

**COLLEGE OF DENTAL SCIENCES AND RESEARCH CENTRE**

**DEPARTMENT OF ORAL AND MAXILLOFACIAL SURGERY**

**CLINICAL DEMONSTRATION PG**



Clinical demonstration



Clinical demonstration

**COLLEGE OF DENTAL SCIENCES AND RESEARCH CENTRE**

**DEPARTMENT OF ORAL AND MAXILLOFACIAL SURGERY**

**CLINICAL DEMONSTRATIONS UG**



Clinical demonstration

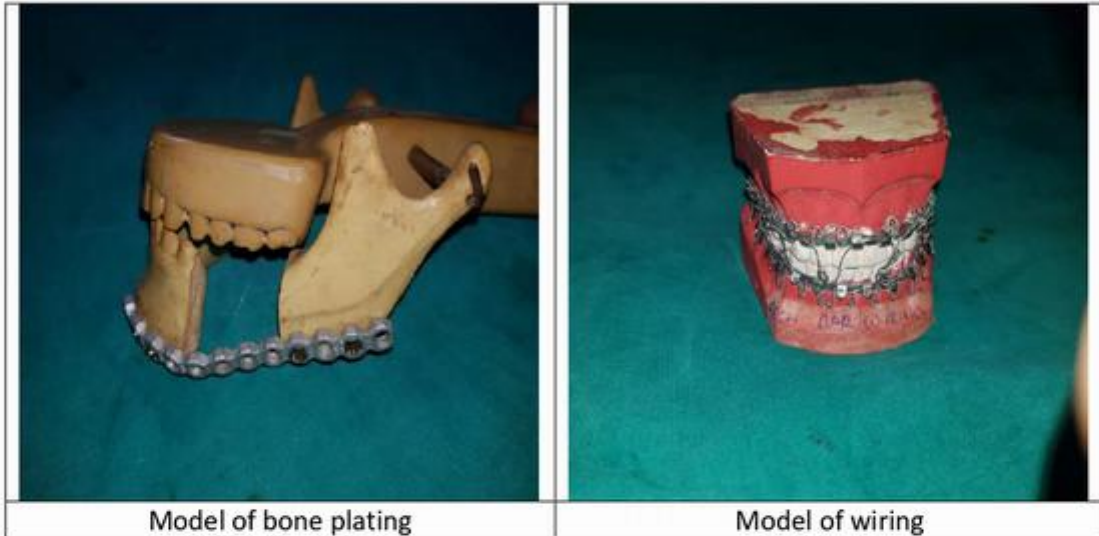


Clinical demonstration

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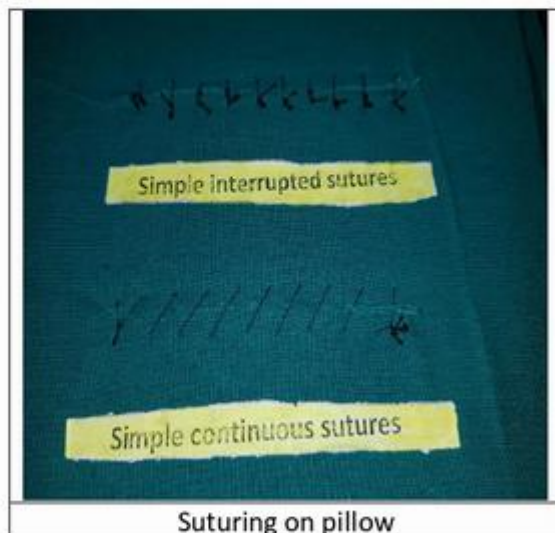
**DEPARTMENT OF ORAL AND MAXILLOFACIAL SURGERY**

**CLINICAL SKILL MODELS**



Model of bone plating

Model of wiring



Suturing on pillow

**COLLEGE OF DENTAL SCIENCE AND RESEARCH CENTRE**  
**DEPARTMENT OF ORAL AND MAXILLOFACIAL SURGERY**  
**POST-GRADUATE STUDENT EDUCATION POSTERS**

## CONDYLAR FRACTURE CLASSIFICATION

### UNILATERAL CONDYLAR FRACTURES

### BILATERAL CONDYLAR FRACTURES

### COMPREHENSIVE CLASSIFICATION: LINDHAL (1977)

**A. Fractured level**

1. Condyle head fracture
2. Condylar neck
3. Subcondylar

**B. Relationship of condylar fragment to mandible**

1. Unfractured
2. Displaced
3. Displaced with stable contact
4. Displaced with the same contact
5. Anteroposterior overlap
6. Without contact between the fragments

**C. Relationship to foramen**

1. Adjacent
2. Displaced
3. Dislocated

**D. Injury to meniscus**

### ROWE AND KILLEY'S CLASSIFICATION (1968)

**A. Intraarticular fracture of high condylar fracture**

**B. Extraarticular or low condylar**

**C. Fractures associated with injury to the capsule, ligament and meniscus**

**D. Fractures involving the adjacent bone**

### SPIESSEL AND SCHROLL CLASSIFICATION (1972)

**I. Nonfractured fracture**

**II. Low neck fracture with displacement**

**III. High neck fracture with displacement**

**IV. Head fracture**

**V. Low neck fracture with dislocation**

**VI. High neck fracture with dislocation**

### CLASSIFICATION BY MACLENNAN (1952)

**A. No displacement**

**B. Deviation**

**C. Displacement**

**D. Dislocation**

**E. Comminuted (Multiple fragmentation)**

### WASSMUND'S CLASSIFICATION (1934)

**A. Type I:** Fracture of the neck of the condyle with slight displacement of the head. The angle between the head and the axis of the ramus varies from 10 to 45 degrees.

