



General Arrangement or Considerations for Extraction

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1. Light

Dentist or oral surgeon work in a limited accessible area (oral cavity), then he is going to do his work (extraction site) in a relatively inaccessible area in addition to that the shadow of the hand & the instrument he use , so good illumination of the operative field is very important & necessary to perform your work efficiently & safely.

2. Position of the operator

- When extracting any tooth in the oral cavity except the left mandibular molars , premolars, canines, the operator stand on the right-hand side of the patient, in other words in front of the patient.
- For removal of right mandibular cheek teeth MPC the operator stand behind the patient (this is for right handed operator), the left handed operator stands behind the patient when removal of left mandibular cheek teeth MPC .







3. Position of the patient

- Correct position of the patient is very important to avoid any Occupational Postural problems. The patient is seated comfort in the dental chair with head rest adjusted to fit the nape of the neck & support of the head.

Patient Position



a

For a maxillary extraction the chair should be tipped backward and maxillary occlusal plane is at 60 degrees to the floor. **The height of the dental chair should be 8cm below the shoulder level of the operator.**



b

For the extraction of mandibular teeth, the patient should be positioned in a more upright position the occlusal plane is parallel to the floor. **The chair should be 16cm or 6 inches below the level of operators elbow.**

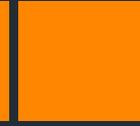
4. Height of the dental chair

- ❑ This is very important. If the site of the operation is either too high too low in relation to the operator, he work in mechanical disadvantage & in tiring & uncomfortable position.
- ❑ When maxillary teeth is being extracted the chair should adjusted so that the site of the operation is about 8 cm (3 inches) below the shoulder level of the operator.
- ❑ During extraction of mandibular teeth the chair height should be adjusted so that the tooth to be, extracted about 16cm (6 inches) below the level of the operators elbow. When the operator is standing behind the patient the chair should be lowered sufficiently to enable him to have a clear view of the field of the operation so that the operator need to use the operating box to achieve such position especially in tall patients.

Instruments used in simple uncomplicated teeth extraction includes the followings: -

- ❖ **1. Diagnostic instruments:** (Dental mirror, probe, Tweezer in kidney dish).
- ❖ **2. Dental forceps.**
- ❖ **3. Dental elevators.**

The instrument required for extraction are selected, sterilized & placed in a sterile dish at the side of the patient.



Dental forceps

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- The most widely used instrument employed in extraction of the teeth are dental forceps. Dental forceps are designed in a large number of patterns & configuration which adapt to different teeth & techniques used to extract teeth.



It is composed of three parts

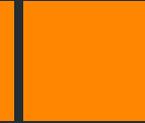
- 1. Handle.
- 2. Hinge joint.
- 3. Blades (Beaks).



Beak

Hinges

Handle



The more desirable properties & requirements of dental forceps

1. That must be made of strong metal so that it can resist the forces exerted during extraction movements.
2. It must be constructed of non-corrosive metal
3. The handles of forceps should be serrated to prevent slippage & good grip during extraction movements. The handles must be of such design so that they can give the operator a chance to use maximum leverage force. Also it must be of suitable shape & size so that they can applied to area of extraction without injury to the opposing teeth & surrounding tissues.

- **4. The blades:** The blades (beaks) are the source of the greatest variation among forceps. The beaks is designed to adapt to the root of the teeth at the junction of the crown & root & to adapt to the root surface & not to the crown.
- Other variation is the width of the beaks, some forceps are narrow (fine) & others are wider (heavy). The edges of the blades is sharp enough so they cut through the periodontal fibres without causing injury to the gingiva. The blades should fit the surface of the extracted tooth. The space between the blades should be enough to accommodate the crown of the extracted tooth without making crushing of the crown. The design of the blades should be suitable to be applied to the surface of the root of the tooth so that the blades are parallel to the long axis of the tooth to be extracted.

