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ORAL SURGERY

EXODONTIA - PROCEDURES, RISKS, COMPLICATIONS

MIND MAP & CUE CARDS

BY DR. JIGYASA SHARMA

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MIND MAP

EXODONTIA - PROCEDURE, RISK AND COMPLICATION

Definition and Importance of Exodontia

- Exodontia is a fundamental skill for dentists involving tooth extraction.
- Patients expect extractions to be skillful and painless every time.

Complexity and Challenges of Extractions

- A Extractions are not always simple and can present challenges.
- Surgical procedures require careful harm-benefit consideration and thorough diagnostics.

Assessment of Tooth Condition

- Tooth extraction decisions are straightforward in cases of decay, periodontal disease, or fracture.
- Differential diagnoses like trigeminal neuralgia and sinus disease must be excluded to avoid unnecessary extraction.

Mouth-Level Indications for Extraction

- Orthodontic reasons such as tooth size and jaw size discrepancies.
- Prosthodontic treatment plans may also require extractions at the mouth level.

Pain Control Techniques

- Multiple options include local anesthesia, sedation, and general anesthesia.
- Most extractions use local anesthesia after harm-benefit analysis, but complications can occur.

Chair and Dentist Positioning for Extraction

- Maxillary chair position: tilted backward; occlusal plane at ~60°; patient's mouth at or below operator's elbow.
- Mandibular chair position: more upright; occlusal plane parallel to floor; chair lower for stable positioning.

Diagnostic Process Before Extraction

- Full history and examination, including special tests, are necessary.
- Pre-extraction radiographs confirm diagnosis and highlight potential difficulties

Patient's Role and Ethical Considerations

- Dentists should not extract teeth solely based on patient insistence without clear diagnosis.
- Ethical practice requires careful re-evaluation or referral pain persists post-extraction.

Overall Health Considerations

- Oncology patients may need extractions of compromised teeth before radiotherapy, chemotherapy, or antiresorptive treatment.
- A holistic approach beyond individual tooth assessment is essential.

Extraction Technique and Tools

- Fine periotomes are used to gently expand the socket and minimize alveolar damage.
- Careful insertion through the periodontal membrane essential for atraumatic extraction.

Dentist's Standing Position During Extraction

- For maxillary teeth: dentist stands in front and to the right side of the patient.
- For mandibular teeth: left quadrant-dentist in front right side; right quadrant-dentist behind patient on right side (for right-handed operators).

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MIND MAP

TOOTH MOVEMENT AND EXODONTIA: TECHNIQUES, TEETH DIFFERENCES, AND COMPLICATIONS

Maxillary Lateral Incisors

- Same extraction technique as central incisors
- No rotational force due to palato-distal root curvature

Maxillary Premolars

- **1st Premolar**: Gentle buccal and palatal pressure, no rotation to avoid root fracture
- **2nd Premolar**: Easier extraction with mostly one root, final movement buccal.

Mandibular Incisors and Canines

- **Incisors**: Easy extraction due to narrow roots and thin alveolar bone
- **Canines**: More difficult, gradual labial and lingual pressure, slight rotation allowed
- Final extraction force is outward and downward

Mandibular Molars (First and Second)

- 2nd molar easier than 1st due to smaller less divergent roots
- Initial gentle buccal and lingual pressure
- Final extraction movement buccal (outward and downward)

Extraction of Deciduous Teeth

- Small forceps with narrow beaks used
- Similar technique to permanent teeth but easier if roots resorbed
- A Beaks placed mesially or distally to avoid permanent tooth bud damage

Managing Hemorrhage

- Direct pressure with gauze is first line
- Adrenaline in local anesthetic for vasoconstriction, cautery if available
- Absorbable materials (gelatin sponge, oxidized cellulose) help clot stabilization
- Sutures or non-resorbable gauze tamponade for closure
- Bone wax or Surgicel for bone bleeding, careful use near nerves
- Floseal and tranexamic acid useful adjuncts for bleeding control
- Uncontrollable bleeding requires emergency referral

Maxillary Central Incisors

- Initial movement is labial, then palatal
- Rotational forces applied due to conical root shape

Maxillary Canines

- Difficult extraction due to firm anchorage and long curved roots.
- A Thin alveolar bone risks fracturing alveolar process

Maxillary Molars

- **1st Molar**: Three diverging roots, strong but careful buccopalatal pressure, final buccal curved motion
- **2nd Molar**: Similar but easier than 1st molar due to less root divergence
- **3rd Molar**: Extraction by buccal and palatal pressure or elevator if roots permit

Mandibular Premolars

- Easy extraction with straight conical roots
- Gentle rotational force permitted, buccolingual pressure applied
- Final extraction movement outward and downward

Mandibular Third Molars

- Buccolingual pressure with emphasis on lingual due to thin lingual bone
- Elevator may be sufficient if roots converge or single root present.

Complications of Exodontia

- Unexpected adverse outcomes, not always failures if planned properly
- Most common: alveolar osteitis (dry socket), painful but self-limiting
- Tooth/root displacement into sinuses or soft tissues needs prompt referral
- Hemorrhage challenging, often related to bleeding disorders (congenital or acquired)

Summary

- Extraction techniques vary by tooth anatomy and location
- Gentle initial movements with proper force directions reduce risk of fracture
- Awareness of complications and patient risk factors critical for planning
- Multiple hemostatic tools and protocols essential for managing bleeding
- Prompt specialist referral needed for serious complications or procedural failures

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EXODONTIA - PROCEDURES, RISKS, COMPLICATIONS

Question 1

What is the primary objective of exodontia?

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Answer 1

The primary objective of exodontia is to remove the whole tooth while preserving the alveolus for future prosthetics or implants.

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Question 2

Why is it important to perform a full diagnostic process before tooth extraction?

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Answer 2

A full diagnostic process including history, examination, special tests, and radiographs is important to weigh the harm and benefits of extraction, confirm diagnosis, identify potential difficulties, and rule out causes of pain that are not related to the tooth, such as sinus disease or trigeminal neuralgia.

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Question 3

What factors at the individual tooth level justify tooth extraction?

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Answer 3

Tooth extraction is justified in cases of gross decay, advanced periodontal disease, and fracture, but it requires careful diagnosis to exclude referred pain or conditions that mimic toothache. Extraction should not be performed solely based on patient insistence without clear diagnosis.

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Question 4

What considerations are made when deciding to extract teeth at the mouth or overall health level?

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Answer 4

At the mouth level, common indications include orthodontic extractions for tooth size/jaw size discrepancies or part of a prosthodontic plan. Regarding overall health, teeth may be extracted in oncology patients undergoing radiotherapy or chemotherapy to prevent complications.

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Question 5

List the main types of pain control options available during tooth extraction.

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Answer 5

Pain control options include local anesthesia, local anesthesia combined with oral sedation, local anesthesia combined with intravenous sedation, and general anesthesia (in hospital or day surgery).

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Question 6

Describe the recommended chair position for extracting maxillary teeth.

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Answer 6

For maxillary teeth, the chair should be tipped backward so the occlusal plane is about 60 degrees to the floor, and the mouth should be at or slightly below the operator’s elbow level.

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EXODONTIA - PROCEDURES, RISKS, COMPLICATIONS

Question 7

What is the most common complication of exodontia, and what are its risk factors?

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Answer 7

The most common complication is alveolar osteitis (dry socket), a painful but self-limiting condition in which the blood clot dissolves exposing the bone. Risk factors include traumatic extraction, smoking, extraction of posterior teeth, and extraction in the mandible more than in the maxilla.

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Question 8

How should an oro-antral communication after maxillary tooth extraction be managed?

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Answer 8

If the communication is small and the tooth is intact, compress the socket and suture it closed, advising the patient not to blow their nose or create negative pressure. For large communications (>4 mm) or missing tooth fragments, immediate referral to an oral and maxillofacial surgeon is required.

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Question 9

What actions are recommended when a tooth root is fractured and left in situ during extraction?

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Answer 9

If the fractured root tip is less than 5 mm, vital, and close to important structures like nerves, it can be left in place. If removal is necessary, it should be done via a small bony window to maintain alveolar bone height.

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EXODONTIA - PROCEDURES, RISKS, COMPLICATIONS

Question 10

Name at least three hemostatic agents or methods used to control hemorrhage during exodontia.

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Answer 10

Hemorrhage can be controlled by direct pressure with non-resorbable gauze, absorbable materials such as porcine gelatin sponge or oxidized cellulose (Surgicel), gelatin-thrombin mixtures (Floseal), bone wax, and topical application of tranexamic acid mouthwash or solution.

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ORAL SURGERY

ASA - CLASSIFICATION

MIND MAP & CUE CARDS

BY DR. JIGYASA SHARMA

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MIND MAP

ASA PHYSICAL STATUS CLASSIFICATION SYSTEM

Overview and Purpose

- The ASA system assesses and communicates a patient's pre-anesthesia medical co-morbidities.
- It helps predict perioperative risks when combined with other factors like surgery type and patient condition.

Clinical Decision and Timing

- Classification level is a clinical decision based on multiple factors.
- Final assignment made on the anesthesia care day after patient evaluation

ASA I: Normal Healthy Patient

- Examples: Healthy adult non-smokers, minimal alcohol use; healthy pediatric patients with normal BMI.
- Pediatric: No acute/chronic disease, normal BMI percentile for age.

ASA II: Mild Systemic Disease

- Examples: Mild adult diseases without major limitations-current smoker, social drinker, obesity (BMI 30-40), well-controlled diabetes or hypertension.
- Pediatric: Asymptomatic congenital cardiac disease, asthma without exacerbation, mild/moderate OSA, autism with mild limitations.
- Obstetric: Uncomplicated pregnancy, well-controlled gestational hypertension and diabetes.

