

Chapter 56

Oral and Maxillofacial Surgery

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Introduction

Oral and maxillofacial surgery is the specialty of dentistry involved in the diagnosis and surgical treatment of diseases, injuries, and defects.

Indications for Maxillofacial Surgery

- Extractions of decayed teeth that cannot be restored
- Surgical removal of impacted teeth
- Extraction of nonvital teeth
- Preprosthetic surgery to smooth and contour the alveolar ridge
- Removal of teeth for orthodontic treatment
- Removal of root fragments

Indications for Maxillofacial Surgery— cont'd

- Removal of cysts and tumors
- Biopsy
- Treatment of fractures of the mandible or maxilla
- Surgery to alter the size or shape of the facial bones
- Surgery of the temporomandibular joint
- Reconstructive surgery

Indications for Maxillofacial Surgery— cont'd

- Cleft lip and cleft palate repairs
- Salivary gland surgery
- Surgical implant procedures

The Surgical Assistant

- Must have advanced knowledge and skill in:
 - Patient assessment and monitoring
 - Specialized instruments
 - Surgical asepsis
 - Surgical procedures
 - Pain control techniques

The Surgical Setting

- Dental Operator
- Surgical Suite
- Operating Room

Specialized Instruments and Accessory Items

■ **Elevator**

- Used to apply leverage against the tooth to loosen from the periodontal ligament and ease in the extraction.

■ **Types**

- Periosteal elevator
- Straight elevator
- Root tip picks

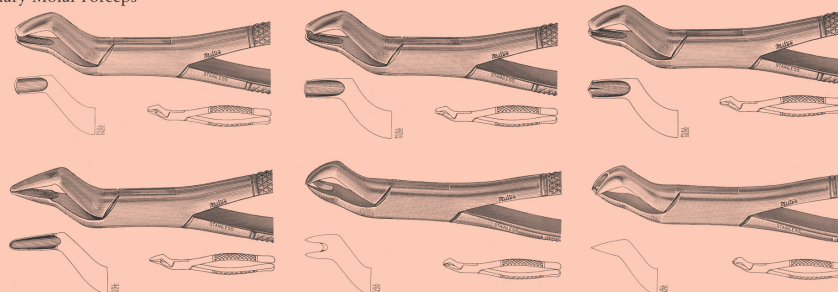
Table 56-1 Commonly Used Forceps

56-1

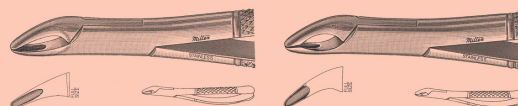
Types of Extraction Forceps

Type

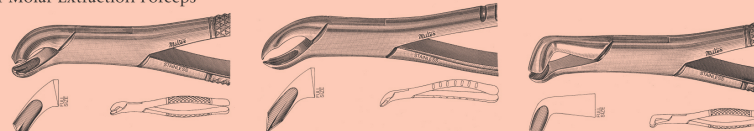
Maxillary Molar Forceps



Maxillary Anterior Forceps



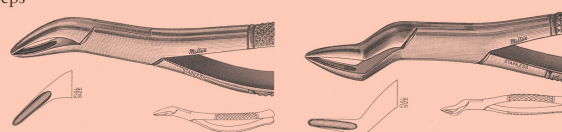
Mandibular Molar Extraction Forceps



Mandibular Anterior Extraction Forceps



Root Tip Extraction Forceps



Images courtesy of Miltex Instruments, Bethpage, NY.

Specialized Instruments and Accessory Items— cont'd

- **Surgical curettes**

- Clean and scrape the interior of the tooth socket to remove diseased tissue.

- **Rongeurs**

- Trim alveolar bone.

Specialized Instruments and Accessory Items – cont'd

- **Bone file**

- To smooth rough margins of the alveolus.

- **Scalpel**

- A surgical knife for making precise incisions into soft tissue.

- **Hemostat**

- To grasp and hold things.

Specialized Instruments and Accessory Items – cont'd

- **Needle holder**
 - To firmly grasp a suture needle.
- **Surgical scissors**
 - For trimming soft tissue.
- **Suture scissors**
 - For cutting suture material.
- **Retractors**
 - To hold or retract tissue during surgery.

Specialized Instruments and Accessory Items – cont'd

■ **Mouth prop**

- Also known as a **bite-block**, allows the patient to rest and relax the jaw muscles during surgery.

■ **Chisel**

- Either in a single-bevel or bi-bevel design. The single-bevel type is used for removing bone. Bi-bevel is for splitting teeth.