**B. Type II:** An angle of 45 to 90 degrees is seen between the head and the ramus.

**C. Type III:** The fragments are not in contact.

**D. Type IV:** Fractured head articulates or is forced to the articular eminence.

**E. Type V:** Vertical or oblique fracture through the head of the condyle zone.

### THOMA (1945)

**A. Condylar Fractures**

1. Without displacement of condyle
  - Greenstick fracture
  - Intraarticular
  - Extraarticular
2. With displacement of condyle
  - Lateral
  - Medial
  - Forward
  - Backward
3. With overlying of fragments
4. With displacement in lateral or medial direction
  - Intraarticular
  - Complete fracture dislocation
  - Complete development of the condyle
  - Dislocation of the fracture part of the head of the condyle
5. With dislocation in forward direction
  - Ankylosis from the articular eminence
  - Popout from the articular eminence
  - With calcification and displacement of the meniscus
  - With comminution
  - Old fracture with ankylosis
  - Pseudoarthrosis
  - Ankylosis

**B. Subcondylar fracture**

1. Without displacement of fragment
2. With displacement of fragment

### ROWE AND KILLEY'S CLASSIFICATION

- Simple fractures of condyle
- Compound fracture of condyle
- Comminuted fracture associated with zygomatic arch fractures

**DEPARTMENT OF ORAL AND MAXILLOFACIAL SURGERY**  
 Guided by : Dr. Deval Mehta, Dr. S.K. Dewan, Dr. Sonal Madan, Dr. Kiran Patel  
 Dr. Rama Shankar, Dr. Ankit Shah, Dr. Maulik Mewada  
 Prepared by : Bijal Patel

# MIDFACIAL FRACTURE CLASSIFICATION

Presented By : Ushi Parmar, Sohini Parmar, Priyanka Parmar  
 Guided By : Dr. Deval Mehta, Dr. S.K. Dewan, Dr. Sonal Madan, Dr. Kiran Patel, Dr. Rama Shankar, Dr. Ankit Patel, Dr. Maulik Mewada  
 Department of Oral Maxillofacial Surgery

### LE FORT I (low level fracture, horizontal, floating, guerin's fracture)

- Fracture line
- Lateral margin of the anterior nasal aperture
- Below zygomatic tuberosity
- Lower third of the pyriform process
- If also goes to lateral wall of the nose
- Lower third of the nasal alveus
- To join the lateral fracture behind the alveolus

### LE FORT II (pyramidal fracture, subzygomatic fracture)

- Fracture line
- Through the nasal bridge, infraorbital rim, maxilla
- Along the lateral process of the nasal alveolar wall in one spot
- Anterior nasal spine
- Infraorbital rim
- Infraorbital foramen
- Lower third of the pyriform process of the maxilla
- Lower third of the nasal alveus
- To join the anterior wall fracture of the nasal alveus

### LE FORT III (High Transverse / Suprazygomatic Fracture)

- Through the nasal bridge
- Through the base of the nasal bridge
- Through the full length of the orbital rim, including the orbital rim
- Through the infraorbital rim above the zygomatic arch
- Through the lateral wall of the orbit
- Through the lateral wall of the orbit
- Through the lateral wall of the orbit
- Through the lateral wall of the orbit

### Le fort IV Le fort II / III fracture Buccal bone fracture

**IVa**  
+Supraorbital rim fracture

**IVb**  
+Anterior orbital fossa & supraorbital rim fracture

**IVc**  
+Anterior orbital fossa & orbital wall fracture

# HUMAN IMMUNODEFICIENCY VIRUS

Department of Maxillofacial Surgery  
 Presented By : Ushi Parmar  
 Guided By : Dr. Deval Mehta, Dr. S. K. Dewan, Dr. Sonal Madan, Dr. Kiran Patel, Dr. Rama Shankar, Dr. Ankit Patel, Dr. Maulik Mewada

#### ROUTES OF TRANSMISSION

- PARENTERAL
- SEXUAL
- PERINATAL

##### PARENTERAL

- Transfusion of blood & blood products
- Needle sharing (including intravenous drug users)
- Needle stick injuries

##### SEXUAL

- Homosexual
- Heterosexual

##### PERINATAL

- Vertical transmission from mother to fetus
- Parapartum
- Blood, serum, vaginal secretions & breast milk can transmit infection.
- Saliva does not transmit HIV infection.

#### UNIVERSAL PRECAUTION

- Wear safety spectacles to protect eye
- Waterproof gown to protect front & arms
- Full boots to protect feet
- Wear double pairs of gloves
- Keep surgical assistants to a minimum

- Sharp instruments should be passed from scrub nurse to the surgeon in a kidney tray to avoid injury.
- Put used needles in puncture resistant containers & never try to replace them back in protective sheath.

- Health workers with medullary lesions weeping dermatitis should not handle such patients.
- Wear gloves during procedure (taking blood samples, inserting cannula, dental extraction)

#### POST EXPOSURE PROPHYLAXIS

##### STEP 1- FIRST AID MANAGEMENT OF EXPOSURE

- Immediately wash the exposed skin or wound with water and soap.

DO NOT USE ANTISEPTICS OR SKIN WASHES.

Wash eyes immediately with water or saline.

Spit fluid immediately and rinse the mouth.

##### STEP 2- ESTABLISH ELIGIBILITY FOR PEP

##### STEP 3- COUNSELLING FOR PEP

- Psychological Support
- Documentation of exposure

##### STEP 4- PRESCRIBE PEP

- Basic Regimen (2 drug combination)
- Expanded Regimen (3 drug combination)

##### STEP 5- HIV CHEMOPROPHYLAXIS

- Zidovudine (AZT)
- Stavudine (dST)
- Lamivudine (3TC)

##### STEP 6- FOLLOW UP OF EXPOSED PERSON

## ADIPOSE DERIVED STEM CELL FROM HUMAN BUCCAL FAT PAD FOR USE IN ORAL AND MAXILLOFACIAL SURGERY

Any attempt to regenerate tissues in the body, whether accomplished in the laboratory or directly in the patient, by adding associated biologic mediators and matrices. This is known as tissue engineering. Stem cells which are derived from adipose tissue are known as Adipose Derived Stem Cell (ADSC).



