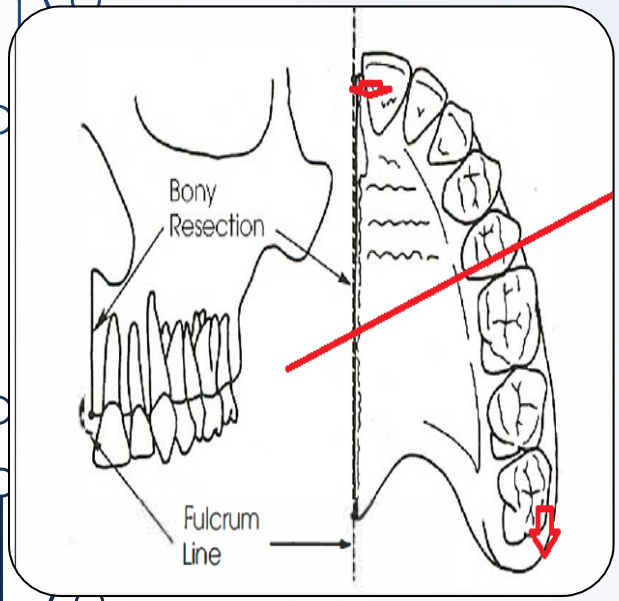
Endodontic treatment

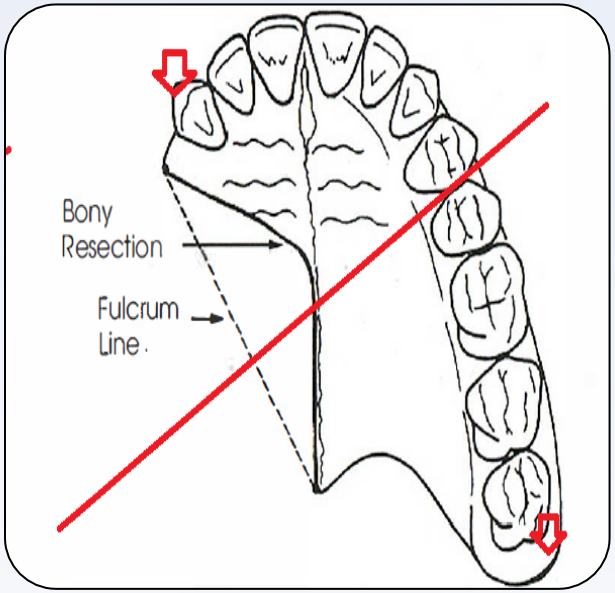
Extraction

Surgical enhancements and suggestions for the surgeon



it is the responsibility of the prosthodontist to communicate to the surgeon. the prosthodontic advantages of maintaining as many of the alveolar processes and teeth as possible without compromising complete removal of the tumor. whenever possible to preserve the teeth or the alveolar ridge