ASA III: Severe Systemic Disease

- Adults: Substantive functional limitations, poorly controlled diabetes/hypertension, morbid obesity (BMI ⩾40), history of MI or stroke.
- Pediatrics: Uncorrected stable congenital cardiac abnormalities, severe asthma, poorly controlled epilepsy, severe OSA, metabolic disease.
- Obstetric: Preeclampsia with severe features, gestational diabetes with complications.

ASA IV: Severe Systemic Disease Threatening Life

- Adults: Recent MI/stroke, ongoing cardiac ischemia, shock, sepsis, severe valve dysfunction.
- Pediatrics: Symptomatic congenital heart disease, severe respiratory distress, ventilator dependence, sepsis.
- Obstetric: Severe preeclampsia with HELLP, peripartum cardiomyopathy with EF <40.

ASA V: Moribund Patient Not Expected to Survive Without Operation

- Adults: Ruptured aneurysm, massive trauma, intracranial bleed with mass effect.
- Pediatrics: Massive trauma, ECMO-dependent, respiratory failure/arrest.
- Obstetric: Uterine rupture.

ASA VI: Brain-Dead Organ Donor

- Declared brain-dead patient undergoing organ removal for transplant purposes

Importance of Combined Factors

- ASA classification alone does not predict perioperative risk.
- Used with surgery type, frailty, deconditioning level, risk prediction improves.

Examples Highlighting System Usage

- Specific examples provided for adults, pediatrics, and obstetric patients across a II ASA levels.
- Helps anesthesiologists communicate patient physical status clearly.

Historical Context

- System has been used for over 60 years.
- Integral part of preoperative patient evaluation globally.

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ASA - CLASSIFICATION

Question 1

What is the primary purpose of the ASA Physical Status Classification System?

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ASA - CLASSIFICATION

Answer 1

The primary purpose of the ASA Physical Status Classification System is to assess and communicate a patient’s pre-anesthesia medical co-morbidities.

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ASA - CLASSIFICATION

Question 2

Does the ASA Classification system alone predict perioperative risks?

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ASA - CLASSIFICATION

Answer 2

No, the ASA Classification system alone does not predict perioperative risks, but when combined with other factors like the type of surgery, frailty, and level of deconditioning, it can help predict perioperative risks.

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ASA - CLASSIFICATION

Question 3

Who makes the final assignment of the ASA Physical Status classification?

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ASA - CLASSIFICATION

Answer 3

The final assignment of the ASA Physical Status classification is made by the anesthesiologist on the day of anesthesia care after evaluating the patient.

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ASA - CLASSIFICATION

Question 4

What defines a patient classified as ASA I?

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Answer 4

An ASA I patient is a normal healthy patient with no systemic disease. Examples include a healthy adult who is a non-smoker with minimal alcohol use or a healthy pediatric patient with no acute or chronic disease.

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ASA - CLASSIFICATION

Question 5

Give examples of conditions that classify an adult patient as ASA II

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ASA - CLASSIFICATION

Answer 5

Examples for ASA II adult patients include mild systemic diseases without substantive functional limitations, such as current smoker, social alcohol drinker, pregnancy, obesity (BMI between 30 and 40), well-controlled diabetes mellitus or hypertension, and mild lung disease.

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ASA - CLASSIFICATION

Question 6

What kinds of systemic disease characterize an ASA III patient?

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Answer 6

An ASA III patient has severe systemic disease causing substantive functional limitations, such as poorly controlled diabetes or hypertension, COPD, morbid obesity (BMI ≥40), active hepatitis, alcohol dependence, implanted pacemaker, or history of myocardial infarction, cerebrovascular accident, or coronary artery disease.

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ASA - CLASSIFICATION

Question 7

Describe an ASA IV patient and provide examples.

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Answer 7

An ASA IV patient has severe systemic disease that is a constant threat to life. Examples include recent (less than 3 months) myocardial infarction, stroke, ongoing cardiac ischemia, severe valve dysfunction, shock, sepsis, or end-stage renal disease not on regular dialysis.

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ASA - CLASSIFICATION

Question 8

What clinical situations place a patient into ASA V classification?

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Answer 8

ASA V patients are moribund and not expected to survive without the operation. Examples include ruptured abdominal or thoracic aneurysm, massive trauma, intracranial bleed with mass effect, ischemic bowel with significant cardiac pathology, or multiple organ/system dysfunction.

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ASA - CLASSIFICATION

Question 9

Who is classified as ASA VI?

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Answer 9

ASA VI is assigned to declared brain-dead patients whose organs are being removed for donor purposes.

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ASA - CLASSIFICATION

Question 10

Why are pregnant women with uncomplicated pregnancy classified as ASA II?

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Answer 10

Pregnancy is not a disease, but the physiologic state of a pregnant woman is significantly altered from her non-pregnant state; therefore, an uncomplicated pregnancy is classified as ASA II.

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THIRD MOLAR EXTRACTION AND COMPLICATIONS

MIND MAP & CUE CARDS

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MIND MAP

THIRD MOLAR EXTRACTION AND COMPLICATIONS

Overview of Third Molars

- Third molars (wisdom teeth) are the last teeth to erupt and highly variable in morphology and eruption timing.
- Often impacted due to limited space, obstruction by other teeth, or abnormal positioning.

Classification of Third Molars

- Disease positive/negative
- Symptom positive/negative

Management of Asymptomatic Third Molars

- Symptom free but disease positive third molars: evidence supports removal in young adults.
- Symptom and disease free third molars pose clinical challenges and require careful decision matrices.

Prophylactic Removal Groups

- Contact sports and military personnel for performance and safety.
- Patients with neuromuscular conditions or mental capacity issues (dementia, cognitive delay).
- Patients on bisphosphonates, anticoagulants, or undergoing radiotherapy/chemotherapy.
- Tissue transfer or immunomodulator therapy patients with higher infection risks.

Postoperative Complications

- Common: pain, swelling, hemorrhage, infection, alveolar osteitis, hematoma, trismus.
- Rare but serious: mandibular angle fracture, nerve injury, oroantral communication, delayed healing.
- Patient anxiety affects outcomes; younger patients have better prognosis for prophylactic extraction.

Informed Consent Process

- Consent educates patients legally and ethically prior to treatment.
- Must include nature of treatment, risks/benefits, alternatives, consequences of no treatment, and surgeon identity.
- Disclosure tailored to what reasonable and individual patients need to know.
- Consent must be voluntary and by competent individuals; can be written, verbal, or implied.

Legal and Ethical Considerations

- Valid consent protects against claims of trespass and negligence.
- Written consent standard in Australian hospitals for invasive procedures.
- Survey data guides consensus on risk disclosure for third molar extraction complications.

Financial and Social Factors Influencing Decision

- Patient's financial capacity may affect choice to undergo surgery.
- Social support systems also modify surgical decision-making and postoperative care.

Decision-Making for Removal

- Straightforward removal for symptom positive and/or disease positive teeth.
- Symptom positive but disease negative removals generally accepted by surgeons and patients.

Indications for Extraction

- Disease or symptom presence (e.g., caries, pericoronitis, cysts, tumors)
- Prophylactic reasons including prevention of root resorption, crowding, or damage to adjacent teeth.

Surgical Difficulty and Risk Assessment

- WHARFE system used to evaluate: Winter's lines, Height of mandible, Angulation, Root form, Follicular sac size, Exit pathway.
- Surgeon's capability must match procedure complexity; referral advised if outside surgeon's competence.

Advantages and Disadvantages

- Advantages: resolution of caries, periodontal defects, cysts, tumors, prevention of crowding/damage.
- Disadvantages: increased probing depth, attachment loss near second molars, no bone height gain, 10% complication rate.

Risks to Disclose in Consent

- Lingual and inferior alveolar nerve damage (temporary or permanent)
- Postoperative pain, alveolar osteitis, general infection risks
- Excessive bleeding, unexpected soft tissue injury, oroantral communication
- Bone fractures and other rare but severe complications.

Surgeon Experience and Patient Outcomes

- Experienced surgeons have lower complication rates.
- Surgeon skill is crucial especially when considering prophylactic removal of asy
- mptomatic third molars.

Summary

- Removing third molars requires multifactorial assessment: symptoms, disease status, surgical risk, patient health, social, and financial context.
- Thorough informed consent and risk discussion are essential parts of ethical surgical practice.
- Ongoing research and clinical guidelines continue to evolve best practices for managing third molars.

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THIRD MOLAR EXTRACTION AND COMPLICATIONS

Question 1

What is the third molar (M3), and why is it considered the most variable tooth?

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THIRD MOLAR EXTRACTION AND COMPLICATIONS

Answer 1

The third molar (M3) is the last tooth to appear in the mouth and is considered the most variable tooth due to differences in its morphology, eruption period, and the presence of oligodontia or hypodontia.

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THIRD MOLAR EXTRACTION AND COMPLICATIONS

Question 2

What is an impacted third molar, and what causes impaction?

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THIRD MOLAR EXTRACTION AND COMPLICATIONS

Answer 2

An impacted third molar is a wisdom tooth that has not completely erupted despite having a fully formed root. Impaction occurs due to inadequate space in the mouth, obstruction by another tooth, or abnormal tooth positioning. The impacted tooth is often covered partially or fully by soft tissue, bone, or both.

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THIRD MOLAR EXTRACTION AND COMPLICATIONS

Question 3

How are third molars classified according to recent literature?

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THIRD MOLAR EXTRACTION AND COMPLICATIONS

Answer 3

Third molars are classified based on disease and symptom status as disease positive or disease negative, and symptom positive or symptom negative.

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THIRD MOLAR EXTRACTION AND COMPLICATIONS

Question 4

What factors influence the decision to remove third molars?