- **5. The hinge joint:** Is that part of the dental forceps which transfers & concentrate the force applied to the handle of the dental forceps & then to the beaks. It is the part which connecting the handle to the beaks. The joint must be Bevelled so that it will not cause pinching of the lip or injury to the lip. Heavy & strong allow free movement without rocking.



TYPES OF DENTAL FORCEPS

THE FORCEPS FOR UPPER TEETH

■ 1- The upper straight forceps:

- The blades, joint and handle are in one long straight line. with broad blades ,this is used for extraction central incisors and upper canines, left and right.
- The second types of straight forceps has narrow blades or we call it fine blades for extraction of upper lateral incisors (left and right)



■ 2- The upper premolar forceps:

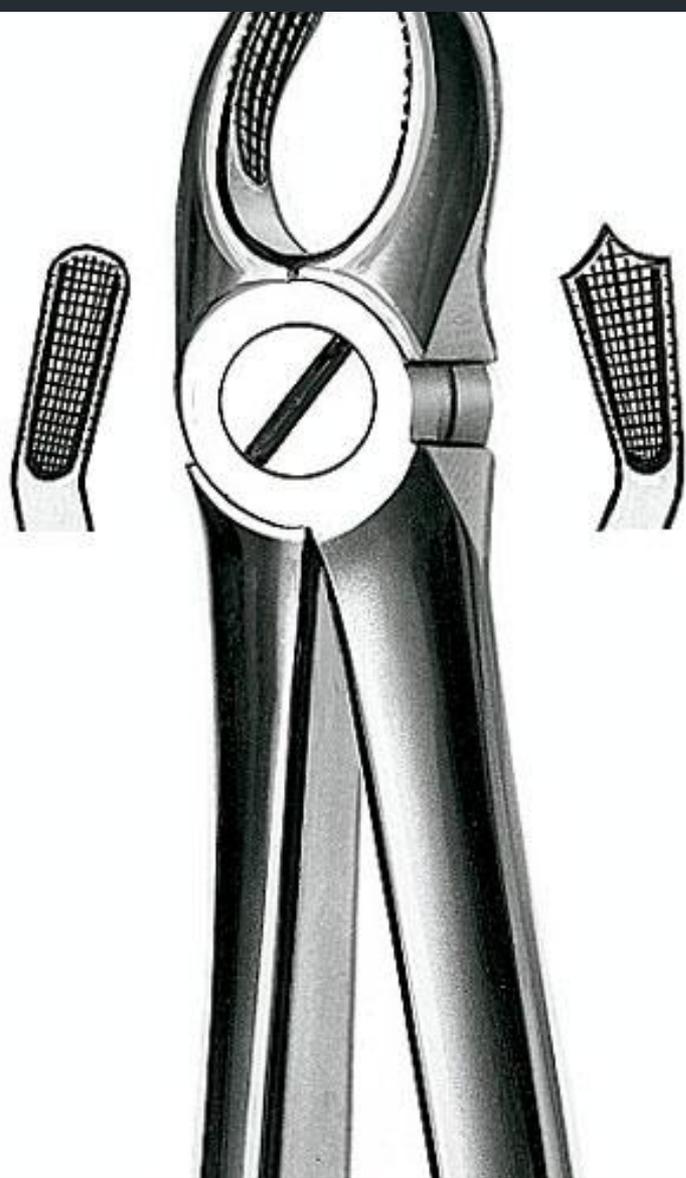
the forceps has two bends to apply the forceps parallel to long axis of premolar and these bends or curvature of the handle to avoid injury to the lower lip and apposing teeth (mandibular). The upper premolars teeth has either one root or two roots (one buccal and one palatal), so there is no difference in the anatomy of the tooth root of the premolar on the buccal and palatal surface so the two blades of the premolars forceps are mirror image to each other.