Bony
Resection
Fulcrum
Line


Bony
Resection
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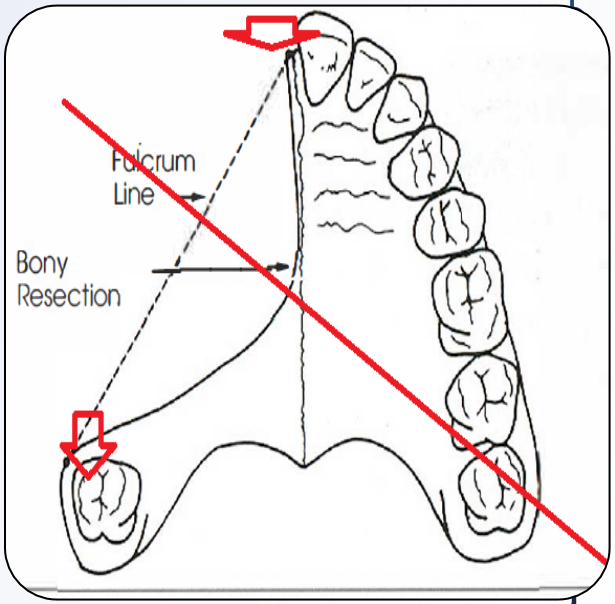
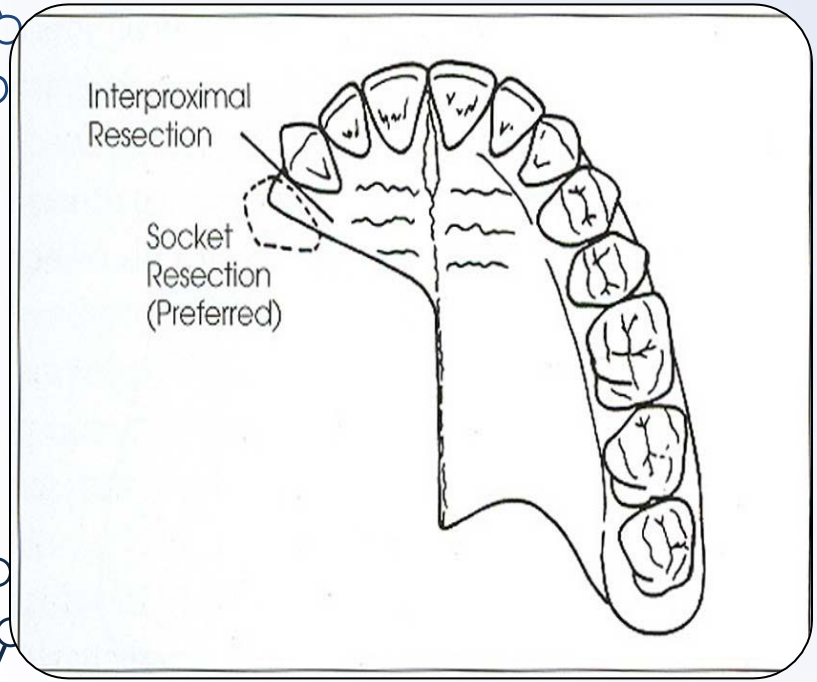
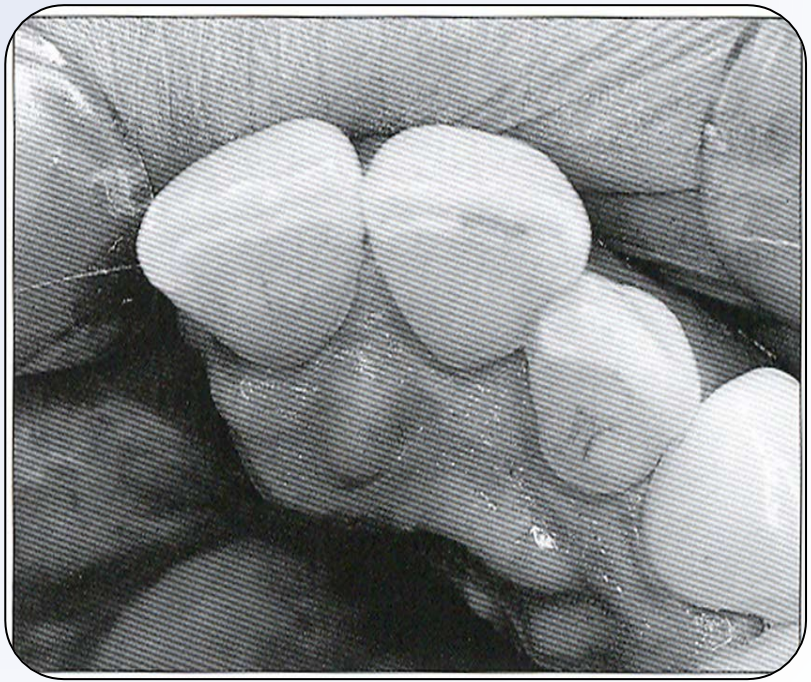

Fulcrum
Line
Bony
Resection


Interproximal
Resection
Socket
Resection
(Preferred)