Isolation and culture: adipose tissues are obtained from buccal fat pad (BFP, ASCs)



The tissues are enzymatically digested by 0.75% type I collagenase for 30 min at 37°C. The stromal vascular fraction is obtained by centrifugation at 1200 g for 10 min, filtered through a sterile medication filter, and plated (355 cells/cm<sup>2</sup>) in the medium supplemented with 20% fetal bovine serum (FBS), 50 U/ml penicillin, 50 U/ml streptomycin, and 200 U/ml nystatin (Sigma Aldrich)



Both cell types have to maintain in culture for 21 days and counted every week. The doubling time has to calculate as  $\ln(N/NO)/\ln 2$ , where N is the number of the counted cells and NO represents the number of plated cells. This seeded cell can be differentiate in various form like adipogenic, osteogenic, chondrogenic as their needs.

### INDICATIONS



ADSC can be used in surgically excised tumor and cyst like lesions.

ADSC can be used in dental implant site to create bone by its osteogenic differentiation.

ADSC can be used in TMJ pain problems. It can be planted in its chondrogenic differentiation.

ADSC can be used in surgically removal of impacted teeth for better healing.

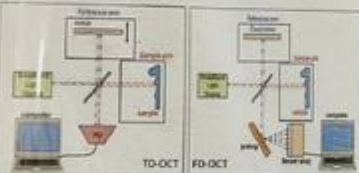
ADSC can be used in segmental or hemisection of mandible which is generally seen in osteosarcoma.

DR. SMIT DEAI

## OPTICAL COHERENCE TOMOGRAPHY

### INTRODUCTION:

- OCT is a high resolution and minimally invasive, non radioactive optical imaging method, which provides in vivo cross-sectional images of living tissue in real-time.
- It can differentiate between benign, premalignant and early malignant lesions with high sensitivity and specificity.
- Two different types of OCT systems: time-domain OCT (TD-OCT) & frequency domain OCT (FD-OCT).



### HISTORY & PRINCIPLE:

- First reported by Fujimoto et al. in 1991.
- First applied in vivo in human retina and in atherosclerotic plaques.
- It is also used in gastroenterology, ophthalmology, dermatology, and dentistry.
- By using a low-coherence broadband near-infrared light source, it is possible to obtain excellent spatial resolution (~20 μm) and real-time images.
- It is an optical imaging technique that enables cross-sectional imaging of microstructures of tissue in vivo.
- OCT can provide "optical biopsy" without the need for excision and processing of specimens as in conventional biopsy and histopathology.



**Dysplastic basal mucosa**  
The OCT image of a dysplastic lesion (Fig. 8) parallels histopathological status (Fig. 9) showing epithelial thinning, loss of stratification in lower epithelial strata, epithelial down-growth, and loss of epithelial stratification as compared to healthy oral mucosa (Fig. 5).

**SCC on the alveolar mucosa**  
In the OCT image (Fig. 8), the epithelium is highly variable in thickness, with areas of erosion and extensive down growth and invasion into the sub-epithelial layers.

**Specified leukoplakia on tongue**  
The area in the box shows a focal disruption of the surface keratin layer and mild thinning (atrophy) of the epithelium.



- A) "Normal" tongue OCT - H/C between EP & LP.
  - B) White tongue plaque OCT - Irregular surface, decreased contrast and intact BM.
  - C) Photograph of the tongue.
- EP, epithelium; LP, lamina propria; MP, muscularis propria. Black arrows indicate the BM. Bar = 1 mm.


- USES:**
- Differentiation b/w benign, premalignant and malignant mucosa' changes.
  - For screening, monitoring existing lesions, guiding biopsies, surgical guidance and post-treatment surveillance.
  - The OCT investigations can be performed in an outpatient setting.
  - Easy access to oral cavity.



PG394 - Dr. Ekta Mistry

## CRANIO-FACIAL FIBROUS DYSPLASIA - A CASE REPORT

### PRE-OPERATIVE



### MEDICAL MANAGEMENT

	Date	Alkaline Phosphatase (u/L)
(1) Risedronate - 35 mg Q7 (pre bisphosphonate) (1 tab/week)	August 2012	589 U/L
(2) Calcium - 125 mg (biologic active form of Ca, 5) (2 tabs/week)	November 2012	249 U/L
(3) Denosumab (100 mg (6x 3)) + Calcium carbonate (50 mg) (1 tab. at bed time)	January 2013	219 U/L
(4) Denosumab (100 mg (6x 3)) (1 tab/3 days)	March 2013	712 U/L
	August 2013	221 U/L
	October 2013	830 U/L

### RADIOGRAPHS BEFORE BISPHOSPHONATE THERAPY



### RADIOGRAPHS AFTER BISPHOSPHONATE THERAPY



### SURGICAL MANAGEMENT



### POST-OPERATIVE



POST - DR. BITU P. SHAH

## INTRAORAL GRAFTING OF TISSUE ENGINEERED HUMAN ORAL MUCOSA

*EVYOME is a composite human oral mucosa Equivalent consisting of a dermal component composed of a human cadaveric dermis. Alloderm that is seeded with autogenous human oral keratinocytes to form an overlying stratified parakeratinized epithelial layer.*



