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Surgery

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Q: 1

## Surgical Instruments:-

Answer

Following are the instruments use in extraction process.

### ⇒ Examination Instruments:-

- (i) Mouth mirror
- (ii) ~~testi~~
- (iii) Cotton pliers
- (iv) Probe
- Surgical curette

### ⇒ Elevators:-

- (i) Straight elevators
- (ii) Angular
- (iii) Cross bar
- (iv) Crails
- (v) Periapical elevator

### ⇒ Forceps:-

- (i) Maxillary
- (ii) Mandibular
- (iii) Cow horn

- Maxillary central incisor forceps are straight and posterior forceps are angular while mandibular all are angular.
- Broken down root forceps.
- Bayonet
- Deciduous forceps (for children)



- \* ~~Anesthesia gun~~ Anesthesia syringe
- Cartridge
- Block needle (long)
- infiltration need (short)

- \* Scalpel

- \* Surgical blades

- \* Hemostats

- \* Rongeur

- \* Bone file

- \* Bone ronger

- \* Bone chisel and mallet.

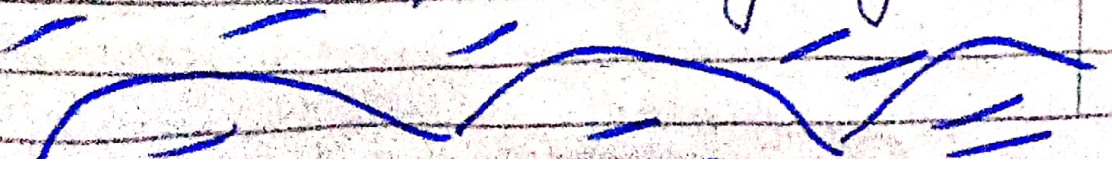
- \* Saliva ejection tip

- \* Needle holder

- \* Suture

- \* Tissue scissors

- \* Disposable syring





Q:2

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## Local Anesthesia:

Local anesthesia is defined as loss of sensation in a local area of the body caused by inhibition of the conduction process in peripheral nerves.

⇒ Six Constituents OF LA:

### ① Local anesthetic agent:

\* Most commonly used local anesthetic agent in local anesthesia is lignocain hydrochloride 2%.

USES

It cause nerve conduction.

### ② Vasoconstrictor:

Adrenaline is used local anesthesia for vasoconstriction in local anesthesia.

USES:

It causes slow absorption of local anesthesia from the site.



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\* Prolong the action. provides blood. less field.

\* Reduces the systemic toxicity

### ⇒ Reducing Agents.

\* Sodium metasilphate is used to prevent the oxidation of the vasoconstrictor.

### ⇒ Preservatives:

\* Methylparaben  
it increases the shelf life of the anesthetic solution acts as a bacteriostatic agent.

### ⇒ Fungicide:

\* Thymol is used as fungicide.

### ⇒ VEHICLE:

\* distilled water is used as vehicle.

\* It produce the volume of the solution and act as diluent.



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Q:3

## Complications:

- \* Soft tissue injuries
- \* problem with the tooth being extracted
- \* Injuries to the adjacent tooth
- \* Injuries to the osseous structures
- \* Oroantral communication
- \* Post operative bleeding
- \* Delayed healing and infection
- \* Injuries of the mandible

## ⇒ Soft tissue injuries:

### Causes:

- \* Surgeon's lack of adequate knowledge to the delicate nature of the mucosa.
- \* Attempts to do surgery with inadequate access.
- \* Rushing during surgery
- \* use of excess and uncontrolled forces.

\* Soft tissue injuries occur in the form of:



- (5)
- (A) Tear of a mucosal flap
  - (B) Puncture wounds
  - (C) Stretch or abrasion

## (A) Tear OF a Flap:-

\* The most common soft tissue ~~surgery~~ injury during surgery

⇒ Causes:-

\* Inadequately sized envelop flap



\* Forcibly retraction beyond the ability of the tissue to stretch



\* Tearing

⇒ Prevention:-

(1) \* Creating adequately sized flap to prevent excess tension on the flap.

2 \* Using controlled amounts of retraction forces on the flap.

(3) \* Creating releasing incisions when indicated.



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⇒

## Management's

Carefully repositioned  
once the surgery is  
completed.

\* Excise the edges of  
torn flap to create a  
smooth flap margin.

(B)

## Punctured Wound:

### Causes

≡ \* Due to uncontrolled  
forces during using the  
instruments such as Spaulsh  
or a periosteal elevator  
which may slip from the  
surgical field and puncture  
or tear into adjacent soft  
tissue.