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THIRD MOLAR EXTRACTION AND COMPLICATIONS

Answer 4

The decision to remove third molars depends on the presence of symptoms and disease, surgical difficulty, procedural risks, patient’s current and future health, social support, and financial capacity.

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THIRD MOLAR EXTRACTION AND COMPLICATIONS

Question 5

What is prophylactic removal of third molars, and what are some common indications for it?

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THIRD MOLAR EXTRACTION AND COMPLICATIONS

Answer 5

Prophylactic removal refers to the extraction of third molars that are symptom-free and disease-free to prevent future complications. Indications include patients in contact sports or military, those with reduced physical dexterity, altered mental capacity, pre-medication with bisphosphonates or anti-coagulants, pre-treatment for radiotherapy or chemotherapy, and those undergoing immunomodifier therapy or tissue transfer.

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THIRD MOLAR EXTRACTION AND COMPLICATIONS

Question 6

What is the WHARFE system, and what does it assess?

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THIRD MOLAR EXTRACTION AND COMPLICATIONS

Answer 6

The WHARFE system is a method used to predict the difficulty of third molar removal. It assesses Winter's lines (W), Height of the mandible (H), Angulation (A), Root form (R), Size of follicular sac (F), and Exit pathway of the tooth (E).

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THIRD MOLAR EXTRACTION AND COMPLICATIONS

Question 7

What are common advantages and indications for third molar extraction?

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THIRD MOLAR EXTRACTION AND COMPLICATIONS

Answer 7

Advantages include removal of impacted teeth associated with dental caries, periodontal defects near the second molar, pericoronitis, odontogenic cysts, and dental tumors. Prophylactic removal may be indicated to prevent root resorption, crowding of lower incisors, and damage to adjacent teeth.

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THIRD MOLAR EXTRACTION AND COMPLICATIONS

Question 8

What are some disadvantages and complications associated with third molar extraction?

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THIRD MOLAR EXTRACTION AND COMPLICATIONS

Answer 8

Disadvantages include increased probing depth and reduced attachment level on adjacent molars, no gain in alveolar bone height after removal, and a complication rate of about 10%. Complications can include pain, swelling, hemorrhage, infection, alveolar osteitis, nerve injury, hematoma, lockjaw, bone fracture, oroantral communication, incomplete root removal, and delayed healing.

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THIRD MOLAR EXTRACTION AND COMPLICATIONS

Question 9

How does surgeon experience impact third molar extraction complications?

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THIRD MOLAR EXTRACTION AND COMPLICATIONS

Answer 9

Surgeon experience decreases the likelihood of significant post-surgery complications. Experienced surgeons tend to have better outcomes, making their involvement particularly important for prophylactic surgeries in asymptomatic patients.

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THIRD MOLAR EXTRACTION AND COMPLICATIONS

Question 10

What does informed consent for third molar extraction involve according to Australian standards?

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THIRD MOLAR EXTRACTION AND COMPLICATIONS

Answer 10

Informed consent requires educating the patient on the nature of the treatment, risks and benefits, alternative options, consequences of not proceeding, and the person performing the procedure. Consent must be voluntary, informed, and given by a competent patient, either verbally, in writing, or by implication. Known risks to disclose include common minor and rare severe complications such as nerve damage

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ORAL SURGERY

TMD'S AND SPLINT TYPES AND BRUXISM

MIND MAP & CUE CARDS

BY DR. JIGYASA SHARMA

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MIND MAP

TMDS AND SPLINT TYPES AND BRUXISM

Definition of TMD

- Temporomandibular disorder (TMD) involves pain and/or dysfunction of the masticatory muscles and temporomandibular joints (TMJ).
- It is a broad term covering clinical problems related to masticatory muscles, TMJ, and associated structures.

Classification of TMD

- Subclassified into Temporomandibular Joint (TMJ) disorders and masticatory muscle disorders.
- Major types include myofascial pain & dysfunction, internal derangement, and osteoarthrosis.

Risk Factors for TMD

- Multifactorial etiology including direct and indirect trauma.
- Parafunctional habits such as tooth grinding and clenching increase risk.
- Psychosocial factors like stress and anxiety contribute significantly.

Comorbidities Affecting TMJ

- Diseases such as rheumatoid arthritis, juvenile idiopathic arthritis, psoriatic arthritis, lupus, osteoarthritis, and neoplasia may impact TMJ.
- Women more frequently seek TMD treatment and show greater pain sensitivity than men.

Bruxism and Its Relation to TMD

- Bruxism may be independent but also a risk for masticatory muscle and TMJ pain plus severe tooth wear.
- Malocclusion is not considered a risk factor for TMD.

Examination Techniques for TMD

- Palpation of preauricular region and masticatory muscles locates tenderness and trigger points.
- Joint sounds can be detected by palpation or stethoscope over the TMJ during jaw movement.

Diagnosis of TMD

- Requires integration of patient history, clinical examination, and imaging findings.
- Detailed pain history and psychosocial factors must be considered for accurate diagnosis and risk assessment

Differential Diagnosis for TMD

- Clinicians should rule out other pathological conditions that can mimic TMD symptoms through thorough evaluation.

Types of TMD Explained

- Myofascial pain & dysfunction stems from muscle disorders often linked to parafunctional habits like clenching and bruxism.
- Internal derangement involves abnormal articular disc positioning causing clicking or limited jaw movements.
- Osteoarthrosis is a degenerative cartilage disorder of the mandibular condyle, common in older adults.

Additional Perpetuating Habits

- Lip biting, cheek biting, nail biting, chewing gum, and smoking can worsen TMD conditions.
- Chronic TMDs are frequently linked with psychological disorders.

Psychological Assessment in TMD Patients

- Evaluation for depression, anxiety, catastrophizing, distress, fear avoidance, and PTSD is critical.
- Chronic pain and psychological factors have a bidirectional relationship in TMD.

Signs and Symptoms of TMD

- Pain is the cardinal symptom followed by limited jaw movement and joint noises.
- Joint sounds such as clicking indicate internal derangement, while crepitus suggests advanced joint disease.

Investigations for TMD

- Plain radiographs (e.g., orthopantomograms, transcranial projections) detect gross pathological or degenerative changes.
- MRI is useful for detailed assessment of the articular disc and internal derangement.

Management Considerations

- Patients at high risk or with existing TMD should be managed carefully, especially before dental procedures.
- Informed consent is essential concerning the risk of developing or exacerbating TMD during dental treatment.

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MIND MAP

MANAGEMENT OF TEMPOROMANDIBULAR DISORDERS (TMDS)

Scope of Dental Practitioner

- Recognize if management is within practitioner's scope
- Refer to specialists (oral medicine or maxillofacial surgeons) if needed

Management Pathways According to Risk

- Use recommended pathways based on patient and procedure risk
- Acute TMD exacerbations treated with Ibuprofen and Paracetamol

Non-Surgical Treatment (Most Effective for 90% Patients)

- Explanation and reassurance of benign chronic condition
- Patient education and tailored self-care routines to limit mandibular function

Pharmacotherapy and Physiotherapy

- Drugs as adjuncts; no single drug efective for all TMD cases
- Physiotherapy techniques include ultrasound, acupuncture, TENS, exercises
- Physiotherapy crucial post-TMJ surgery and for myofascial pain, closed lock

Occlusal Splint Therapy

- Most common dental treatment; protects teeth and reduces TMJ load
- Types: hard acrylic, soft/resilient, and dual laminated splints
- Hard acrylic preferred for durability, adjustment ease, longevity

Common Splint Types

- Muscle relaxation (Michigan splint): protects teeth, relaxes muscles, reduces bruxism
- Anterior Bite Plane (traditional and mini): palatal coverage, but possible TMJ overload and occlusal changes
- Anterior Repositioning Appliance: shifts mandible forward, used short-term for internal derangements
- Posterior Bite Plane Appliance: worn on lower arch to change vertical dimension, but risks open bite.

Surgical Treatment

- Required in 5-10% of patients
- Procedures range from arthrocentesis and arthroscopy to open joint surgery (arthrotomy)
- Non-surgical therapy preferred before surgery consultation

Treatment Goals

- Focus is on symptom control rather than cure
- Goals include pain reduction, adverse loading control, mandibular function restoration, resuming normal activities

Identification of High-Risk Patients

- Identify patients at high risk of TMD aggravation
- Discuss and document predisposing risks before dental procedures

Treatment Options Overview

- Reassurance, patient education, and behavior therapy
- Physiotherapy, occlusal splint therapy, drug therapy
- Occlusal adjustment, surgical intervention, combined treatment

Self-Care and Lifestyle Modifications

- Soft diet, avoid excessive chewing, talking, yawning, gum chewing
- Muscle massage and moist heat for relaxation
- Allow jaw rest during long dental appointments, use mouth props if needed

Behavioral Therapy

- Cognitive behavioral therapy for persistent habits
- Includes counselling, relaxation therapy, hypnosis, biofeedback

Classification of Occlusal Appliances

- Okeson's: muscle relaxation, anterior repositioning, anterior bite plane, pivoting, soft appliances
- Dawson's: permissive (muscle deprogrammer), directive (non-permissive), pseudo-permissive, flat plane stabilization (Michigan splint)

Other Therapies

- Acupuncture, Botox injections, chiropractic/osteopathic manipulations tried but lack strong evidence

Use of Botulinum Toxin

- Emerging treatment option for symptom management in TMD cases

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MIND MAP

BRUXISM

Etiology

- The cause is complex, multifactorial, and not fully understood.
- Different mechanisms likely contribute to its development.

Sleep Bruxism Characteristics

- .Rhythmic masticatory activity peaks just before REM (Rapid Eye Movement) sleep.
- Usually noticed by a sleeping partner, not the patient.