3- The upper molar forceps (full crown upper molar forceps):

- Since upper molar teeth have three roots, two buccal and one palatal, the blade of palatal side is round to conform or fit on palatal root, while blades on buccal has pointed tip or projection so it can enter or fit the bifurcation between the two buccal roots (mesial and distal) on the buccal side of the tooth. So we have two forceps one for the right molars and one for the left molars and these forceps also double bend for the same requirement as mentioned for premolar teeth.

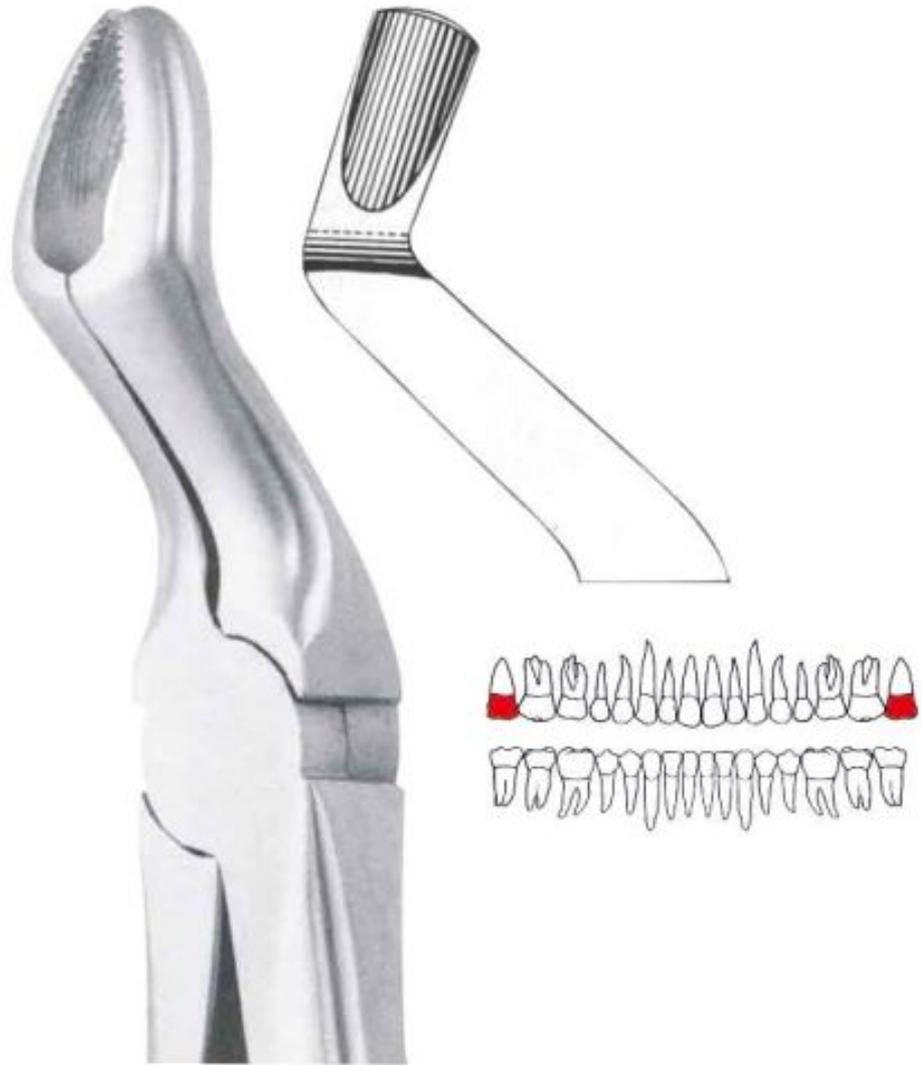




4- The Bayonet forceps:

- The blades of the forceps is off set so the long axis of the extraction of upper 3rd molars right and left. In addition of these forceps there are two forceps for extraction of retained roots, there are fine blades, one forceps is straight for upper anterior retained roots and one curved for upper posterior roots.







Thank you