

ALVEOPLASTY GUIDELINE

1. Introduction

When teeth are extracted from the jawbone, holes/sockets are left behind. Even when gums are completely healed, there will still be high and low points in the bone. This can make it difficult for dentures to be fitted. The denture base can rub against the high points and may cause sore spots. The fit of the denture may also be affected.

People who have had missing teeth for quite some time have lost some of their bone in their jaws. The top part of the jawbone, referred to as the ridge, can become very thin. Some people may have a lip of bone that protrudes from the jaw. Dentists use alveoplasty in order to smoothen out these lumps/irregularities in the jawbone, flatten the ridge of the jaw, or to taper the ridge of the jaw.

An alveoplasty also aims to facilitate the healing procedure as well as the successful placement of a future prosthetic restoration.

2. Defenition for alveoplasty

Alveoplasty is a surgical procedure used to smoothen out jawbone. This is done in areas where teeth have been removed or where teeth have been lost. Alveoplasty can be done alone but it is usually performed at the same time with tooth extraction. Oral surgeons usually do alveoplasties although some dentists are also trained to do it.

In alveoplasty, the gums will be sutured over the hole/socket. This will speed up the healing and control the bleeding since there is no more open socket/hole left.

3. Indications

Alveoplasty is a pre-prosthetic surgical procedure that deals with the smoothing of rough alveolar bone/ridges after extraction on edentulous area or by trimming of bulbous tuberosities that create deep undercuts [uni-lateral or bi-lateral]

4. Alveoplasty Preparation

Before the actual procedure, the patient has to sign his/her consent first

Preparation for alveoplasty will depend on the individual. Some patients will be required to rinse with antimicrobial mouthwash prior to surgery. They may also be required to take antibiotics and pain medication before they go through surgery. Proper medical, dental and social history is to be taken prior to surgery.

5. Alveoplasty Procedures – operators are to comply to universal precaution policy

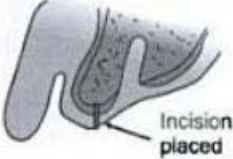



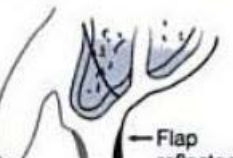



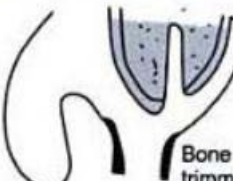



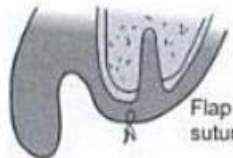
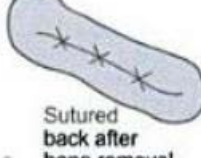
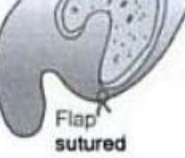

- Alveoplasty is to be performed in sterile environment [comply to the MOH Infection Control Manual] under local anaesthesia or using an intravenous sedation combined with local anaesthesia. Some of the patients may need general anaesthesia so their procedures may be done at the hospital operating theatre setup.
- The Surgeon/Dentist will make an incision in the gum tissue next to the area that needs bone trimming and raise the flap till bone is exposed
- The surgeon/Dentist will use a rotary drill/chisel/bone removing instrument to remove the necessary bone and then use a bone file to smoothen it.
- After smoothing of bone, the Surgeon/Dentist will irrigate the area with saline solution so that all bone particles and debris are removed.

- The gum tissue will be replaced and then it will be stitched together. Surgeon/Dentist usually uses locking sutures that minimize bleeding and seals the tissues together.
- Post Operative Instruction is to be given in writing and supported verbally.
- Medication: Painkiller and Antibiotic if necessary
- Ensure that proper Documentations and Treatment Fee is recorded.
- Appointment dates to be given to patient and recorded in the appointment book.

Do not over trim bulbous tuberosities or alveolar bone of edentulous patients to form a tapered ridge. This would allow no form of physical retention. Minor undercuts are also useful for denture retentions and stability.