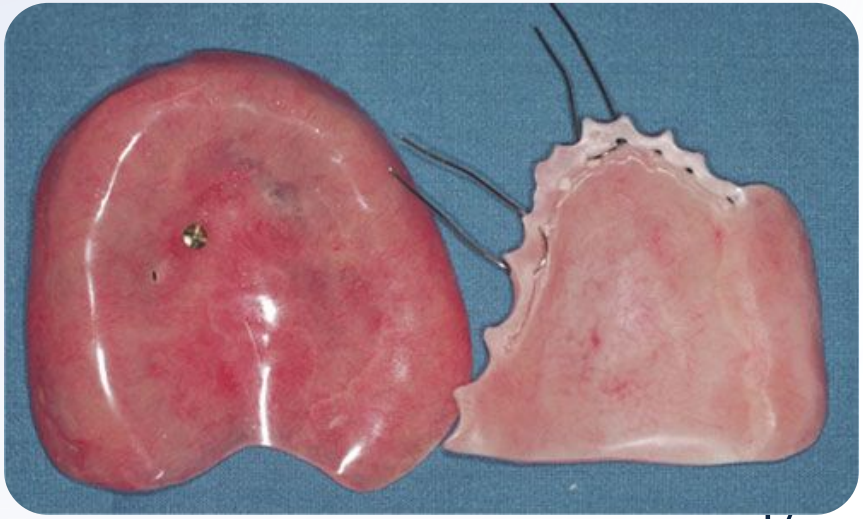
Types of the obturators

1. Surgical Obturator
2. Interim obturator.
3. Definitive obturator

Surgical Obturator Design

The design of the surgical obturator should be based upon the understanding that it is **actually a stent** rather than an obturator.

It should also be designed and fabricated with the understanding that **it cannot be tried in and adjusted preoperatively** but must fit and function as intended, without adjustment.

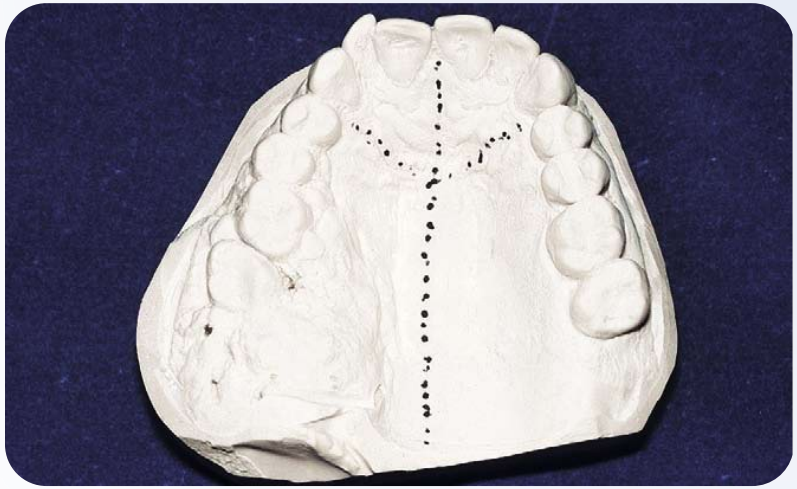


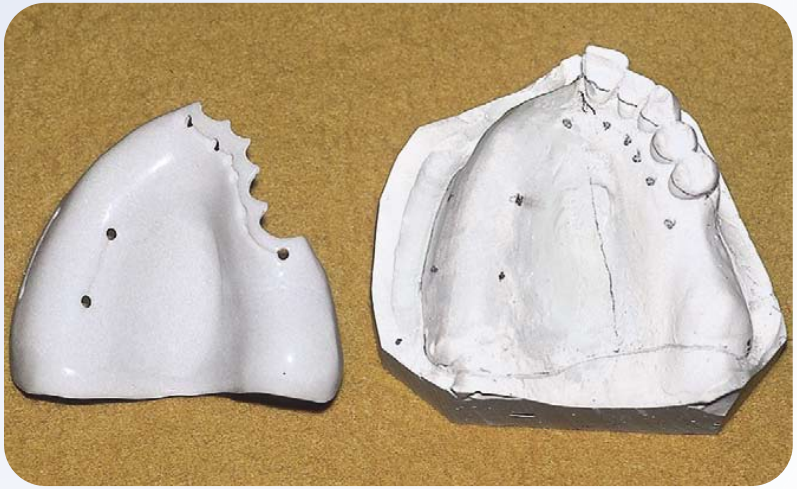
Objectives of The surgical obturator

placed at the time of tumor resection in the operating room

1. support the surgical dressing
2. supports the facial flap
3. keeps pressure on the skin graft
4. placed over the internal surface of the facial flap.
5. provides a barrier between the surgical dressing and the oral cavity.
6. take nourishment without a nasogastric tube, enable the patients to speak normally,
7. minimize the initial feelings of loss.