Management of Sleep Bruxism

- Avoiding risk factors
- Relaxation techniques
- Hypnotherapy
- Biofeedback
- Cognitive Behavioral Therapy (CBT)
- Improving sleep hygiene

Management of Awake Bruxism

- Habit recognition and reversal
- Stress management

Signs of Bruxism (Parafunction)

- Cracked teeth and multiple failed restorations
- Chipping of incisal edges and wear facets
- Mobile teeth and masseteric hypertrophy
- Buccal mucosal ridging and scalloping of the lateral border of the tongue

Definition and Overview

- Bruxism is the repeated clenching and grinding of teeth and bracing or thrusting of the mandible.
- It can occur during sleep or while awake.

Types of Bruxism

- Sleep Bruxism
- Awake Bruxism

Causes of Sleep Bruxism

- No evidence that occlusal factors cause sleep bruxism.
- Related to transitions between sleep stages.

Awake Bruxism Characteristics

- Occurs when the patient is awake
- Often linked to conscious or subconscious habits.

Common Triggers for Bruxism

- Stress and anxiety
- Excessive caffeine or stimulant intake
- Poor sleep quality
- Other environmental and psychological factors

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TMD'S AND SPLINT TYPES AND BRUXISM

Question 1

What is Temporomandibular Disorder (TMD) and what anatomical structures does it involve?

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TMD'S AND SPLINT TYPES AND BRUXISM

Answer 1

Temporomandibular Disorder (TMD) is a broad term encompassing pain and/or dysfunction of the masticatory musculature and the temporomandibular joints. It is a collective term for clinical problems involving masticatory muscles, temporomandibular joints (TMJ), and associated structures.

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TMD'S AND SPLINT TYPES AND BRUXISM

Question 2

What are the key risk factors contributing to the development of TMD?

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TMD'S AND SPLINT TYPES AND BRUXISM

Answer 2

Key risk factors for TMD include direct trauma, indirect trauma (acceleration and deceleration injury), parafunctional habits (tooth grinding and clenching), psychosocial issues such as stress and anxiety, habitual behaviors like lip biting, cheek biting, nail biting, chewing gum, smoking, and chronic psychological disorders.

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TMD'S AND SPLINT TYPES AND BRUXISM

Question 3

How is pain in the pre-auricular area assessed and what does it indicate?

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TMD'S AND SPLINT TYPES AND BRUXISM

Answer 3

Pain in the pre-auricular area is assessed by placing the fingertips in the depression in front of the ear canal where the condyle translates when the mouth opens. Pain specifically localized here is a good sign of actual temporomandibular joint pathology.

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TMD'S AND SPLINT TYPES AND BRUXISM

Question 4

Which investigation methods are commonly used to evaluate TMD and associated joint pathology?

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TMD'S AND SPLINT TYPES AND BRUXISM

Answer 4

Common investigation methods include plain radiographs such as orthopantomograms and transcranial projections for baseline imaging, as well as magnetic resonance imaging (MRI) to assess the status of the articular disc and detect internal derangements of the TMJ.

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TMD'S AND SPLINT TYPES AND BRUXISM

Question 5

What are the primary goals in the management of temporomandibular disorders?

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TMD'S AND SPLINT TYPES AND BRUXISM

Answer 5

The primary management goals are to reduce pain, reduce adverse loading on the joint and muscles, restore mandibular function, and enable the patient to resume normal daily activities.

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TMD'S AND SPLINT TYPES AND BRUXISM

Question 6

What are the key components of conservative non-surgical treatment for TMD?

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TMD'S AND SPLINT TYPES AND BRUXISM

Answer 6

Conservative treatment includes patient education and reassurance, self-care routines such as limiting mandibular function and habit modification, physiotherapy, pharmacotherapy, behavioral therapy, and occlusal splint therapy.

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TMD'S AND SPLINT TYPES AND BRUXISM

Question 7

Describe the hard acrylic occlusal splint and its advantages over soft occlusal splints.

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TMD'S AND SPLINT TYPES AND BRUXISM

Answer 7

The hard acrylic occlusal splint is a rigid, tooth-borne appliance made from self-cured or heat-cured acrylic resin. Advantages include ease of adjustment and repair, more accurate fit, greater longevity, color stability, less food debris accumulation, better durability, and more reliable fabrication compared to soft splints.

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TMD'S AND SPLINT TYPES AND BRUXISM

Question 8

What types of occlusal splints are used in TMD treatment according to Okeson's classification?

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TMD'S AND SPLINT TYPES AND BRUXISM

Answer 8

Soft/resilient appliances

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TMD'S AND SPLINT TYPES AND BRUXISM

Question 9

What are common signs and triggers of bruxism?

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TMD'S AND SPLINT TYPES AND BRUXISM

Answer 9

Common signs of bruxism include cracked teeth, multiple failed restorations, chipping of incisal edges, wear facets, mobile teeth, masseter muscle hypertrophy, buccal mucosal ridging, and scalloping of the lateral tongue border. Triggers

WINSPERT

ORAL SURGERY

JAW CYSTS AND TUMORS

MIND MAP & CUE CARDS

BY DR. JIGYASA SHARMA

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MIND MAP

JAW CYSTS AND TUMORS

Definition of Cysts

- A cyst is a pathologic fluid-filled cavity lined by epithelium and surrounded by connective tissue.
- Fluid in cysts is secreted by lining cells or derived from surrounding tissue fluid.

Occurrence and Characteristics of Jaw Cysts

- Cysts occur more often in the jaws due to odontogenic epithelium remnants after tooth formation.
- Radiographically cysts appear as radiolucent lesions with swelling and usually no pain unless infected.

Odontogenic Cysts: Radicular Cysts

- Most common jaw cyst, arising from epithelial rests stimulated by inflammation from non-vital teeth.
- Usually asymptomatic unless infected; cause swelling when large; radiographically at apex of nonvital tooth.
- Treatment includes extraction, endodontics, apical surgery, surgical removal, or marsupialization.

Odontogenic Cysts: Dentigerous (Follicular) Cysts

- Cyst forming around crowns of unerupted teeth due to fluid accumulation in enamel epithelium layers.
- Second most common cyst; typically painless; found above crown, attached at cementoenamel junction.
- Can displace or resorb adjacent teeth; treated by surgical removal, sometimes preceded by marsupialization.

Lateral Periodontal Cysts

- Develop from epithelial rests lateral to tooth roots; often unilocular, sometimes multicystic (botryoid).
- Asymptomatic, small (<1 cm), primarily in mandible from lateral incisor to second premolar.
- Treatment by excisional biopsy or simple enucleation; low recurrence risk.

Non-Odontogenic Cysts: Nasolabial Cyst

- Soft tissue cyst causing unilateral nasolabial swelling and nasal obstruction if large.
- Not visible on plain radiographs; CT or MRI required for soft tissue imaging.
- Surgical excision via intraoral approach; rare recurrence.

Summary of Treatments

- Treatments vary: surgical removal, marsupialization, endodontic therapy, or conservative curettage depending on cyst type.
- Recurrence rates vary; KOTs have higher recurrence probability than radicular or lateral periodontal cysts.

Clinical Signs and Symptoms

- Many cysts are asymptomatic unless infected or large.
- Swelling, tooth displacement, root resorption, or facial asymmetry may be clinical clues.

Locations and Radiographic Features

- Cysts mostly occur centrally within maxilla or mandible but are rare in condyle and coronoid process.
- Odontogenic cysts locate in the tooth-bearing area, above the inferior alveolar nerve canal in the mandible.
- Peripheral borders are usually well-defined and corticated unless secondary infection alters the appearance.

Odontogenic Cysts: Residual Cysts

- Cysts remaining after incomplete removal of radicular cysts, often asymptomatic and found radiographically.
- Treated by surgical removal or marsupialization if large.

Odontogenic Tumors: Keratocystic Odontogenic Tumor (KOT)

- Reclassified as a tumor due to keratinized and proliferative epithelial lining.
- Usually asymptomatic with occasional mild swelling; contains thick, cheesy keratin material.
- Mostly found in posterior mandible and ramus; tendency to recur due to satellite cysts.
- Radiographically radiolucent with scalloped, multilocular margins and minimal jaw expansion.

Non-Odontogenic Cysts: Nasopalatine Duct Cyst

- Represents 10% of jaw cysts, often asymptomatic swelling near palatine papilla.
- Radiographically shows well-defined corticated, often heart-shaped radiolucency in incisive canal area.
- Treated by enucleation from the palate or marsupialization if large to avoid complications.

Cyst-Like Lesions: Simple Bone Cysts (SBC)

- Hollow bone cavities without epithelial lining; also called traumatic or hemorrhagic bone cysts.
- Occur mostly in first two decades with male predominance; mainly asymptomatic and found incidentally.
- Located predominantly in mandible, especially ramus and posterior region, sometimes scalloping roots.
- Treatment by conservative bone opening and curettage to stimulate healing; spontaneous healing possible.

Diagnostic Importance

- Radiographic features including location, shape, borders, and tooth involvement are critical for cyst identification.
- Advanced imaging (CT/MRI) necessary for soft tissue or complex lesions.

Epidemiology and Demographics

- Most cysts show a slight male predominance and develop mostly in the second to sixth decades of life.
- Some cyst types more common in mandible, others in maxilla; odontogenic cysts favor tooth-bearing regions.

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MIND MAP

JAW TUMORS

Clinical and Radiographic Detection

- Detected clinically by jaw enlargement or radiographic exam
- Radiologic exams document lesion extent: radiolucent, radiopaque, or mixed patterns

Bone Dysplasia vs. Tumor Root Resorption

- Bone dysplasia (e.g., fibrous dysplasia) rarely resorbs teeth
- Malignant root resorption causes thinning/spiked root shape, less extensive than benign

Mandibular Torus

- Hyperostosis on lingual mandibular alveolar process, usually near premolars
- Radiopaque shadow superimposed over roots on radiographs, usually bilateral; continuous with mandibular cortex

Dense Bone Islands (DBIS)

- Localized compact bone growths inside cancellous bone, more common in mandible premolar-molar area.
- Asymptomatic, often found near mandibular first molar with vital associated teeth.

