Lecture (5)

Assist. L zainab Hassan 4th Stage Nursing

pre anesthesia management

Pre-anesthesia management :involves the assessment, preparation, and optimization of a patient before they undergo anesthesia for a surgical or diagnostic procedure .

The pre anesthesia assessment include :

1.History

- Past Medical Conditions: Chronic illnesses (e.g., cardiovascular disease, diabetes, respiratory disorders).

- Surgical and Anesthesia History: Previous surgeries and any anesthesia-related complications (e.g., difficult intubation, postoperative nausea).

- Family History: Family history of anesthesia issues, especially malignant hyperthermia or other genetic anesthesia-related disorders.

- Medication Use: Current medications, supplements, herbal remedies, and potential interactions.

- Allergies: Known allergies, particularly to medications or latex.

Some condition with special relevance

1.Rheumatoid arthritis: Need for careful evaluation of airway and neck preoperatively and careful positioning under anesthesia

2. **Epilepsy:** drug treatment can interact with anesthetics; surgical stress and some anesthetics can ↑ seizure risk. Ensure that usual antiepileptic medication is given as normal.

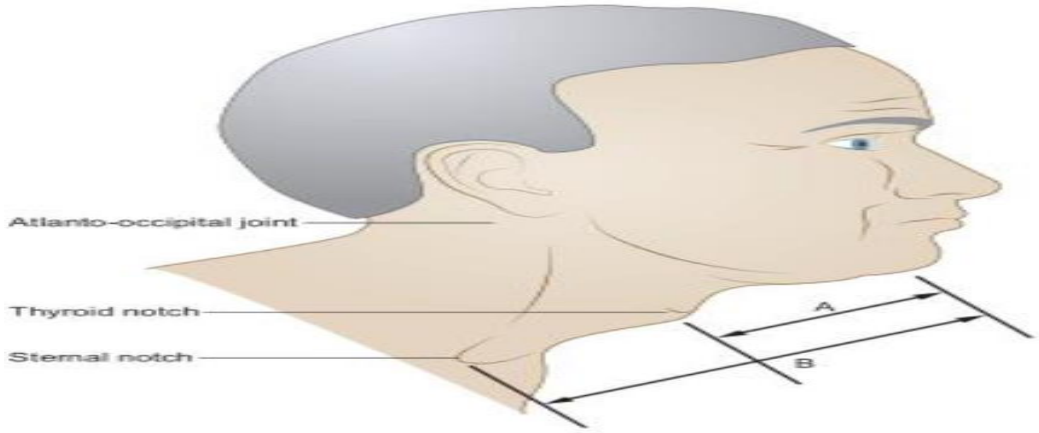
3.Scoliosis and spinal abnormalities:
Can ↓ respiratory reserve; tracheal intubation can be difficult; regional anesthesia difficult

4. Sickle cell disease: Stress of surgery, hypoxia, hypothermia or dehydration can precipitate sickle cell crisis.

2. Physical Examination

- Vital Signs: Blood pressure, heart rate, respiratory rate, and oxygen saturation.
- Airway Assessment: Look for any factors that may make intubation difficult (Mallampati score, neck mobility, jaw size).
- Cardiovascular System: Assess for any signs of heart disease, including murmurs or abnormal rhythms.
- Respiratory System: Evaluate lung sounds, breathing patterns, and any signs of respiratory distress.
- Other Systems: Check for any abnormalities in the neurological and Muloskeletal systems, as well as body mass index (BMI).

-Assessing thyromental distance. Thyromental distance < 6.5 cm may predict difficult intubation. Steromental distance < 12.5 cm may predict difficult intubation.



The modified Mallampati test

class 1, pharyngeal pillars, soft palate and uvula visible
class 2, only soft palate and uvula visible
class 3, only soft palate visible
class 4, soft palate not visible.