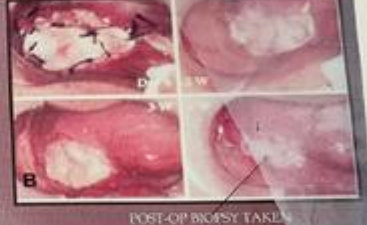
EVYOME



EVYOME PLACED AND SUTURED




HYPERPROLIFERATIVE STATE OF KERATINOCYTES



CUBOID OR CIRCULAR KERATINOCYTES OF BASAL LAYER




PARAKERATINIZED LAYER



BASAL LAYER



SUPRABASAL LAYER



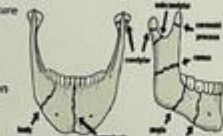
EXTRACELLULAR MATRIX

POST-OP BIOPSY TAKEN

# CLASSIFICATION OF MANDIBULAR FRACTURES

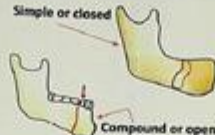


- 2. Anatomical Location:**  
**Rowe and Killey's classification:**  
 A) Fractures not involving the basal bone- are termed as dentoalveolar fractures  
 B) Fractures involving the basal bone of the mandible  
 1. Single unilateral 2. Double unilateral 3. Bilateral 4. Multiple  
**Dingman and Natvig's classification by anatomic region:**  
 A) Body of the mandible between canine and angle  
 B) Symphysis fracture  
 C) Canine region fracture  
 D) Angle region  
 E) Ramus region  
 F) Coronoid region  
 G) Condylar fractures  
 H) Dentoalveolar region

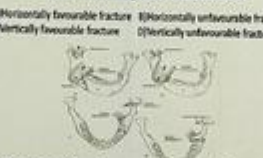


- 3. Relation of the fracture to the site of injury**  
 A) Direct fractures B) Indirect fractures
- 4. Completeness**  
 Complete and incomplete fractures
- 5. Depending on the mechanism**  
 A) Avulsion fracture B) Bending fracture  
 C) Burst fracture D) Countercoup fracture  
 E) Torsional fracture
- 6. Number of fragments**  
 Single, multiple, comminuted etc.

## 1. Kruger's General Classification:



- 7. Involvement of the integument**  
 A) Closed or open fractures  
 B) Grades of severity I-IV
- 8. Shapes or area of the fracture**  
 Transverse, Oblique, Butterfly, Oblique surfaced
- 9. According to the direction of fracture and favourability for treatment**



- 10. According to presence or absence of teeth in relation to fracture line**
- CLASS I**  
 A) an adequate number of teeth of suitable shape and stability  
 B) an inadequate number of teeth, whose shape or stability is unsuitable.
- CLASS II** A) Short edentulous posterior fragment  
 B) Long edentulous posterior fragment
- CLASS III**  
 A) Simple or compound fracture without much displacement  
 B) Open reduction and fixation C) Compound fractures.



## 11. AO Classification (Relevant to internal fixation)

- F: Number of fracture or fragments**  
 F0: Incomplete fracture F1: Single fracture  
 F2: Multiple fracture F3: Comminuted fracture  
 F4: Fracture with a bone defect
- L: Location of fracture**  
 L1: Pre-canine L2: Canine  
 L3: Post-canine L4: Angle  
 L5: supra-angular L6: Condyle  
 L7: Coronoid L8: Alveolar process
- O: Status of occlusion**  
 O0: No occlusion O1: Malocclusion  
 O2: Non-existent occlusion-edentulous mandible
- S: Soft tissue involvement**  
 S0: Closed S1: Open intraorally  
 S2: Open extraorally S3: Open intra and extraorally  
 S4: Soft tissue defect
- A: Associated fractures of the facial skeleton**  
 A0: None A1: Fracture and/or loss of tooth  
 A2: Nasal bone A3: Zygoma  
 A4: Lefort I A5: Lefort II  
 A6: Lefort III

Prepared by: Hemal Pandey, Kirti Parikh, Gaurav Sakari, Anshuman (2012-13) Guided by: Dr. S. K. Jeevan, Dr. Deval Mehta, Dr. Sonal Madan, Dr. Anil Patel, Dr. Ramesh Chandra, Dr. Ashish Datta, Dr. Shashi Bhandari, Department of Oral & Maxillofacial Surgery, (D.S.S.), Thane, Maharashtra.

# DENTAL IMPLANTS

**DENTAL IMPLANTS**  
 The most significant dental innovation of our generation

**Best Long Term Solution**  
 99% success rate

**Looks Appearance**  
 Natural looking

**Therium Metal Fuses to Bone**



**Implant Crown vs. Conventional Bridge to Replace a Single Missing Tooth**

**Bridge**  
 Requires preparation of adjacent teeth.

**Implant**  
 Does not affect adjacent teeth.

**Bridges Damage Adjacent Teeth** vs **Implants Protect Adjacent Teeth**

**Replacement of Single tooth**

**Replacement of Multiple tooth**

**Replacement of Full Arch/Mouth**


Conventional Bridges	Dental Implants
Requires removal of adjacent teeth.	Does not affect adjacent teeth.
Teeth decay is potential problem.	There are no chances of decay.
Root canal treatment may be required if nerves are affected.	Root canal treatment of adjacent teeth not required.
Greater tendency for gum disease.	Less likely to develop gum disease.
Less longevity than implants.	More longevity than conventional bridges.
Less costly and requires less time for final result.	More expensive and requires healing time before permanent teeth replacement.
No surgery required.	Requires minor surgery.

Guided by - Dr. Deval Mehta, Dr. Sonal Madan Prepared by - Dr. Shalin, Dr. Nisba, Dr. Urvi



## PTERYGOID IMPLANTS


Definition by Glossary of Oral and Maxillofacial Implants (GOMI): "Implant placement through the maxillary tuberosity and into the pterygoid plate" described by TULASNE in 1989, who credited Paul Tessier with the idea of placing implants in this position.




**Advantages**

- Overcomes the need for maxillary sinus lift and grafting procedures.
- No risk of sinus perforation or bone graft resorption.
- Shorter treatment time and it may allow immediate loading.
- Allows a prosthesis to have sufficient posterior extension: eliminates detrimental distal cantilever which cause screw fracture, prosthesis fracture, bone loss, and loss of osseointegration.

**Clinical Anatomy**



- Pyramidal and pterygoid processes composed of dense cortical bone
- Average thickness of bone at their juncture is 6-6.7 mm
- Implant passed at an angle of 45 degrees can incorporate up to 8-9 mm of dense cortical bone



**Disadvantages**

- Learning curve and technique sensitivity.
- Proximity to vital anatomic structures
- Difficult accessibility.
- Radiographically difficult to assess the marginal bone loss.