Ameloblastoma Radiographic Features

- Well-defined with cortical border; honeycomb or soap bubble internal septa patterns
- Causes extensive root resorption and tooth displacement, sometimes cortical plate perforation visible on CT

Odontoma Radiographic Characteristics

- Well-defined borders with radiopaque contents surrounded by a radiolucent capsule.
- May cause tooth eruption disturbances, malposition, and jaw expansion, treated by simple excision without recurrence.

Cementoblastoma Radiographic Features and Treatment

- Mixed radiopaque-radiolucent lesion with cortical border and a radiolucent band surrounding radiopacity
- Treatment involves surgical removal and tooth extraction or root amputation with endodontic therapy; rare recurrence

Benign Tumors of the Jaw

- Benign tumors grow slowly and spread by direct extension, not metastasis
- Usually painless, insidious onset, and not life-threatening unless interfering with vital structures

Effects on Adjacent Structures

- Tumors exert pressure causing displacement of teeth and bone remodeling
- Root resorption common in benign tumors like ameloblastomas; smooth root resorption pattern

Torus Palatinus (Palatine Torus)

- Bony protuberance in midline hard palate, present in ~20% population
- Variable shape: flat, lobulated, nodular, mushroom-shaped; appears as radiopaque shadow on radiographs.

Other Exostoses

- Can develop on buccal surface of maxillary alveolar process or mandibular alveolar process
- Often nodular, pedunculated or flat, well-defined radiopaque lesions, sometimesunder bridge pontics

Odontogenic Tumors: Ameloblastoma

- Aggressive benign neoplasm from odontogenic epithelium, arising from dental lamina remnants
- Types: solid/multicystic, unicystic, desmoplastic; slow-growing causing facial asymmetry

Mixed Odontogenic Tumors: Odontoma

- Most common odontogenic tumor; hamartoma producing enamel, dentin, cementum, pulp tissues
- Two types: compound (tooth-like structures, anterior maxilla) and complex (irregular calcified masses, mandible molar area)

Benign Cementoblastoma

- Slow-growing tumor attached to tooth root apex, composed of cementum-like tissue.
- More common in young males, often in mandibular premolars/molars, causingvital teeth pain.

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CUE CARDS

JAW CYSTS AND TUMORS

Question 1

What is a cyst and why do cysts occur more often in the jaws than in any other bone?

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JAW CYSTS AND TUMORS

Answer 1

A cyst is a pathologic cavity filled with fluid, lined by epithelium, and surrounded by a definite connective tissue wall. Cysts occur more often in the jaws than in any other bone because most cysts originate from the numerous rests of odontogenic epithelium that remain after tooth formation.

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JAW CYSTS AND TUMORS

Question 2

What are the most common clinical and radiographic features of jaw cysts?

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JAW CYSTS AND TUMORS

Answer 2

Jaw cysts are radiolucent lesions often presenting with swelling and usually lack pain unless secondarily infected. They are associated with unerupted teeth, especially third molars. Radiographically, cysts typically have a well-defined, corticated periphery.

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JAW CYSTS AND TUMORS

Question 3

What is a radicular cyst and how is it typically treated?

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JAW CYSTS AND TUMORS

Answer 3

A radicular cyst is the most common type of jaw cyst that results from inflammatory stimulation of epithelial cell rests by a nonvital tooth. Treatment includes extraction, endodontic therapy, apical surgery, or surgical removal/marsupialization for large cysts, with low recurrence if completely removed.

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JAW CYSTS AND TUMORS

Question 4

How is a dentigerous cyst formed and what are its key diagnostic features?

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JAW CYSTS AND TUMORS

Answer 4

A dentigerous cyst forms around the crown of an unerupted tooth due to fluid accumulation between reduced enamel epithelium layers or between epithelium and the crown. Key features are its attachment at the cementoenamel junction and radiographic location just above the crown of the involved tooth, commonly mandibular/maxillary third molar or maxillary canine.

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JAW CYSTS AND TUMORS

Question 5

What distinguishes a keratocystic odontogenic tumor (KOT) from other jaw cysts radiographically and clinically?

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CUE CARDS

JAW CYSTS AND TUMORS

Answer 5

KOTs have a distinctive keratinized, thin epithelial lining with potential satellite microcysts. Radiographically, KOTs are radiolucent with scalloped margins, tend to grow along the internal jaw bone causing minimal expansion, and commonly occur in the posterior mandible. Clinically, they show a high recurrence rate and may present with mild swelling or secondary infection pain.

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JAW CYSTS AND TUMORS

Question 6

What are lateral periodontal cysts, and how are they diagnosed and treated?

JAW CYSTS AND TUMORS

Answer 6

Lateral periodontal cysts arise from epithelial rests lateral to tooth roots, usually asymptomatic and less than 1 cm. Radiographically, they appear as well-defined, round or oval radiolucencies mostly in the mandibular lateral incisor to second premolar region. Treatment is simple enucleation or excisional biopsy, with low recurrence risk.

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JAW CYSTS AND TUMORS

Question 7

Describe the nasopalatine duct cyst and its common clinical and radiographic features.

JAW CYSTS AND TUMORS

Answer 7

The nasopalatine duct cyst is a non-odontogenic cyst occurring in the nasopalatine canal, more common in males and often asymptomatic. Clinically, it may cause a small swelling near the palatine papilla. Radiographically, it appears as a well-defined, oval or heart-shaped radiolucency between central incisors, often causing root divergence.

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JAW CYSTS AND TUMORS

Question 8

How are simple bone cysts (SBC) characterized and what is their usual treatment?

Answer 8

Simple bone cysts are cavities within bone lacking an epithelial lining, often empty or containing fluid, commonly found in younger patients with male predominance. Radiographically they are smooth, oval or scalloped radiolucencies usually scalloping between tooth roots. Treatment is conservative opening and curettage, which promotes healing.

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JAW CYSTS AND TUMORS

Question 9

What are the typical features and radiographic appearance of an ameloblastoma?

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JAW CYSTS AND TUMORS

Answer 9

Ameloblastomas are benign but aggressive odontogenic tumors arising mostly in the mandibular molar-ramus region, showing slow growth and presenting with facial asymmetry. Radiographically, they are well-defined radiolucent lesions with curved cortical borders and internal septa creating honeycomb or soap bubble patterns, often causing root resorption and tooth displacement.

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ORAL SURGERY

LA TECHNIQUES AND COMPLICATIONS

MIND MAP & CUE CARDS

BY DR. JIGYASA SHARMA

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MIND MAP

LOCAL ANESTHESIA TECHNIQUES AND COMPLICATIONS IN DENTISTRY

Mechanism of Action of Anesthetic Agents

- Anesthetics bind reversibly to sodium channels, blocking nerve impulse propagation.
- Pain impulses do not reach the brain; patient experiences no pain.

Classification of Local Anesthetic Agents

- Amides: lidocaine, prilocaine, mepivacaine, bupivacaine (common in dentistry).
- Esters: less common, e.g., benzocaine for topical anesthesia.
- Lidocaine is the gold standard, often combined with adrenaline to prolong effect and reduce toxicity.

Infiltration Injection Techniques

- Submucous injection: under mucous membrane, mainly for soft tissue anesthesia.
- Supra-periosteal injection: outside periosteum; most common infiltration technique.
- Buccal infiltration: needle 2-3 mm into buccal sulcus adjacent to target tooth.
- Palatal infiltration: anesthetizes palatal gingiva; may be painful due to tight mucoperiosteum.

Regional (Nerve Block) Anesthesia Techniques

- Anesthetic injected near nerve trunk proximal to treatment site.
- Onset of analgesia in 4-5 minutes.
- Blocks pain in entire nerve distribution area.

Palatal Anesthesia Techniques

- Greater Palatine block: anesthesia to posterior hard palate.
- Nasopalatine block: anesthesia to anterior hard palate and palatal premaxilla.
- Palatal anesthesia can also be achieved via infiltration adjacent to the target tooth.

Understanding Pain & Local Anesthesia

- Pain is an unpleasant sensory and psychological experience linked to tissue damage.
- Local anesthesia manages pain safely and effectively during dental treatment.

Types of Local Anesthesia in Dentistry

- Infiltration anesthesia: commonly used in maxilla.
- Block anesthesia: frequently used in mandible.

Methods of Local Anesthesia Administration

- Topical: applied to skin/mucosa, anesthetizes superficial nerve endings; onset ~3 mins.
- Infiltration: anesthetic near nerve terminals locally; onset 2-3 mins.
- Subdivisions of infiltration: submucous, supra-periosteal, buccal, palatal, sub-periosteal.

Specialized Injection Techniques

- Sub-periosteal injection: between periosteum and bone; painful.
- Intra-osseous injection: into medullary bone using drills and special needles.
- Intra-ligamentary injection: into periodontal ligament sulcus, for terminal nerve endings.
- Intra-pulpal anesthesia: direct injection into pulp chamber for pulpal procedures.

Maxillary Nerve Blocks

- Posterior Superior Alveolar (PSA) block: anesthetizes maxillary molars except mesio-buccal root of first molar.
- Middle Superior Alveolar (MSA) block: anesthetizes premolars and mesio-buccal root of first molar.
- Anterior Superior Alveolar (ASA) block: anesthetizes maxillary incisors and canines.
- Infraorbital block: anesthetizes ipsilateral maxillary teeth, soft tissues, and facial regions.