Surgical Obturator

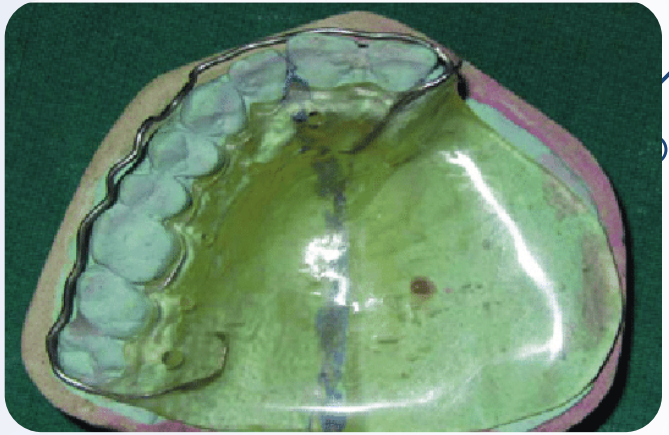


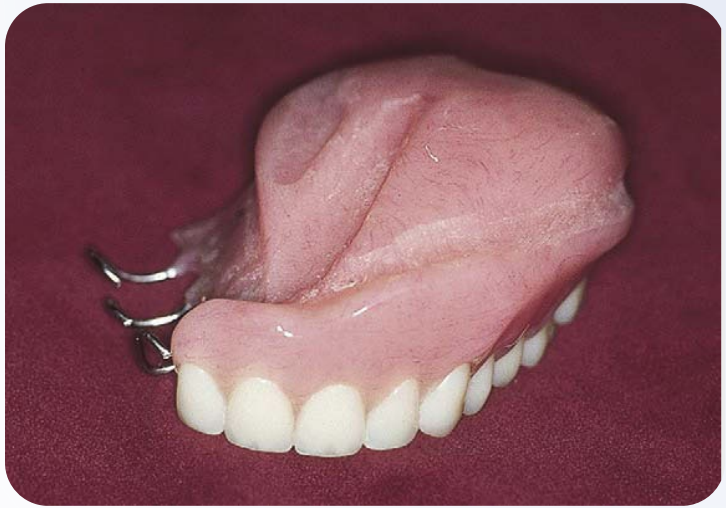


The Postsurgical Obturator

Following surgery, the extent of the surgical defect and the number of teeth lost are no longer subject to change.

Occasionally, it may be necessary to make a new impression at the time of surgical pack removal. If this is the situation, it is recommended that the time between pack removal and the placement of the postsurgical obturator be kept to a minimum. Tissue contraction and edema in the defect will quickly alter the shape of the defect, making it extremely difficult to insert the obturator