Prepared By: Dr. Malav H. Parikh

## Zygomatico-Maxillary Complex

Zygomatic bone associated with

- Frontal
- Maxilla
- Temporal bone


**Introduction**

3 suture : Zygomaticofrontal suture.  
Zygomaticotemporal suture.  
Zygomaticomaxillary suture.


**Classification**

### 1. Fracture Stable After Elevation

**(a) Arch Only (Medially Displaced)**




**(b) Rotation around vertical axis**




(A) Medially (B) Laterally

### 2. Fracture Unstable After Elevation

**(a) Arch Only (Inferiorly Displaced)**




**(b) Rotation Around Horizontal Axis**




(A) Medially (B) Horizontally

**(c) Dislocation enblock**



(A) Inferiorly (B) medially (C) Postero-Laterally

**(d) Comminuted Fractures**



Prepared By : Bharvi Patel, Chandni Patel, Dhairya Patel (Final Year 2012-13) Department of Oral & Maxillofacial Surgery  
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# ROLE OF BOTULINUM TOXIN TYPE A IN DENTAL IMPLANTOLOGY

Immediate loading of implant has become a hot topic in implant dentistry.

## Evaluation of force

- Parafunction
- Position of abutment in the arch
- Masticatory dynamics
- Nature of the opposing arch
- Direction of load forces
- Crown-Implant ratio

Jaw volume, bone quality, and overload are the three major determinants for late implant failures.

*This mobility can be the result of increasing muscular forces*

*Prophylactic administration of Botulinum toxin may facilitate a reduction of the strength of the masseter and temporalis muscles after implantation, especially with immediate load.*



## Limitation of Botulinum Toxin A

Administered a full dose of 200-250 U for each masseter muscle in order to provide an adequate reduction of chewing forces for up to 6 to 7 month

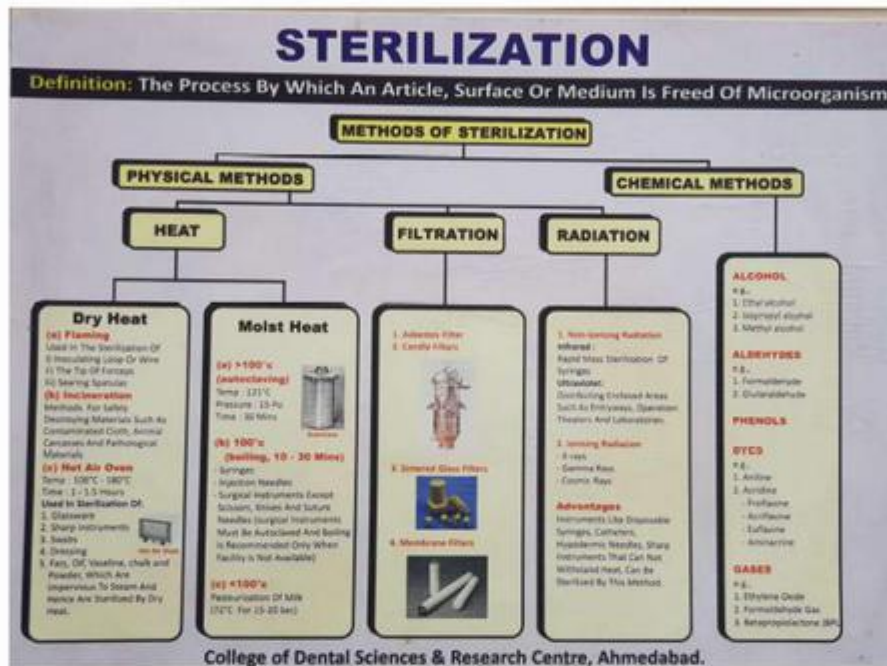
Relative contraindications to the use of BTX are pregnancy and lactation, neuromuscular Disease, motor neuron disease.



# COLLEGE OF DENTAL SCIENCE AND RESEARCH CENTRE

## DEPARTMENT OF ORAL AND MAXILLOFACIAL SURGERY

### UNDER-GRADUATE STUDENT EDUCATION POSTERS



# GLOVE WEARING TECHNIQUE



**STEP-1**  
RIGHT HAND HOLDS THE CUFF OF LEFT GLOVE, FINGERS OF LEFT HAND ARE PLACED INTO THE LEFT GLOVE.



**STEP-2**  
RIGHT HAND PULLS LEFT GLOVE & THE FINGERS OF LEFT HAND ARE PUSHED INTO THE GLOVE, KEEPING THE CUFF TURNED.



**STEP-3**  
LEFT HAND IS PLACED INSIDE THE CUFF OF RIGHT GLOVE & FINGERS OF RIGHT HAND ARE PUSHED INTO THE GLOVE.



**STEP-4**  
CUFF OF RIGHT GLOVE IS TURNED WITH LEFT HAND.



**STEP-5**  
CUFF OF LEFT GLOVE IS TURNED WITH RIGHT HAND.

**GUIDED BY:-**  
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Dr. DEVAL MEHTA  
Dr. SONAL MADAN  
Dr. SHITAL PATEL  
Dr. JIGAR DHUVAD

**PRESENTED BY:-**  
SHAM OJHA  
SHAM KISSAL  
BANDU TELAR  
TRIVEDI NEHAL

**DEPARTMENT OF ORAL & MAXILLOFACIAL SURGERY,  
COLLEGE OF DENTAL SCIENCES & RESEARCH CENTRE, A'BAD.**

# GOWNING TECHNIQUE IN O.T.



**STEP-1**  
PICK UP THE ENTIRE FOLDED GOWN BY GRASPING IT WITH ONE HAND.



**STEP-2**  
GRASP THE GOWN WITH BOTH THE HANDS & LIFT IT FROM THE TABLE BEING CAREFUL TO TOUCH ONLY THE INSIDE THE LAYER.