Summary and Clinical Relevance

- Choice of anesthetic and technique depends on site and type of dental procedure
- Awareness of painful techniques (e.g., sub-periosteal) and patient comfort methods is essential.
- Understanding onset times and areas anesthetized guides effective pain management.

Map Your Way to ADC Success!

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MIND MAP

LA TECHNIQUES AND COMPLICATIONS

Mandibular Blocks Overview

- The mandible's dense bone hinders difusion of local anesthetic to the inferior alveolar nerve (IAN).
- Blockade anesthesia targets the IAN before it enters the mandibular canal.

Common Mandibular Block Techniques

- Direct Inferior Alveolar Nerve Block (IANB)
- Indirect IANB
- Akinosi Closed-Mouth Technique
- Gow-Gates Technique
- Some extraoral approaches useful in trauma patients.

Indirect Inferior Alveolar Nerve Block

- Uses same injection site as direct IANB but with greater syringe angulation causing early bone contact anterior to mandibular foramen.
- Variation: anterior injection with shallow needle insertion for anesthetic difusion.

Akinosi Closed-Mouth Technique

- Designed for patients with limited mouth opening, no bony contact needed.
- Needle placed in loose areolar tissue medial to mandibular ramus for anesthetic deposition.

Mental and Incisive Blocks

- Useful for bilateral anesthesia anterior to mandibular premolars.
- These nerves are also covered by IANB but targeted blocks enhance anesthesia.

Complications and Adverse Effects of Local Anesthesia

- Includes local complications and systemic toxicity with generally low incidence.
- 50% Immediate management requires availability of resuscitation drugs and oxygen.

Tissue Trauma and Injection Effects

- Hematoma formation from vessel injury during injection.
- Trismus caused by accidental intramuscular injection or bleeding; early specialist intervention recommended.

Early Signs of Systemic Toxicity

- Minor CNS signs: restlessness, anxiety, dizziness, blurred vision, tremors, drowsiness.
- Cardiac toxicity (especially with bupivacaine) may precede CNS effects.

Direct Inferior Alveolar Nerve Block (IANB)

- Needle inserted into pterygomandibular space piercing buccinator muscle to deposit anesthetic near IAN before mandibular foramen.
- Key landmarks: retromolar triangle and pterygomandibular raphe; needle contacts bone just superior to lingula tip.

Gow-Gates Mandibular Block Technique

- True mandibular block with broader anesthesia including auriculotemporal and long buccal nerves.
- Needle inserted to anterolateral condylar neck; requires mouth to be kept open post-injection for effective difusion.

Supplementation with Local Supra-Periosteal Infiltrations

- Supplemental infiltrations improve success rates, especially for direct and indirect IANBs.
- Long buccal and lingual nerves must also be anesthetized for complete mandibular posterior anesthesia.

Buccal Nerve Block

- Indicated to anesthetize buccal mucosa and gingiva of mandibular molars.
- Needle inserted into buccal vestibule until bone contact with ~0.25 ml anesthetic solution administered.

Local Neurological Complications

- Paresthesia, dysesthesia, temporary nerve paralysis, with permanent anesthesia being rare.
- Caused by direct or indirect nerve trauma and localized neurotoxicity.

Systemic Toxicity

- Caused by intravascular injection, excessive dose, impaired clearance, or rapid absorption.
- Neurological, psychiatric, cardiovascular, respiratory symptoms, and allergic reactions may occur.

Methemoglobinemia Associated with Local Anesthetics

- Mainly linked to prilocaine and benzocaine; occasionally with lidocaine, articaine, tetracaine.
- Presents as hypoxia despite adequate oxygen delivery.

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LA TECHNIQUES AND COMPLICATIONS

Question 1

What is the primary mechanism by which local anesthetic agents work to prevent pain perception?

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LA TECHNIQUES AND COMPLICATIONS

Answer 1

Local anesthetic agents work by reversibly binding to sodium channels, preventing sodium from entering the cells, which inhibits the propagation of nerve impulses so that nociceptive signals associated with pain do not reach the brain, and the patient does not perceive pain.

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LA TECHNIQUES AND COMPLICATIONS

Question 2

What are the two main types of local anesthesia administration used in dentistry, and where are they typically applied?

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LA TECHNIQUES AND COMPLICATIONS

Answer 2

The two main types are infiltration anesthesia, commonly used in the maxilla, and block anesthesia, which is frequently used in the mandible.

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LA TECHNIQUES AND COMPLICATIONS

Question 3

What are the two chemical classes of local anesthetic agents, and which is most commonly used in dental practice?

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LA TECHNIQUES AND COMPLICATIONS

Answer 3

Local anesthetics are divided into amides and esters. Amide anesthetics (such as lidocaine, prilocaine, mepivacaine, and bupivacaine) are most commonly used in dentistry, with lidocaine considered the gold standard.

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LA TECHNIQUES AND COMPLICATIONS

Question 4

What is the role of adrenaline when added to lidocaine in dental anesthesia?

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LA TECHNIQUES AND COMPLICATIONS

Answer 4

Adrenaline is added to lidocaine to counteract its vasodilating properties, delay drug absorption, prolong the duration of anesthesia, and reduce the risk of toxicity.

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CUE CARDS

LA TECHNIQUES AND COMPLICATIONS

Question 5

Describe the infiltration method of local anesthesia administration and its common applications.

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CUE CARDS

LA TECHNIQUES AND COMPLICATIONS

Answer 5

Infiltration anesthesia involves depositing the anesthetic solution near terminal nerve fibers, allowing it to diffuse through tissues to block sensation in a localized area. It is commonly used for most teeth except lower molars, with analgesia occurring about 2 to 3 minutes after injection.

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LA TECHNIQUES AND COMPLICATIONS

Question 6

What is the difference between submucous injection and supraperiosteal injection techniques in local anesthesia?

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CUE CARDS

LA TECHNIQUES AND COMPLICATIONS

Answer 6

Submucous injection deposits anesthetic just beneath the mucous membrane and is mainly used to anesthetize the long buccal nerve or for soft tissue surgery, but rarely anesthetizes the dental pulp. Supraperiosteal injection deposits anesthetic outside the periosteum where it infiltrates through the periosteum and bone to anesthetize nerve fibers, commonly used in areas like the maxilla.

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LA TECHNIQUES AND COMPLICATIONS

Question 7

Which regional block is most commonly used to anesthetize the inferior alveolar nerve in the mandible?

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LA TECHNIQUES AND COMPLICATIONS

Answer 7

The direct inferior alveolar nerve block (IANB), also called the direct thrust approach, is the most commonly used technique to anesthetize the inferior alveolar nerve in the mandible.

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CUE CARDS

LA TECHNIQUES AND COMPLICATIONS

Question 8

What are some common complications related to local anesthesia in dentistry?

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CUE CARDS

LA TECHNIQUES AND COMPLICATIONS

Answer 8

Complications include local neurological issues (paresthesia, dysesthesia, temporary or rarely permanent nerve paralysis), trauma to tissues causing hematoma or trismus, equipment failure, and systemic toxicity such as neurological, cardiovascular, respiratory effects, allergic reactions, and rarely methemoglobinemia.

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CUE CARDS

LA TECHNIQUES AND COMPLICATIONS

Question 9

What signs and symptoms indicate early systemic toxicity of local anesthetics?

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LA TECHNIQUES AND COMPLICATIONS

Answer 9

Early indicators include minor central nervous system effects such as restlessness, anxiety, dizziness, blurred vision, tremors, CNS depression, and drowsiness.

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LA TECHNIQUES AND COMPLICATIONS

Question 10

Which local anesthetic agents are most commonly associated with methemoglobinemia?

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LA TECHNIQUES AND COMPLICATIONS

Answer 10

Prilocaine (especially above 600 mg) and benzocaine are most commonly associated with methemoglobinemia; it has also been occasionally reported with lidocaine, articaine, and tetracaine.

WINSPERT

ORAL SURGERY

PYOGENIC GRANULOMA

MIND MAP & CUE CARDS

BY DR. JIGYASA SHARMA

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MIND MAP

PYOGENIC GRANULOMA

Definition and Nature

- Pyogenic granuloma is a benign vascular tumor arising on skin and mucous membranes.
- The term is a misnomer; it neither contains pus nor is a true granuloma.

Etiology and Predisposing Factors

- Caused by reactive hyperplasia of connective tissue in response to local irritants like trauma and poor oral hygiene.
- Hormonal factors, especially in females during pregnancy, significantly influence its development.

Locations and Variants

- Commonly found on gingival mucosa and lips; pregnancy-associated form called granuloma gravidarum or epulis gravidarum.
- Usually occurs during the second or third trimester in pregnant females.

Differential Diagnosis

- Fibrous epulis is firmer, less vascular, rarely ulcerated, and arises from fibrous hyperplasia linked to irritants.
- Diagnosis primarily clinical but confirmed by histopathology to exclude malignancy or other lesions.

Management Strategies

- Initial management includes elimination of irritants, oral prophylaxis, and improved oral hygiene.
- Complete surgical excision is the definitive treatment to prevent recurrence.

Prognosis and Recurrence

- No malignant potential but may recurrently bleed or ulcerate.
- Partial excision or curettage increases risk of recurrence; complete removal is preferred.

Summary of Key Points

- Pyogenic granuloma is a benign hyperplastic vascular lesion responsive to irritants and hormones.
- Early diagnosis and complete excision with removal of triggers ensure best outcomes and prevent recurrence.

Clinical Presentation

- Appears as a painless, mostly pedunculated, soft, vascular mass that bleeds easily
- Lesion colors vary: pink, red, reddish-brown, or purple, often ulcerated with rapid growth.

Pathogenesis and Histology

- Lesion consists of lobular aggregates of capillary-sized vessels within highly vascular granulation tissue.
- Contains thin-walled capillaries embedded in loose fibrous stroma with scattered inflammatory cells.