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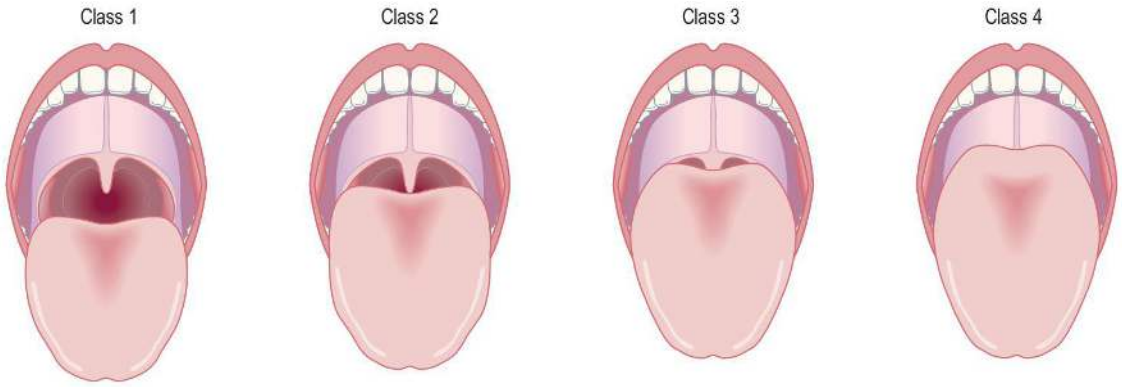
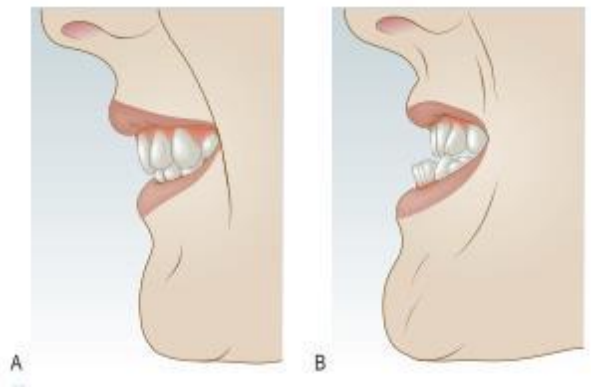


-Assess jaw movement from the side. Can the patient protrude the lower incisors in front of the upper incisors? • interincisor gap <3 cm • inability to protrude lower in front of upper incisors • Mallampati class 3 or 4.



-The range of motion in the atlanto-occipital joint (AO joint) affects alignment for intubation.

• Limited extension (<35°, as shown in your image) can hinder visualization of the vocal cords during direct laryngoscopy.

• Conditions like arthritis or cervical spine disorders can reduce neck mobility

Grading of reduction in A.O.Extension

Grade I : > 35°
Grade II : 22-34°
Grade III : 12-21°
Grade IV : < 12°



Grade	Reduction of A.O.Extension
1	none
2	One third
3	Two third
4	complete

Grades 3 and 4 : Difficult laryngoscopy

3. Investigation

-Full blood count: Patients with known abnormalities, e.g. anemia, thrombocytopenia, suspected infection.
-Urea and electrolytes: Pre-existing disease affecting biochemistry, e.g. renal failure or liver disease Drugs that could affect electrolytes, e.g. diuretics, ACE inhibitors.
-Coagulation: Known states that can alter coagulation, e.g. warfarin therapy, liver disease Prior to major surgery that may affect coagulation, e.g. cardiac surgery, hepatobiliary, surgery.
-Blood cross-matching: Use local surgical blood-ordering schedule to guide requests.
-12-lead electrocardiogram: Known or suspected heart disease.
-Chest X-ray: Selected patients with known respiratory disease.
-Respiratory function tests (FEV/FVC): Prior to major thoracic surgery, Selected patients with chronic respiratory disease.

-Echocardiography: Selected patients with heart disease (especially heart murmurs)**.**

Premedication and other prophylactic measures

Premedication refers to the administration of drugs in the period 1-2 h before induction of anesthesia.

Aim:

- allay anxiety and fear
- reduce postoperative nausea and vomiting
- assist with intra- and postoperative analgesia
- reduce secretions
- reduce the volume and increase the pH of gastric contents

Pre-anesthetic medications to stop

- oral antihyperglycemics: stop on morning of surgery
- antidepressants: stop on morning of surgery
- ACE inhibitors and angiotensin receptor blockers: may stop on morning of surgery (controversial)
- Anticoagulants

Good Luck