Final Night

Anesthesia

King Abdul Aziz University, Jeddah

22252

فهرس | Contents

تمت إضافة تجميعات ميد ٢١و فيميل وميل ميد ٢٢

وتصحيح الأخطاء الكتابية من قِبل عبدالرحمن قاضي بعد

تحديد عنوانين المحاضرات المعنية لكل سؤال عن طريق ريما

نيازي واضافتها لأسئلة دفعة mix ٢١ بصيغة مرتبة

شاكرين الله على مجوداتهم المبذولة، فلا تنسوهم من صالح

الدعاء

A GIFT for MED22

2026-4-28

Healthier than Candy

لولا تعب وتعاون هذا الفريق لم يكن ليُكتب لهذا العمل الظهور بهذا الشكل

هدى خان	جوانا الجنيد
عناية موسى	ريما العوهلى
تالا ظفر	لين الغامدى
تالا ميمنى	ريفال القحطانى
جودى السلمى	

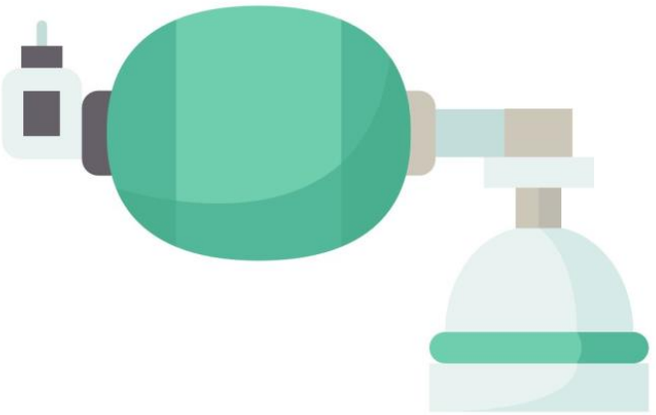
تحت اشراف

تسنيم الزهرانى

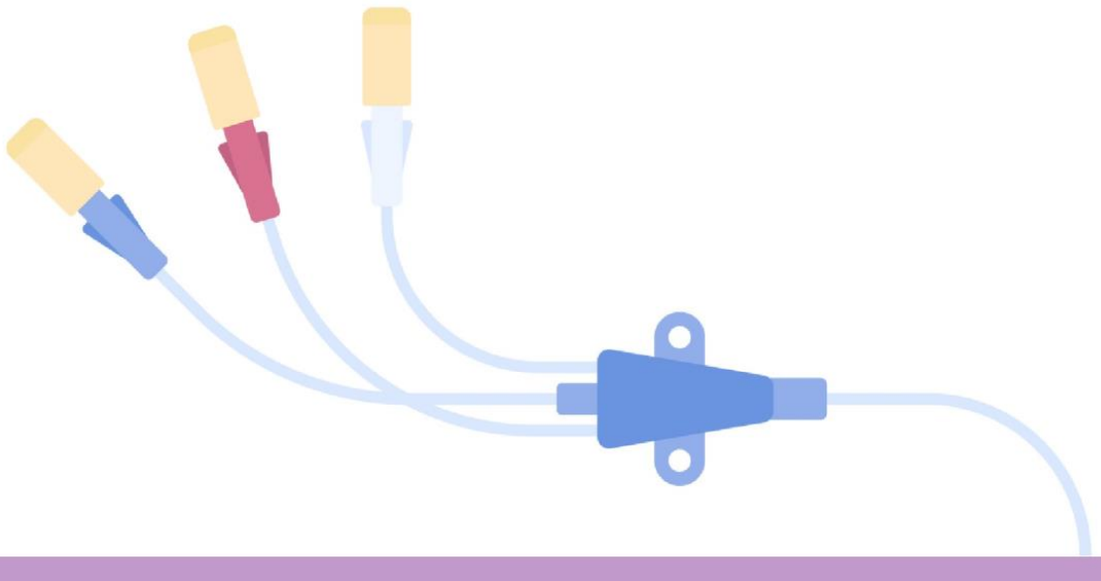
شكراً لكم

محمد سندى

٢٠٢٤/١٠/٢٣



اللهم إني أسألك فهم النبيين
وحفظ الملائكة المقربين،
اللهم اجعل لساني عامرا بذكرك
وقلبي بخشيتك، وسري بطاعتك،
إنك على كل شيء قدير
وحسبنا اللَّه ونعم الوكيل



L1 – General Anesthesia 1

(93 Q's)

(MED22 Mix)

1- Which drug is anxiolytic?

A. Midazolam
B. Propofol
C. Etomidate
D. Ketamine

Ans: A

2- Which reverses benzodiazepine?