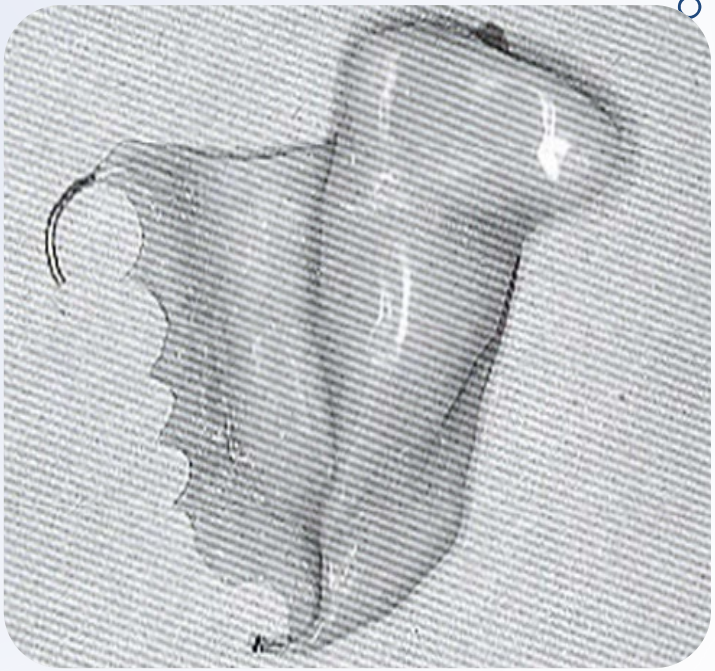


Postsurgical Obturator Fabrication

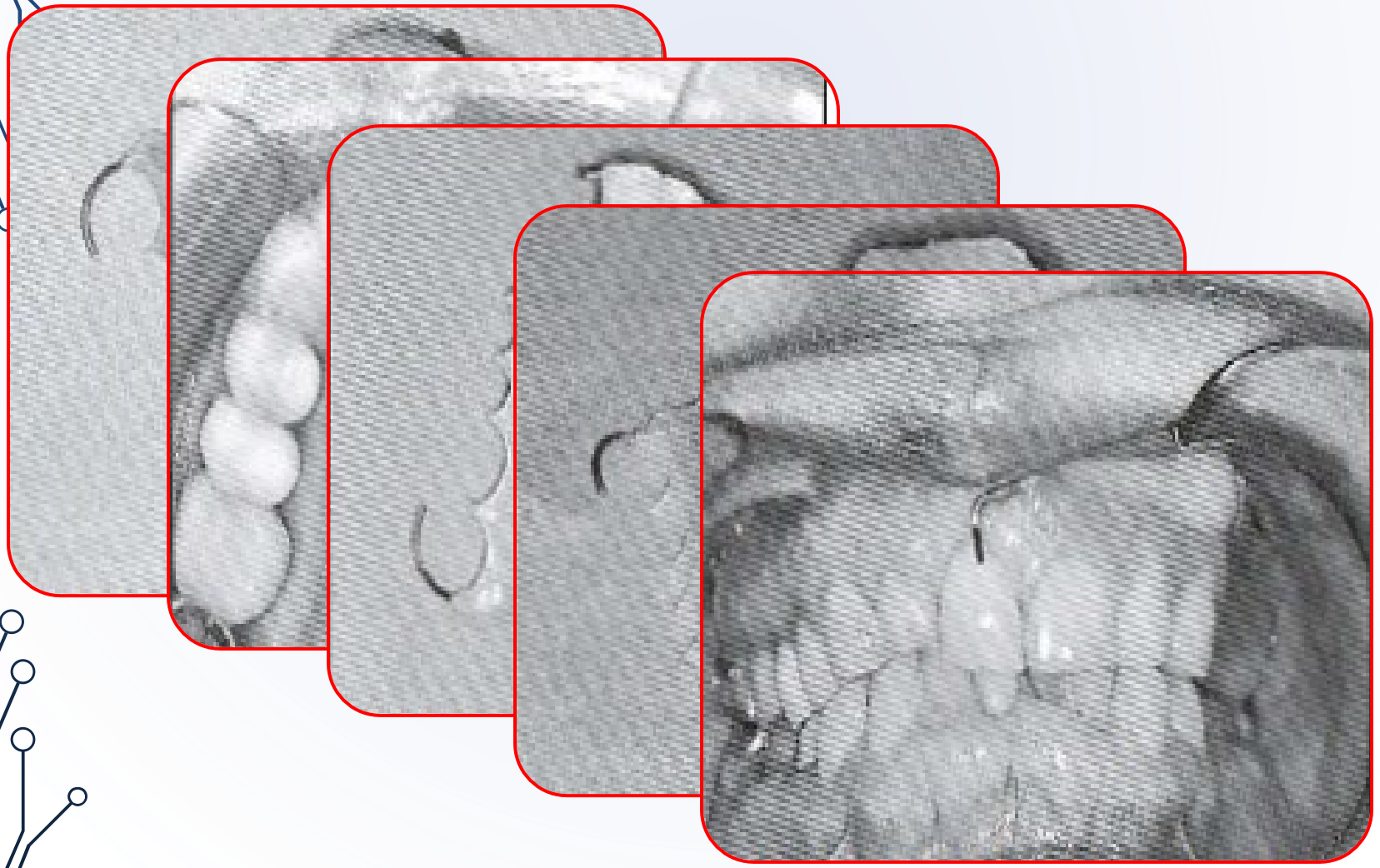
The Use of retentive undercuts and multiple clasps depending upon the location and size of the surgical detect and the position and number of abutment teeth available.

This general principle of broad coverage and maximum contact on available tooth surfaces should be carried .Maximum support and stability from all available soft and hard tissues must be utilized.

As a general rule, clasps will be most effective in resisting downward displacement of the obturator if they are located **as close as possible to the defect** and **at maximum distance from each other**



As a general rule, the resin base portion of the obturator prosthesis should contact the axial surfaces of all remaining teeth whenever possible.