**STEP-3**  
HOLD THE GOWN NEAR GOWN NECK & ALLOW IT TO UNFOLD BEING CAREFUL THAT IT DOES NOT TOUCH EITHER THE BODY OR OTHER STERILE OBJECTS.



**STEP-4**  
SLIDE BOTH THE ARMS PART AWAY INTO THE SLEEVES OF THE GOWN, KEEPING THE HANDS AT THE SHOULDER LEVEL AWAY FROM THE BODY.



**STEP-5**  
SLIDE BOTH ARMS FURTHER INTO GOWN'S SLEEVES & PROTRUDE THE HANDS OUT FROM THE SLEEVES.



**STEP-6**  
CIRCULATOR THEN TIES THE GOWN AT THE NECK & BACK LEVEL.



**STEP-7**  
SURGEON SHOULD THEN TIE BOTH THE SLEEVES OF THE GOWN.

**PREPARED BY:-**  
KAUSHAL SHAH  
JAYSHIN PATEL  
KIRAN PATEL  
3RD B.B.S (2010-2011)

**ROHIT PATEL**  
CHIRAG MISHRA  
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Dr. SONAL MADAN  
Dr. SHITAL PATEL  
Dr. JIGAR DHUVAD

# PRINCIPLES AND TYPES OF ELEVATORS



DR. RAJ K. AGARWAL  
M.D. AGARWAL  
M.D. AGARWAL  
M.D. AGARWAL

# OPERATOR-PATIENT POSITION IN MAXILLARY TOOTH EXTRACTION



DR. RAJ K. AGARWAL  
M.D. AGARWAL  
M.D. AGARWAL  
M.D. AGARWAL

## OPERATOR-PATIENT POSITION IN MANDIBULAR TOOTH EXTRACTION

**FORCEPS**

Mandibular posterior forceps  
Mandibular double forceps  
Mandibular premolar forceps

**PATIENT'S POSITION**  
Mandibular extraction plane parallel to floor.

**FOUR HANDED DENTISTRY**

**OPERATOR POSITION FOR MANDIBULAR TOOTH EXTRACTION**

**Operator position for extraction of mandibular right posterior teeth**  
Operator is seated in the line of the patient or in the back at 15 degree position.

**Operator position for extraction of mandibular anterior teeth**  
Operator seated in front of the patient at 45 degree position.

**Operator position for extraction of mandibular left posterior teeth**  
Operator should stand in front of the patient.

**PLACEMENT OF FINGERS DURING EXTRACTION**

**RIGHT quadrant**  
The thumb supports the tongue. The index finger supports the lip and middle finger supports lower border of alveolar ridge.

**LEFT quadrant and anterior quadrant**  
For the left posterior and anterior teeth, the index finger of the left hand supports the cheek and lip as it is placed in the buccal vestibule. The thumb is placed below the lip so that the jaw is held between the fingers and thumb.

**LEFT quadrant**

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PRE OPERATIVE INSTRUCTIONS	POST OPERATIVE INSTRUCTIONS
<p>(1) Patient must inform doctor if he/she is suffering from any medical conditions like <b>diabetes, hypertension &amp; any heart diseases</b></p> <p>(2) Patient must inform the doctor about any <b>medicine and allergy</b>.</p> <p>(3) Patient must inform the doctor about any previous history of <b>hospitalization, major minor illness &amp; surgery</b>.</p> <p>(4) Patient undergoing treatment should not be <b>empty stomach</b>.</p> <p>(5) Patient must bring all previous <b>medical reports</b> regarding hypertension, Diabetes, Heart Conditions, blood disorder if any.</p>	<p>(1) The gauze pack placed over the surgical area should be kept for <b>30 to 45 minutes</b>.</p> <p>(2) After removing gauze pack patient should eat <b>cold &amp; soft food items</b> like icecream &amp; milkshake.</p> <p>(3) Patient is recommended <b>not to spit or gargle</b> for at least <b>24 hours</b>.</p> <p>(4) Patient is recommended not to eat hot &amp; hard food items &amp; not to eat from side of surgery for at least 24 hrs.</p> <p>(5) Some bleeding is expected after removal of tooth till 24 hours.</p> <p>(6) If bleeding does not stop after 24 hours than patient is advised to inform the doctor regarding the same.</p> <p>(7) Place ice packs to the sides of face where surgery was performed &amp; avoid hot fomentation bag.</p> <p>(8) <b>All the instructions &amp; advice given by doctor should be followed strictly &amp; meticulously.</b></p> <p>(9) Patient is instructed to take all the medicines timely &amp; regularly.</p> <p>(10) Patient must come for <b>followup</b> timely &amp; regularly.</p>

**College of Dental Science & Research Centre. 3rd Year 2015-16**

Guided by Dr. Dewan, Dr. Deval Mehta, Dr. Sonal Madan, Dr. Kiran Patel, Dr. Avni Acharya, Dr. Setu Shah  
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# SYNCOPE

**Definition:-** Syncope is defined as a sudden, transient loss of consciousness that usually occurs secondary to a period of cerebral ischaemia.

## Predisposing factors:-

**Psychogenic factors:**  
 1. Fear  
 2. Anxiety  
 3. Pain  
 4. Emotional stress  
 5. Sight of blood

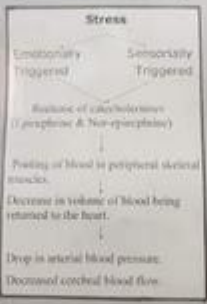
**Non psychogenic factors:**  
 1. Excess sitting or standing posture for prolonged period  
 2. Hunger from fasting or a missed meal  
 3. Physical & mental exhaustion  
 4. Poor physical condition  
 5. Hot, humid, crowded environments

## Causes

**Psychiatric causes**  
 - Somatization disorders  
 - Hysteria  
 - Panic  
 - Flight

**Neurological causes**  
 - Betanose disorders  
 - Transient ischaemic attacks  
 - Subarachnoid aneurysms  
 - Normal pressure hydrocephalus