6. DIAGRAM

Types of Alveoplasty and Their Procedures

<p>a. Simple - here, buccal alveolar plates and interseptal bone is removed.</p>	<p>b. Single tooth - done following removal of isolated posterior tooth to Reduce the prominent buccal cortical undercut.</p>	<p>c. Radical - here complete labial plate is removed in cases of extreme prominent undercut, skeletal horizontal jaw discrepancy or in preradiation therapy</p>	<p>d. Interradicular or Interseptal - here the interradicular bone is removed in cases of prominent premaxilla or skeletal class II disproportion</p>
 <p>Incision placed</p> <p>Step 1</p>	 <p>Excess bony tissue on sides of a single tooth</p> <p>Condition</p>	 <p>Incision placed</p> <p>Step 1</p>	 <p>Proclined incisors</p> <p>Condition</p>
 <p>Flap reflected</p> <p>Step 2</p>	 <p>Wedge shaped incision</p> <p>Step 1</p>	 <p>Labial bone to be removed</p> <p>Flap reflected</p> <p>Step 2</p>	 <p>Inter-radicular bone and tooth removed</p> <p>Step 1</p>
 <p>Bone trimmed</p> <p>Step 3</p>	 <p>Excess bone removed and filed</p> <p>Step 2</p>	 <p>Labial bone and tooth removed</p> <p>Step 3</p>	 <p>Dean's method only labial bone moved and flap sutured</p> <p>Step 2</p>
 <p>Flap sutured</p> <p>Step 4</p>	 <p>Sutured back after bone removal</p> <p>Step 3</p>	 <p>Flap sutured</p> <p>Step 4</p>	 <p>Obwegeser method both palatal and labial bone moved</p> <p>Step 2</p>

7. Post Operative Advice

- After Alveoplasty procedure, pain will be expected in the area for approximately a week or so. For the first few days, you may have to take painkillers eg. Panadol Tablets. Over-the-counter medication like Acetaminophen, Tylenon, Ibuprofen, Advil, and Motrin can be used as well upon prescription.
- There will be swelling for the first twenty four hours. This will subside later on. You may use icepack compression on your face in order to keep the swelling down.
- You may take antibiotics in order to prevent infection of the area, especially if you are old and if you have had a lot of teeth removed. You may have to use an antibacterial rinse that your dentist will provide or requested.
- You have to eat soft and warm foods until the stitches have fully dissolved/removed. You must also avoid using a straw because the suction may encourage bleeding. After a week or two, the Surgeon/Dentist will review your condition again.

8. Risks of Alveoplasty

The risks of alveoplasty are

- Excessive bleeding which is a rare complication. This bleeding should eventually taper off
- Infection in the mouth since there is a lot of bacteria there. The risk is relatively low but surgeon may still prescribe some antibiotics in order to help prevent infections
- Wound opening happens when the stitches become loose.
- Trauma to the nerve that causes the sensation to the lips and the chin.

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- This is a rare complication that can happen If the nerves are bruised then the lip and chin may feel numb even after the numbness. In very rare cases, the nerves may become permanently damaged and numbness may be permanent
- Soft & Hard Tissue Trauma.

9. Advice to patients

After alveoplasty, you should contact your Surgeon/Dentist if you experience:

- Excessive bleeding and increased swelling after the first 24 hours.
- Any signs of infection like chills, fever and inflammations
- Loosening of the stitches and the exposition of the bone

NOTE:

1. Report to Accident & Emergency Unit after working hours, weekends and Public Hollidays.
2. Report directly to Dental Clinic durring working hours [8.00am – 4.30 from Monday to Thursday and 8.00am to 4.00pm on Fridays]

10. References:

3. British Assosiation of Oral and Maxillofacial Surgeons – 2008.
4. Peterson, L. J. Principles of Oral and Maxillofacial Surgery. Vol. II. J. B. Lippincott Co., Philadelphia, 1992.
5. Peterson, L.J., Contemporary Oral and Maxillofacial Surgery, 2nd ed., Mosby Year-book Inc., St. Louis, 1993
6. Fonseca, R.J. and Davis, W.H. Reconstructive Preprosthetic Oral and Maxillofacial Surgery. W.B. Saunders Co., Philadelphia, 1986.