Definitive Obturator

Mouth Preparation

Support

Retention

Resistance

Stability

Definitive Obturator

Support

a) Maximam extension into the residual ridge ,alveolar process .
Incorporating more of the remaining teeth .
Maximizing the use of occlusal rest and cingulum rest .
b)Support from within the defect remaining nasal septum

- Vomer
- Posterior lateral region Contacting the temporal bone or the pterygoid plate , floor of the orbit

Definitive Obturator

Retention or resistance

resistance to displacement along the path of insertion

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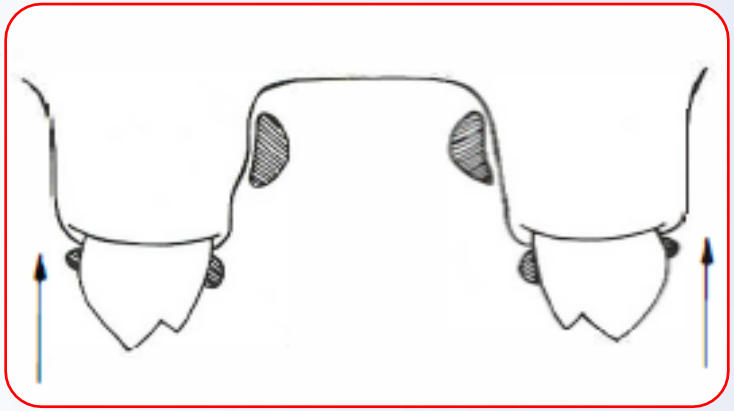
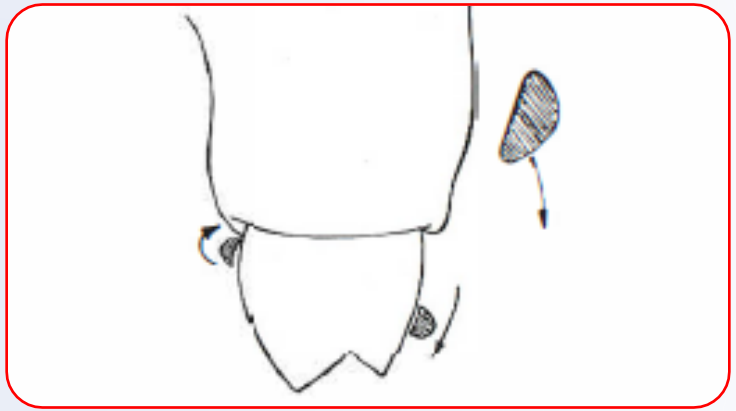
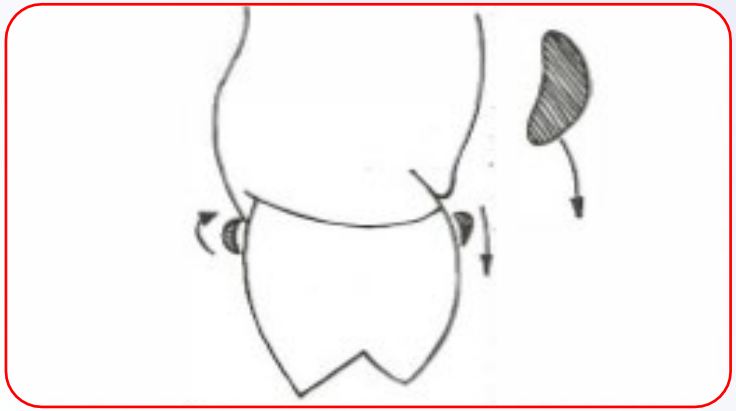
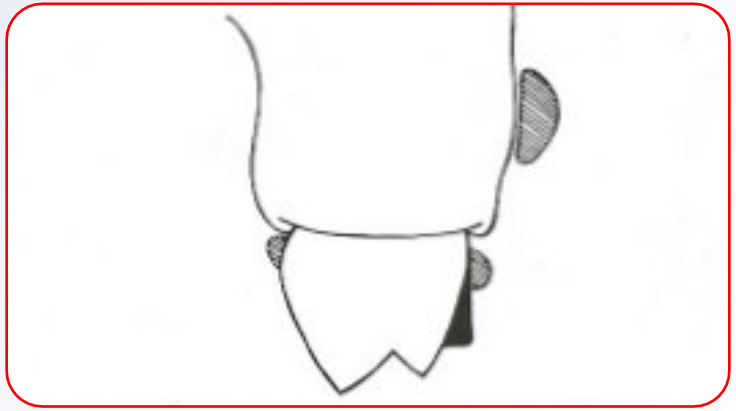
resistance to the rotational displacement of the obturator due to the force of *gravity* and *function* of the surrounding tissues against the obturator. (it is usually the more difficult to attain.