## Pathophysiology



## Signs and Symptoms

- Pre-syncope**
1. Warm feeling in face and neck
  2. Pale or ashen coloration
  3. Sweating
  4. Faint cold
  5. Abdominal discomfort
  6. Lightheaded or dizziness
  7. Mydriasis
  8. Yawning
  9. Increased heart rate
  10. Sludgy or slight decrease in blood pressure
- Syncope**
1. Patient loses consciousness
  2. Generalized muscle relaxation
  3. Bradycardia
  4. Seizure
  5. Eyes open
- Post-syncope**
1. Variable period of mental confusion
  2. Heart rate increases
  3. Blood pressure back to normal level

## Causes

**Cardiac causes**  
 - Structural cardiac or cardiopulmonary disease  
 - Cardiac arrhythmias  
 - Structurally mediated syncope syndromes  
 - Orthostatic postural hypotension

**Metabolic causes**  
 - Hypoxia  
 - Hypoglycaemia  
 - Hypernatraemia

# Management Of Syncope

**Step 1: Assess consciousness**

**Step 2: Termination of dental procedure**

**Step 3: Summoning for help**

**Step 4: P-Position victim**

**Step 5: A-Assess and open airway**

**Head tilt chin lift technique**

**Step 6: Assess ABCs (airway, breathing & circulation)**

**Look-Listen-Feel technique**

**Step 7: Assess circulation**

**1. Monitor heart rate and blood pressure**

**Step 8: D-Definitive care**

**1. Monitor vital signs**  
 (10-12 breaths/min)  
 2. Assess for air ventilation  
 3. Oxygen enriched ventilation

**1. Administer oxygen**  
 Administer the vital signs  
 Administer manual resuscitation apparatus  
 Administer Airway if bradycardia persists

**1. Place syncope patient on their side** (Default recovery)  
 2. Activate Emergency Medical services

**Determine the precipitating factors**

**MEDICAL DATA**

Signs	Response
Heart rate	> 100 bpm / < 60 bpm / irregular
Blood pressure	> 120/80 mmHg / < 90/60 mmHg
Respiratory rate	> 20 / < 10 / irregular
Oxygen saturation	> 95% / < 90%
ECG	Normal / Abnormal

DEFINITION		SHOCK		DEFINITION			
Shock is a life threatening condition due to low blood pressure with impaired tissue perfusion maintained by vasoconstriction.		Shock is a term used to describe the clinical syndrome that ensues when there is critical perfusion of those organs due to acute or chronic failure.					
TYPES							
HYPOTENSIVE SHOCK	CRASHDOWNIC SHOCK	SEPTIC SHOCK	ANAPHYLACTIC SHOCK	VARIABLE/SPONTANEOUS SHOCK	NEUROGENIC SHOCK	PSYCHOGENIC SHOCK	CLASSIFICATION
<p>Causes from</p> <ul style="list-style-type: none"> <li>Cardiac failure</li> <li>Major surgery</li> <li>Major trauma</li> <li>Major burns</li> <li>Major hemorrhage</li> <li>Major infection</li> <li>Major allergic reaction</li> <li>Major drug overdose</li> <li>Major anesthetic overdose</li> <li>Major spinal cord injury</li> <li>Major pulmonary embolism</li> <li>Major aortic dissection</li> <li>Major aortic rupture</li> <li>Major aortic aneurysm</li> <li>Major aortic stenosis</li> <li>Major aortic regurgitation</li> <li>Major aortic coarctation</li> <li>Major aortic dissection</li> <li>Major aortic rupture</li> <li>Major aortic aneurysm</li> <li>Major aortic stenosis</li> <li>Major aortic regurgitation</li> <li>Major aortic coarctation</li> </ul>	<p>This type of shock is caused by a sudden drop in blood pressure due to a massive loss of blood volume.</p> <ul style="list-style-type: none"> <li>Causes: Major trauma, major surgery, major hemorrhage, major infection, major allergic reaction, major drug overdose, major anesthetic overdose, major spinal cord injury, major pulmonary embolism, major aortic dissection, major aortic rupture, major aortic aneurysm, major aortic stenosis, major aortic regurgitation, major aortic coarctation.</li> </ul>	<p>Septic shock is a type of shock caused by a massive infection.</p> <ul style="list-style-type: none"> <li>Causes: Major infection, major allergic reaction, major drug overdose, major anesthetic overdose, major spinal cord injury, major pulmonary embolism, major aortic dissection, major aortic rupture, major aortic aneurysm, major aortic stenosis, major aortic regurgitation, major aortic coarctation.</li> </ul>	<p>Anaphylactic shock is a type of shock caused by a massive allergic reaction.</p> <ul style="list-style-type: none"> <li>Causes: Major allergic reaction, major drug overdose, major anesthetic overdose, major spinal cord injury, major pulmonary embolism, major aortic dissection, major aortic rupture, major aortic aneurysm, major aortic stenosis, major aortic regurgitation, major aortic coarctation.</li> </ul>	<p>Variable/spontaneous shock is a type of shock caused by a massive, unpredictable drop in blood pressure.</p> <ul style="list-style-type: none"> <li>Causes: Major trauma, major surgery, major hemorrhage, major infection, major allergic reaction, major drug overdose, major anesthetic overdose, major spinal cord injury, major pulmonary embolism, major aortic dissection, major aortic rupture, major aortic aneurysm, major aortic stenosis, major aortic regurgitation, major aortic coarctation.</li> </ul>	<p>Neurogenic shock is a type of shock caused by a massive drop in blood pressure due to a massive loss of blood volume.</p> <ul style="list-style-type: none"> <li>Causes: Major trauma, major surgery, major hemorrhage, major infection, major allergic reaction, major drug overdose, major anesthetic overdose, major spinal cord injury, major pulmonary embolism, major aortic dissection, major aortic rupture, major aortic aneurysm, major aortic stenosis, major aortic regurgitation, major aortic coarctation.</li> </ul>	<p>Psychogenic shock is a type of shock caused by a massive drop in blood pressure due to a massive loss of blood volume.</p> <ul style="list-style-type: none"> <li>Causes: Major trauma, major surgery, major hemorrhage, major infection, major allergic reaction, major drug overdose, major anesthetic overdose, major spinal cord injury, major pulmonary embolism, major aortic dissection, major aortic rupture, major aortic aneurysm, major aortic stenosis, major aortic regurgitation, major aortic coarctation.</li> </ul>	<p>Classification of shock:</p> <ol style="list-style-type: none"> <li>1. Hypotensive</li> <li>2. Crashtdownic</li> <li>3. Septic</li> <li>4. Anaphylactic</li> <li>5. Neurogenic</li> <li>6. Psychogenic</li> <li>7. Variable/spontaneous</li> </ol>

