Alaa hussein hajwal (practical anesthesia) forth stage

ASPIRATION UNDERANESTHESIA

Aspiration can be defined as the inhalation of material into the airway below the level of the vocal cords. It is linked with a range of clinical outcomes, being asymptomatic in some instances and resulting in severe pneumonitis and ARDS in others.

Risk factors under general anesthesia

1. Full stomach/delayed emptying (many causes, including opioids, recent trauma, D.M . , Chronic renal failure, non-fasted patient).

2. Raised intragastric pressure (intestinal obstruction, pregnancy, laparoscopic surgery, high BMI).

3. Anesthesia (gastric insufflation, LMA, light anesthesia, difficult intubation).

4. Lower esophageal sphincter

incompetence (Gastro-esophageal reflux, hiatus hernia, pregnancy).

5. Acute alcohol intoxication.

6. Operation factors (emergency, Laparoscopy, Trendelenburg lithotomy position).

Measures to reduce risk:

1) Fasting.

2) Emptying stomach: - via nasogastric tube.

3) Increase lower esophageal sphincter tone, e.g., with metoclopramide(plasil), and prochlorperazine(stemetil).

4) Rapid sequence induction of anesthesia.

5) Induction in the lateral or sitting position.

6) Reduction of aspiration pneumonitis severity: e.g. H2 receptor antagonists, antacids, proton pump inhibitors.

Alaa hajwal

If aspiration occurs:

1) The patient should be placed in the head-down lateral position.

2) Material is aspirated from the pharynx and larynx, and O2 is administered.

3) Tracheal intubation may be necessary to protect the airways and to allow tracheobronchial suction.

4) If spo2<90% regardless of 100% O2, the patient may need bronchoscopy to aspirate solid food particles and ICU admission.

Aspiration pneumonitis (Mendelson's syndrome)

Inflammatory reaction of lung parenchyma following aspiration of gastric contents, a volume of 25 ml of aspirate, of pH 2.5, has been suggested to be required to produce the syndrome, The more acidic the inhaled material, the less volume is required to produce pneumonitis.

Management is mainly supportive, with O2 therapy, bronchodilator drugs, and removal of aspirate and secretions by physiotherapy and suction. Bronchoscopy may be required to remove large particulate matter. Secondary infection may occur, and prophylactic antibacterial drugs are sometimes given, CPAP or IPPV with PEEP may be required in severe cases, and mortality is high.

Aadhaar