One method recommended to
increase the effectiveness of guide plate frictional fit to the abutment teeth is to avoid stripping or electro polishing the plating surfaces when the framework is being finished in the laboratory.

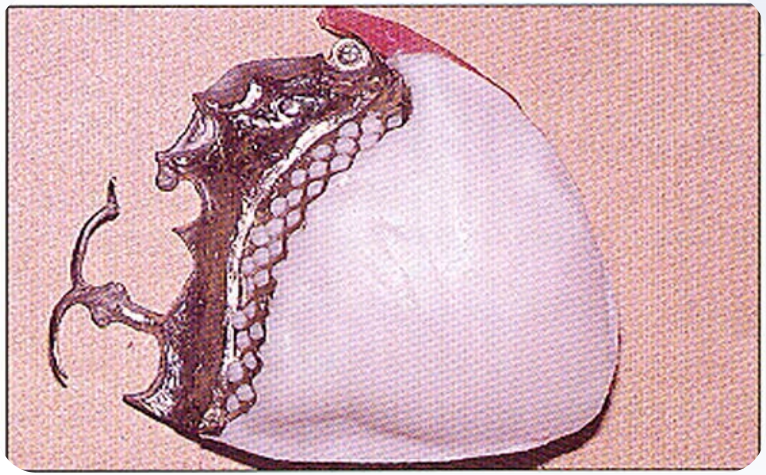
Stability

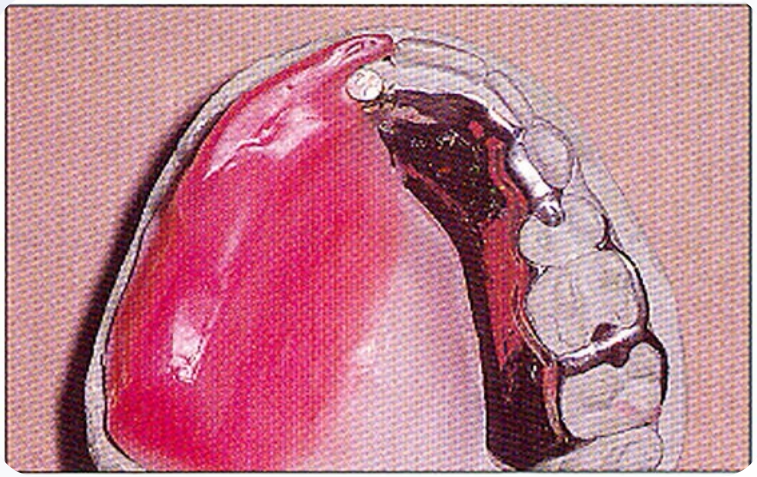
if the principles of support and retention (resistance) are fulfilled, the need for stability will automatically be satisfied.

Definitive Obturator Fabrication

The impression should be extended into the surgical defect sufficiently so the the cast framework is tried firstly.

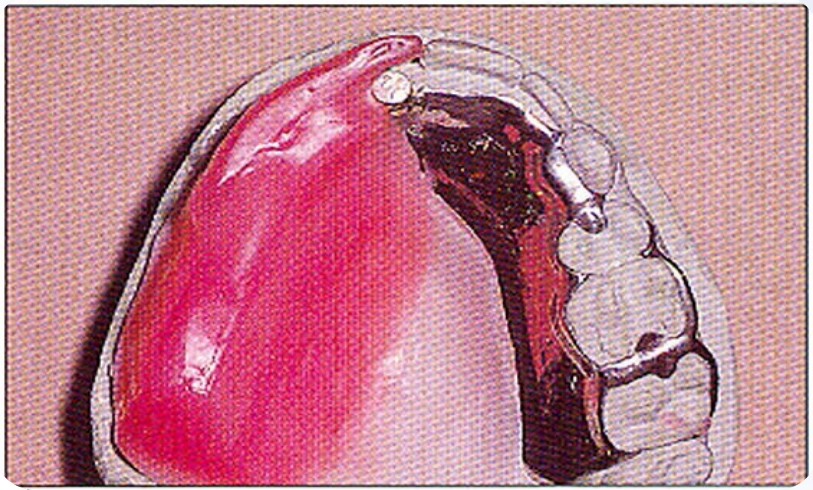
A wax occlusion rim may also be added to assist in evaluating facial support, tooth position, and occlusal registration.