### OPHTHALMIC DIVISION OF TRIGEMINAL NERVE (V1)

First branch and smallest of all three division, purely **SENSORY**.

**INNERVATION** ...-Innervates eye ball, conjunctiva, lacrimal gland, mucous membrane of nose and paranasal sinuses, skin of forehead, eyelid and nose.



**BRANCHES** - NASOCILIARY, FRONTAL, LACRIMAL NERVES

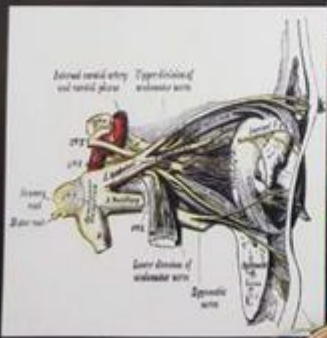
**ACCESSORY NERVES**

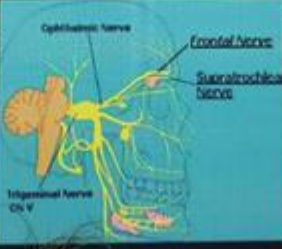
- ANTERIOR ETHMOIDAL
- INTERNAL NASAL NERVE
- EXTERNAL NASAL NERVE
- ILIARY GANGLION
- SHORT CILIARY
- LONG CILIARY
- INFRAORBITAL
- SUPRAORBITAL


**LACRIMAL NERVE**

SMALLEST OF ALL BRANCHES







PREPARED BY: RINKI, PRITIKA DEPARTMENT OF ORAL AND MAXILLOFACIAL SURGERY (2012-2013)



## MANDIBULAR DIVISION OF TRIGEMINAL NERVE(V3)

**Introduction:**

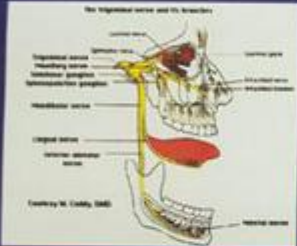
The mandibular division is the largest branch of the trigeminal nerve. It travels directly downward to exit the skull along with motor root through foramen ovale. It is a mixed nerve with two roots - a large sensory root and a small motor root.

**Branches:**

The third division of the trigeminal nerve gives off branches in three areas : from the main trunk, the anterior and posterior division

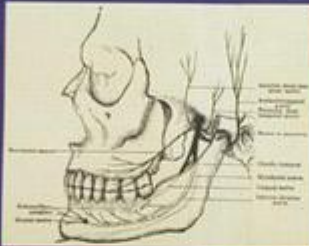
**MAIN TRUNK:**

1. Meningeal
2. Nerve to medial pterygoid



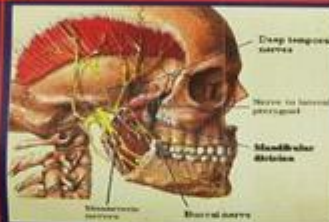
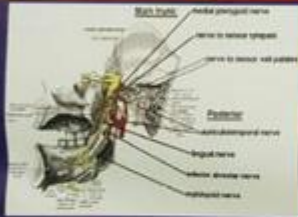
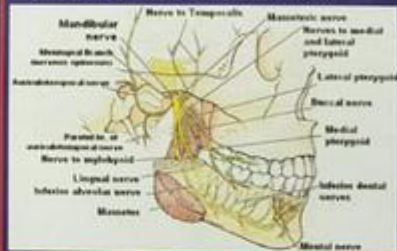
**ANTERIOR DIVISION :**

1. Deep temporal
2. Lateral pterygoid
3. Masseteric
4. Buccal



**POSTERIOR DIVISION:**

1. Auriculotemporal
2. Lingual
3. Inferior alveolar- Nerve to mylohyoid



DEPARTMENT OF ORAL & MAXILLOFACIAL SURGERY  
KHUSHBU, CHIRAG, OSHIN

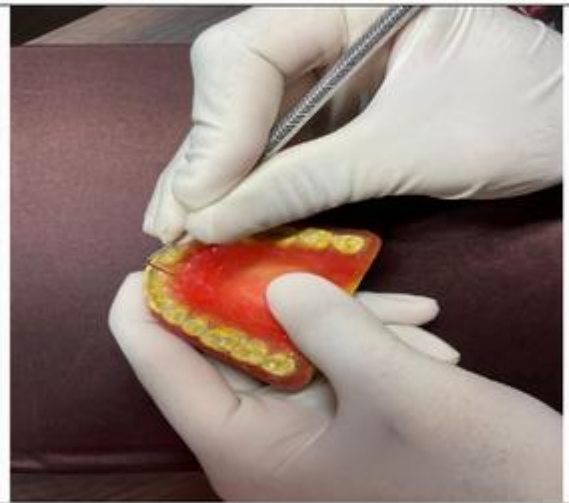
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**DEPARTMENT OF ORAL AND MAXILLOFACIAL SURGERY**

**SIMULATION TRAINING PG**



Wiring on model



Flap surgery on model

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**SIMULATION TRAINING UG**



Blood pressure measurement



Suturing on pillow



Extraction of maxillary anterior tooth



Extraction of mandibular anterior tooth



LA injection on pillow