Diagnostic Approach

- History should review trauma, pregnancy, medications; biopsy required if diagnosis uncertain.
- Histopathology essential for confirmation and to rule out sinister lesions.

Special Considerations in Pregnancy

- Oral hygiene and prophylaxis prioritized; surgical excision avoided due to recurrence risk.
- Lesions often resolve spontaneously after delivery.

Patient Counseling and Advice

- Patients need reassurance about benign nature and counseling on avoiding trauma.
- Warn about recurrence risk and possible scarring after surgery; treatment decisions made jointly.

WINSPERT
CUE CARDS

PYOGENIC GRANULOMA

Question 1

What is a pyogenic granuloma and why is the term considered a misnomer?

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CUE CARDS

PYOGENIC GRANULOMA

Answer 1

A pyogenic granuloma is a common, acquired, benign vascular tumor that arises in tissues such as the skin and mucous membranes. It is a reactive hyperplasia of connective tissue in response to local irritants, characterized by a highly vascular lesion that bleeds easily. The term "pyogenic granuloma" is a misnomer because the lesion does not contain pus ("pyogenic") and is not truly a granuloma histologically.

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PYOGENIC GRANULOMA

Question 2

What causes or contributes to the development of pyogenic granuloma?

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PYOGENIC GRANULOMA

Answer 2

Pyogenic granuloma arises due to local irritants such as trauma, poor oral hygiene, calculus, or irritation from dental restorations. Hormonal factors, especially female sex hormones during pregnancy, and certain drugs can also act as triggers. Approximately one-third of lesions occur due to trauma or irritation.

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PYOGENIC GRANULOMA

Question 3

Which population and clinical context is most commonly associated with the variant known as "pregnancy tumor" or "epulis"?

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PYOGENIC GRANULOMA

Answer 3

The pregnancy tumor or epulis, a variant of pyogenic granuloma, commonly occurs in females during the second or third trimester of pregnancy. It is linked to elevated steroid hormone levels and mostly appears on the gingiva of pregnant women.

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PYOGENIC GRANULOMA

Question 4

Describe the typical clinical presentation of pyogenic granuloma.

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PYOGENIC GRANULOMA

Answer 4

Pyogenic granuloma typically appears as a painless, solitary, red or reddish-brown pedunculated or sometimes sessile mass, mostly on the gingiva or mucosa. It is soft, highly vascular, friable, bleeds easily, and often has an ulcerated surface. The lesion shows rapid growth and may be pink, red, or purple in color.

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PYOGENIC GRANULOMA

Question 5

What is the most scientifically accurate term for pyogenic granuloma based on its histological features?

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CUE CARDS

PYOGENIC GRANULOMA

Answer 5

The most scientifically accurate term for pyogenic granuloma is "lobular capillary hemangioma," reflecting its lobular aggregates of capillary-sized blood vessels seen microscopically.

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CUE CARDS

PYOGENIC GRANULOMA

Question 6

How does a fibrous epulis differ from a pyogenic granuloma in terms of clinical features?

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CUE CARDS

PYOGENIC GRANULOMA

Answer 6

A fibrous epulis is a firm, fibrous hyperplastic nodule that is usually not ulcerated and does not bleed readily, unlike the more vascular, friable pyogenic granuloma. Fibrous epulis may develop from pyogenic granuloma through fibrous tissue maturation and is similarly associated with local irritants.

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PYOGENIC GRANULOMA

Question 7

What histopathological features characterize pyogenic granuloma?

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PYOGENIC GRANULOMA

Answer 7

Histologically, pyogenic granuloma consists of lobular aggregates of capillary-sized vessels with central feeder vessels, embedded in highly vascular granulation tissue. The stroma is loose and fibrous, containing scattered fibroblasts and mixed inflammatory cells such as lymphocytes, neutrophils, plasma cells, and mast cells, resembling normal granulation tissue.

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PYOGENIC GRANULOMA

Question 8

What non-surgical management techniques are recommended for pyogenic granuloma, especially during pregnancy?

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CUE CARDS

PYOGENIC GRANULOMA

Answer 8

Non-surgical management includes elimination of causative local irritants, removal of calculus, and improved oral hygiene to induce partial or occasional complete resolution. During pregnancy, oral prophylaxis and oral hygiene instructions are preferred to avoid surgical intervention and because surgical excision carries a higher risk of recurrence in pregnancy.

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PYOGENIC GRANULOMA

Question 9

What is the definitive treatment for pyogenic granuloma and why is complete excision preferred?

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PYOGENIC GRANULOMA

Answer 9

The definitive treatment of pyogenic granuloma is complete surgical excision of the lesion, along with elimination of any predisposing factors. Complete excision is preferred because partial removal by shave excision or curettage often leads to recurrence. For recurrent lesions, complete excision is again warranted.

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PYOGENIC GRANULOMA

Question 10

What advice should be given to patients regarding pyogenic granuloma and its management?

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PYOGENIC GRANULOMA

Answer 10

Patients should be reassured that pyogenic granuloma is benign with no malignant potential. They should be advised to avoid trauma or picking at the lesion to prevent secondary infection. Counseling should include information about the risk of recurrence after partial excisions and the possibility of scarring following surgery. Treatment decisions should be made jointly with the healthcare provider considering the risks and benefits.

WINSPERT

ORAL SURGERY

RETAINED ROOTS/ ODONTOMAS/ RADIOPACITIES OF JAW

MIND MAP & CUE CARDS

BY DR. JIGYASA SHARMA

WINSPERT

MIND MAP

RADIOPACITIES OF JAW AND RETAINED ROOTS

Overview of Retained Roots

- A residual root is a tooth root left in the jaw after extraction
- A Can cause pain, infection, and often requires surgical removal under local anesthesia

Causes and Consequences of Retained Roots

- Result from tooth fractures during extraction or trauma
- Root morphology affects extraction complexity and management approach

Root Morphology in the Mandible

- Mandibular incisors generally single-rooted, central without apical curvature
- Mandibular canines may have bifurcated roots unlike maxillary counterparts
- First and second molars commonly have two distally tilted roots (mesial and distal)
- Third molar roots vary significantly, usually shorter and parallel

Techniques of Retained Root Removal

- Local anesthesia and patient/team consent essential before surgery
- Closed surgical technique involves root elevation without flap creation
- Use of elevators as wheel, lever, or wedge to dislodge roots
- Open surgical technique requires tissue flap reflection and often bone removal
- Endodontic file technique applies friction within root canal to pull root segment

Radiopacities of the Jaw: Definition and Causes

- Radiopacities appear as white areas on radiographs
- Multiple radiopacities suggest systemic causes; single imply local causes
- Common causes: dense bone islands (idiopathic osteosclerosis) and sclerosing osteitis

Odontogenic Lesions: Odontomas & Supernumerary Teeth

- Odontomas are mixed tissue hamartomas and most common odontogenic tumor in youth
- Compound odontomas resemble small tooth-like structures; complex odontomas show disorganized dental tissues
- Compound odontomas favor anterior maxilla; complex odontomas favor posterior mandible
- Multiple odontomas may indicate Gardner syndrome
- Supernumerary teeth share developmental origin with odontomas

Idiopathic Osteosclerosis (Dense Bone Island)

- Focal bone density increase of unclear origin, often asymptomatic and incidenta 1 finding
- Well-defined margins without radiolucent rim, unlike condensing osteitis
- Typically not associated with tooth root infection; normal pulp vitality

Root Morphology in the Maxilla

- Incisors typically have single, straight, conical roots
- Maxillary canines have single, longest roots
- First premolars often have bifurcated buccal and palatal roots; variants exist.
- First molars have two buccal and one palatal root, with variable splaying

Indications for Removal of Retained Roots

- Acute or chronic infection presence
- Periodontal disease, caries, or vertical root fractures
- Future implant placement or prosthetic restorations
- Patient esthetic concerns and preservation of adjacent teeth

Piezosurgery in Atraumatic Extraction

- An advanced technique using ultrasonic vibrations to minimize tissue trauma

Types of Radiopaque Lesions

- Densely sclerotic: benign, homogeneous density similar to cortical bone
- Ground-glass lesions: caused by fibrous dysplasia, cemento-ossifying fibroma, Paget disease, renal osteodystrophy
- Mixed lytic-sclerotic: heterogeneous group including benign/malignant neoplasms and infections

Condensing Osteitis

- Local reactive sclerosis caused by chronic odontogenic inflammation
- Usually symptomatic with focal, ill-defined sclerosis near affected teeth

Summary

- Understanding root anatomy and pathology essential for managing retained roots
- Radiographic analysis important to diferentiate types of radiopacities for correct diagnosis
- Multiple surgical and technological techniques available for root removal basedon case complexity

Map Your Way to ADC Success!

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RETAINED ROOTS/ ODONTOMAS/ RADIOPACITIES OF JAW

Question 1

What is a retained root in dental context, and what problems can it cause?

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RETAINED ROOTS/ ODONTOMAS/ RADIOPACITIES OF JAW

Answer 1

A retained root is a tooth root left in the jaw after a previous extraction. It can cause problems such as pain and infection and usually requires surgical removal under local anesthetic.

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RETAINED ROOTS/ ODONTOMAS/ RADIOPACITIES OF JAW

Question 2

What are the typical root morphologies of maxillary central and lateral incisors and maxillary canines?

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RETAINED ROOTS/ ODONTOMAS/ RADIOPACITIES OF JAW

Answer 2

Maxillary central and lateral incisors typically have single, straight, conical roots. Maxillary canines are also single-rooted and have the longest roots among all teeth.

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RETAINED ROOTS/ ODONTOMAS/ RADIOPACITIES OF JAW

Question 3

Describe the root anatomy of maxillary first and second premolars.