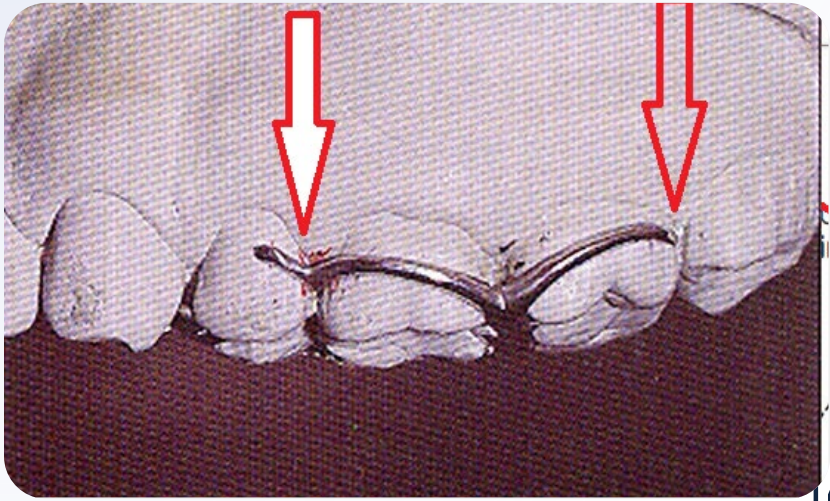




Extended embrasure clasp

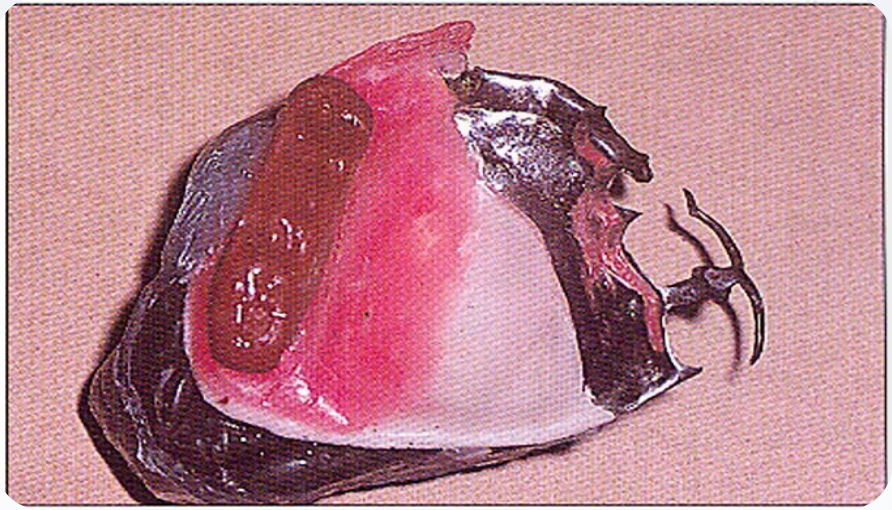
allow a single transocclusal connector that supports retentive arms engaging both a distobuccal retentive undercut on the second molar and a distobuccal undercut on the second premolar ,when no retentive area is available on the first molar.





One technique that will counter the tendency for inferior displacement of the prosthesis is to add an occlusal stop to the occlusion rim prior to the impression.

the patient is instructed to bring the teeth together into maximum intercuspation, thereby reseating the framework to its intended position.



Delivery and Postinsertion Follow-up of definitive obturator

Conclusion

Prosthodontics rehabilitation of the dentate maxillectomy patient is a lengthy and complicated process.

However, if attention is paid to the proper sequencing and details of treatment, it can be one of the most satisfying procedures in all of prosthodontics.

Thanks