Specialized Instruments and Accessory Items – cont'd

■ **Mallet**

- Source of pressure used on the chisel handle.

■ **Surgical burs**

- Have extra-long shanks and used to remove bone, or to cut or split the crowns or roots of teeth.

Surgical Asepsis

- Because surgical procedures invade open tissue, the surgical team must follow a sterile technique.

Surgical Asepsis– cont'd

■ **Sterile field**

- Site where surgical instruments and accessory items are placed during a surgery.

■ **Surgical scrub**

- Type of hand wash used to lessen the chance of infection.

■ **Proper gloving**

- When assisting in an invasive procedure, you must wear sterile gloves.

Preparing for Surgery

■ **Advanced preparation**

- Have all patient records and radiographs in order.
- Have consent forms signed and available.
- Information requested from patient's physician has been received.
- Check for laboratory cases.
- Surgical setups prepared and sterilized.
- Provide preoperative instructions for taking any premedication.

Preparing for Surgery– cont'd

■ **Treatment room preparation**

- Place protective barriers.
- Keep surgical instruments in their sterile wraps until ready for use.
- Have appropriate pain control medications set out and ready for administration.
- Have postoperative instructions ready to provide to the patient.

Preparing for Surgery– cont'd

■ **Patient preparation**

- Update medical history and laboratory reports.
- Check with the patient that any prescribed premedication was taken as directed.
- Place radiographs on view box.
- Take vital signs to determine a baseline.
- Seat and drape the patient.
- Position the chair.

Preparing for Surgery– cont'd

■ **During the surgery**

- Maintain the chain of asepsis.
- Transfer and receive instruments.
- Aspirate and retract as needed.
- Maintain a clear operating field with light.
- Monitor the patient's vital signs.
- Steady the patient's head and mandible if necessary.
- Observe the patient's condition, and anticipate the surgeon's needs.

Preparing for Surgery– cont'd

■ **After surgery**

- Stay with the patient.
- Give verbal and written postoperative instructions.
- Schedule a postoperative visit.
- Update the patient's treatment records.
- Return the patient's records to the business assistant.
- Breakdown and disinfect the treatment area.

Surgical Procedures

■ **Forceps extraction**

- Surgical removal performed on a tooth that is fully erupted and has a solid, intact crown that can be grasped firmly with the forceps.

Surgical Procedures– cont'd

- **Multiple extractions and alveoloplasty**
 - Multiple extraction procedure involving the contouring and smoothing of the alveolar crest of the surgical site.

Surgical Procedures– cont'd

- **Removal of impacted teeth**
 - A complex extraction of a tooth that has not erupted.
 - Soft tissue impaction
 - Hard tissue impaction

Surgical Procedures– cont'd

- **Biopsy** is the surgical removal and examination of lesions in the oral cavity.
 - Incisional biopsy
 - Excisional biopsy
 - Exfoliative cytology

Sutures

- The act of stitching.
- Placed to control bleeding and promote healing.

Types of Sutures

■ **Absorbable sutures**

- **Plain catgut:** Provides the fastest healing for mucous membranes and subcutaneous tissues.
- **Chromic catgut:** Provides a much slower healing, allowing the internal tissues to heal first.
- **Vicryl:** A synthetic absorbable material.

Types of Sutures— cont'd

- **Nonabsorbable sutures**
 - **Silk:** For its strength and its ease in use.
 - **Polyester fiber:** One of the strongest sutures.
 - **Nylon:** For its strength and elasticity.

Suture Removal

- When nonabsorbable sutures are placed, the patient is scheduled to return to have sutures removed in approximately 5 to 7 days.

Postoperative Care

■ **Control of bleeding**

- A 2 x 2 gauze is folded and placed to control bleeding, encourage clot formation and healing.
 - Keep gauze in place at least 30 minutes.
 - If bleeding does not stop, call the dental office.
 - Do not disturb the clot with your tongue or by rinsing your mouth vigorously.
 - Strenuous work or physical activity is restricted that day.

Postoperative Care—cont'd

■ **Control of swelling**

- The use of ibuprofen before and after surgery.
- During the first 24 hours, a cold pack is placed in a cycle of 20 minutes on and 20 minutes off.
- After the first 24 hours, external heat applied to the area of the face to increase circulation in the tissues and to promote healing.
- After the first 24 hours, patient can begin gently rinsing the oral cavity with warm saline solution.

Postsurgical Complications

- **Alveolitis (dry socket)**
- **Causative factors**
 - Inadequate blood supply to the socket.
 - Trauma to the socket.
 - Infection within the socket.
 - Dislodging of the clot from the socket.