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RETAINED ROOTS/ ODONTOMAS/ RADIOPACITIES OF JAW

Answer 3

The maxillary first premolar often has a long root trunk with bifurcated buccal and palatal roots, though single root variants exist. The maxillary second premolar is usually single-rooted and rarely bifurcated.

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RETAINED ROOTS/ ODONTOMAS/ RADIOPACITIES OF JAW

Question 4

What are the common root characteristics of mandibular first and second molars?

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RETAINED ROOTS/ ODONTOMAS/ RADIOPACITIES OF JAW

Answer 4

Mandibular first and second molars usually have two distally tilted roots: a mesial and a distal root. The second molar roots are typically shorter with less splay than the first molar roots.

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RETAINED ROOTS/ ODONTOMAS/ RADIOPACITIES OF JAW

Question 5

List some indications for the removal of retained tooth roots.

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RETAINED ROOTS/ ODONTOMAS/ RADIOPACITIES OF JAW

Answer 5

Indications include acute or chronic infection, partial or complete crown fracture, future dental implant placement, pain, vertical root fractures, periodontal disease, caries, presence of pathology, future prosthetic restoration, preservation of adjacent teeth, esthetic concerns, and sometimes prophylactic removal in asymptomatic patients.

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RETAINED ROOTS/ ODONTOMAS/ RADIOPACITIES OF JAW

Question 6

What are the three fundamental physical concepts used when using dental elevators to remove retained roots?

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RETAINED ROOTS/ ODONTOMAS/ RADIOPACITIES OF JAW

Answer 6

The three concepts are:
1) Wheel,
2) Lever, and
3) Wedge.

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RETAINED ROOTS/
ODONTOMAS/
RADIOPACITIES OF JAW

Question 7

What is the difference between the closed and open surgical techniques for retained root removal?

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RETAINED ROOTS/ ODONTOMAS/ RADIOPACITIES OF JAW

Answer 7

The closed technique involves elevating and luxating the root from the socket coronally without creating a mucoperiosteal flap. The open technique requires reflecting a tissue flap and often removing cortical bone for better visualization and surgical access.

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RETAINED ROOTS/ ODONTOMAS/ RADIOPACITIES OF JAW

Question 8

How does the endodontic file technique assist in removing retained root segments?

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RETAINED ROOTS/ ODONTOMAS/ RADIOPACITIES OF JAW

Answer 8

An endodontic file is inserted through the root canal orifice and advanced apically until friction develops in the canal. The file's contact surface generates pullout force on the root segment, aiding in coronal extraction.

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RETAINED ROOTS/ ODONTOMAS/ RADIOPACITIES OF JAW

Question 9

What are the two most frequent causes of radiopacities in the jaws?

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RETAINED ROOTS/ ODONTOMAS/ RADIOPACITIES OF JAW

Answer 9

Dense bone islands (idiopathic osteosclerosis) and sclerosing osteitis are the two most frequent causes of radiopacities in jaw radiographs.

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RETAINED ROOTS/ ODONTOMAS/ RADIOPACITIES OF JAW

Question 10

What distinguishes idiopathic osteosclerosis from condensing osteitis radiographically and clinically?

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RETAINED ROOTS/ ODONTOMAS/ RADIOPACITIES OF JAW

Answer 10

Idiopathic osteosclerosis shows a well-defined sclerotic focus with no radiolucent rim, is usually asymptomatic, and often incidental. Condensing osteitis appears as ill-defined focal sclerosis associated with chronic inflammation and symptoms, usually related to periodontal or endodontic disease.

WINSPERT

ORAL SURGERY

OROANTRAL COMMUNICATION AND FISTULA

MIND MAP & CUE CARDS

BY DR. JIGYASA SHARMA

WINSPERT

MIND MAP

ORO-ANTRAL COMMUNICATION AND FISTULA

Definition of Oro-Antral Fistula

- Persistent epithelialized tract present >48 hours
- Epithelium grows from gingiva, periodontal pocket, or sinus lining

Predisposing Factors

- Anatomical proximity of tooth roots to maxillary sinus
- History of trauma or surgical complications

Diagnostic Investigations

- Nose blowing test detecting whistling sound or air bubbles at fistula
- Panoramic radiograph for bony defect and foreign bodies
- CT scan to rule out maxillary sinusitis or neoplasms

Preoperative Management

- Treat sinus infection before fistula closure to improve healing
- Lavage sinus with saline and diluted iodine solution until clear

Postoperative Care

- Soft diet; avoid trauma to surgical site
- No nose blowing or sneezing with closed mouth for 2 weeks
- Saline rinses and chlorhexidine mouthwash; no rinsing for 18 hours post-op
- Use steam inhalation to keep mucosa moist and prevent crusting

Summary of Complications if Untreated

- Chronic sinusitis due to contamination
- Persistent fistula formation with epithelialization
- Impaired healing, possible osteitis and infection

Definition of Oro-Antral Communication

- An unnatural passage between oral cavity and maxillary sinus
- Small defects (<2mm) may heal spontaneously; larger defects risk infection

Causes of OAC and OAF

- Mainly from upper molar and premolar tooth extractions (48%)
- Other causes: trauma, implant dislodgement, cysts, tumors, osteoradionecrosis

Clinical Signs and Symptoms

- Initial localized pain, later painless fistula after inflammation subsides
- Escape of fluids/air between mouth and nose during eating or nose blowing
- Sinusitis symptoms: nasal obstruction, fullness, maxillary pain, tenderness

Management of Retained Root Fragments

- Assess if root fragment is loose or trapped under mucosa
- Remove via socket if possible; else require surgical Caldwell-Luc procedure

Surgical Closure Techniques

- Excision of fistula margins to remove epithelial tract
- Buccal advancement flap most common; involves incisions and periosteal incisions for mobility
- Other flaps include palatal island flap, buccal fat pad flap, or combined flaps

Prevention Strategies

- Radiographic assessment before upper molar extraction
- Surgical extraction with tooth sectioning by experienced surgeon if high risk

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ORO ANTRAL COMMUNICATION AND FISTULA

Question 1

What is oro-antral communication (OAC)?

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ORO ANTRAL COMMUNICATION AND FISTULA

Answer 1

Oro-antral communication is an unnatural opening between the oral cavity and the maxillary sinus, which may close spontaneously if small, but larger defects can lead to sinus infections and require surgical closure.

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ORO ANTRAL COMMUNICATION AND FISTULA

Question 2

How do defects smaller than 2 mm in oro-antral communication typically heal?

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Answer 2

Defects smaller than 2 mm can heal spontaneously through blood clot formation and secondary healing, provided there is no maxillary sinus infection.

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ORO ANTRAL COMMUNICATION AND FISTULA

Question 3

What defines an oro-antral fistula (OAF)?

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ORO ANTRAL COMMUNICATION AND FISTULA

Answer 3

An oro-antral fistula is a persistent epithelialized communication between the maxillary sinus and the mouth that remains open for more than 48 hours, with epithelium lining the tract.

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ORO ANTRAL COMMUNICATION AND FISTULA

Question 4

What causes oro-antral fistula formation?

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ORO ANTRAL COMMUNICATION AND FISTULA

Answer 4

OAF forms when an oro-antral communication fails to close spontaneously, remains open, and the oral epithelium migrates into the defect, epithelializing it usually after 48-72 hours.

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ORO ANTRAL COMMUNICATION AND FISTULA

Question 5

What are the most common causes of oro-antral communications and fistulas?

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ORO ANTRAL COMMUNICATION AND FISTULA

Answer 5

The majority result from dental extractions, especially upper molars and premolars due to their proximity to the maxillary sinus. Other causes include malignant tumors, trauma, infections, implant complications, and surgical procedures like Caldwell-Luc.

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ORO ANTRAL COMMUNICATION AND FISTULA

Question 6

What symptoms characterize an oro-antral communication or fistula?

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ORO ANTRAL COMMUNICATION AND FISTULA

Answer 6

Symptoms include initial localized pain at the tooth socket, escape of fluids from mouth to nose when eating, air or fluids passing into the mouth on blowing the nose, nasal regurgitation of liquids, and possibly sinusitis symptoms such as nasal obstruction and maxillary pain.

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ORO ANTRAL COMMUNICATION AND FISTULA

Question 7

Which clinical test is used to detect a small oro-antral communication?

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ORO ANTRAL COMMUNICATION AND FISTULA

Answer 7

The nose blowing test: the patient closes their nostrils and gently blows with their mouth open, observing for whistling sounds, air bubbles, or fluid passage through the fistula.

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ORO ANTRAL COMMUNICATION AND FISTULA

Question 8

What imaging techniques help diagnose and assess oro-antral communications or fistulas?

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ORO ANTRAL COMMUNICATION AND FISTULA

Answer 8

Panoramic radiographs are used to estimate bony defect size and check for foreign bodies or roots, while computed tomography (CT) can rule out maxillary sinusitis. Additional radiographs at different angles may help localize root fragments.

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ORO ANTRAL COMMUNICATION AND FISTULA

Question 9

What is the common surgical technique for closing an oro-antral fistula?

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ORO ANTRAL COMMUNICATION AND FISTULA

Answer 9

The buccal advancement flap is the most common technique, involving creating incisions, elevating a mucoperiosteal flap, making periosteal releasing incisions to advance the flap, and suturing it over the defect.

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ORO ANTRAL COMMUNICATION AND FISTULA

Question 10

What postoperative instructions are important for patients after oro-antral fistula repair?

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ORO ANTRAL COMMUNICATION AND FISTULA

Answer 10

Patients should avoid hard food, blow their nose or sneeze with an open mouth, avoid strenuous activities, not use straws or smoke, keep the wound clean with saline rinses, use decongestants and chlorhexidine mouthwash, and avoid tongue movement over the suture line to ensure successful healing.