### ⇒ Prevention:

\* Use of controlled  
forces.

- (2) using finger rests
- (3) support from the  
opposite hand if slippage  
is anticipated.

### ⇒ Management's

\* Primary aim



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is prevention of infection and allowing healing to occur.

\* If wound bleeds excessively hemostasis left open unsutured healing by secondary intention.

## © Stretch Or Abrasion:

Common sites

\* lip, corners of the mouth

Causes:

≡ \* Abrasion or burns from the rotating shank of the bur rubbing on soft tissue

\* Metal retractor coming into contact with soft tissue.

### ⇒ Prevention:

Surgeon should focus on the cutting end of bur as well as the location of shank and shaft in relation to the soft tissues.

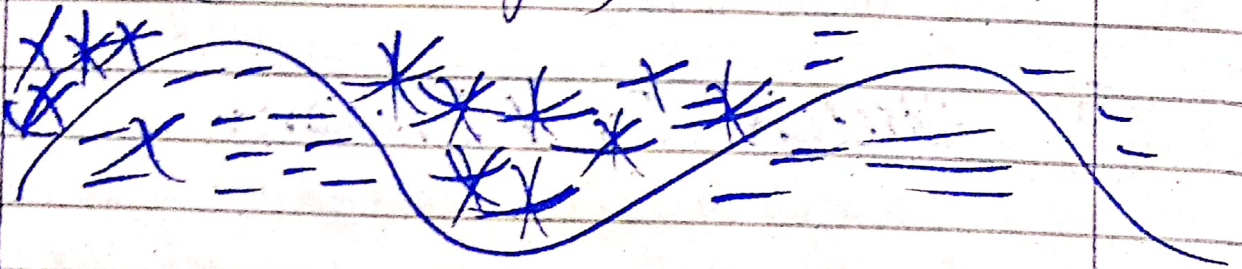
### ⇒ Management:

\* Clean the area with regular oral rinsing usually such wounds heal in 4-7 days without.



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\* Searing  
if such abrasion or burn does develop on skin advised to keep it moist with antibiotic ointment (5-10 days)



Q:4

### Impacted tooth.

Impacted wisdom teeth are third molars at the back of the mouth that don't have enough space to erupt.

"OR"

An impacted tooth is one that fails to erupt into the dental arch within the expected time.

### ⇒ Causes:

Irregularly in the position and pressure of an adjacent tooth

\* Density of the overlying or surrounding bone.



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\* Chronic inflammation with resultant fibrosis of the mucosa.

\* Lack of space due to under developed jaws, unduly over retention of the deciduous teeth.

\* inflammatory changes in the bone due to disease in children, like, chicken pox parotitis.

\* Heredity

\* Malnutrition

\* Endocrine dysfunction

\* Disease of jaw and surrounding tissue.

\* Grow at an angle toward the back of the mouth.

\* Grow at a right angle to the other teeth, as if the wisdom tooth is "lying down" within the jawbone.



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\* Grow at an angle toward the back of the mouth.

\* Grow straight up down like other teeth but stay trapped within the jawbone.

\* Obstruction for eruption

\* Lack of space

\* Ankylosis of primary or permanent tooth.

\* Non-absorbing over retained tooth.

\* Non absorbing alveolar bone

\* Ectopic position of tooth bud.

\* Dilaceration of roots

\* soft tissue or bony lesion - fibrosis

\* Habits

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Q:5

Technique:

Local anesthetics can block almost every nerve between the peripheral nerve endings. The most ~~per~~ peripheral technique is topical anesthesia to skin or other body surface.

\* Injection of local anesthesia is often painful. A number of methods can be used to decrease this pain, including

\* Techniques are the following:

→ Local Infiltration:

Small terminal nerve endings in the area of surgery are flooded with local anesthesia solution rendering them insensitive to pain. In this method insertion is made through the same area in which the solution has been deposited.

\* This technique is usually successful for treatment of mandibular deciduous canines



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incisors and even in molars

## ⇒ Field Block:

Local anaesthesia solution is deposited in proximity to the large terminal nerve branches so that the area to be anesthetized is circumscribed to prevent the central passage of afferent impulse.

\* Maxillary injections administered above the apex of the tooth can be termed field blocks.

## ⇒ NERVE BLOCK:

Method of securing local anaesthesia in which suitable local anesthetic solution is deposited within close proximity to the main nerve trunk, thus preventing nerve impulses from travelling centrally beyond that point.