A. Neostigmine
B. Suggamdex
C. Naloxone
D. Flumanezil

Ans : D

3- What is PNS used to monitor?

A. Depth of neuromuscular blockade
B. Depth of anesthesia
C. ..
D. ..

Ans : A

4- Phantom limb pain is felt at the amputated foot, where does this pain perception occur?

A. Peripheral nerves
B. Spinal cord
C. Brain
D. Dermatomes

Ans : C

(MED22 Female)

1- Which drug is anxiolytic?

A) Midazolam
B) Propofol
C) Etomidate
D) Ketamine

Ans : A

2- Which reverses benzodiazepine?

A) Neostigmine
B) Suggamdex
C) Naloxone
D) Flumanezil

Ans : D

3- Which drug Known to be bronchodilator?

A) Ketamine
B) Etomidate
C) Propofol
D) Morphine

Ans : A

4- What does lidocaine block?

A) Pottasium
B) Chloride
C) Calcium
D) Sodium

Ans : D

5- Which of the following is true?

A) Etomidate for hemodynamic stable
B) Ketamine dissociative and weak analgesic
C) Propofol decrease MAP
D) Morphine strong cardio deppresive

Ans : C

6- What is PNS used to monitor?

A) Depth of neuromuscular blockade
B) Depth of anesthesia

Ans : A

7- Which of following reduce nausea and vomiting?

A) Morphine
B) Ketamine
C) Propofol
D) Etomidate

Ans : C

8- Phantom limb pain is felt at the amputated foot, where does this pain perception occur?

A) Brain
B) Peripheral nerves
C) Spinal cord

Ans : A

9- A 65-year-old male presents for elective surgery. He has a history of diabetes mellitus,hypertension, and ischemic heart disease with a coronary stent placed one year ago. He has been asymptomatic since the procedure with no active cardiac issues. According to the ASA physical status classification, how should this patient be classified? (Same question idea repeated twice)

A) ASA II
B) ASA III
C) ASA IV
D) ASA V

Ans : B

***10- Case?**

A) ASA 1E
B) ASA 2E
C) ASA 3E ✅
D) ASA 4E

(Quistion is missing)

11- LMA is contraindicted in?

A) Laparoscopic
B) Pediatric
C) Edentulous patient
D) General anesthesia

Ans : A

12- For end stage kidney patient which of the following intra-op medications increase post-op sedation duration?

A) Celecoxib
B) Paracetamol
C) Morphine
D) Fentanyl

Ans : C

13- A pediatric patient's breathing became erratic and variable while inducing GA, what stage are they on?

A) Analgesia
B) Excitement/delirium
C) Surgical anesthesia
D) Medullary paralysis

Ans : B

***14- 70 year old Patient with vomiting and hematochezia due to bowel obstruction and hypotensive need emergency surgery, what is the anesthesia plan?** (I may have confused this case with another question?)

A) GA with ketamine and cisatracurium
B) GA with Propofol and succinylcholine
Ans: ??

15- Which of the following drugs activate opioids receptors in the CNS?

A) Paracetamol
B) Morphine
C) Ibuprofen
D) Ketamine

Ans : B

16- A 45-year-old male is being assessed preoperatively. He has a full beard, limited neck extension, mouth opening that permits 4 fingers, Mallampati class II, and thyromental distance >6.5 cm. Which of the following features is most predictive of difficult mask ventilation?

A) Mallampati class II
B) Thyromental distance >6.5 cm
C) Limited neck extension
D) Presence of a beard

Ans : D

17- 70 year old with beard, no teeth, snoring, how many difficult ventilation?

A) 3
B) 4
C) 2
D) 1

There was another “how many difficult ventilation” question

Ans : B

(MED21)

1. Which of the following is the primary receptor target for lidocaine?

A. Potassium

B. Chloride

C. Sodium

D. Calcium

Answer: C

2. Which of the following has a bronchodilator effect?

A. Ketamine

B. Morphine

C. Halothane

D. Midazolam

Answer: A

3. Which of the following drugs is relieve anxiety?

A. Midazolam

B. Thiopental

C. Propofol

D. Sevoflurane

Answer: A

4. Which of the following is an antidote for benzodiazepine?

A. Naloxone

B. Flumazenil

C. Neostigmine

D. Glycopyrrolate

Answer: B

5. Which of the following anesthetics prevent post-operative nausea and vomiting?

A. Ketamine

B. Midazolam

C. Fentanyl

D. Propofol

Answer: D

6. Which of the following has the strongest cardiovascular depression?

A. Etomidate

B. Ketamine

C. Opioids

D. Propofol

Answer: D

(Thiopental is the strongest CVS depressant, but it was not in the options)

The most likely answer is (D).

7. Which of the following drugs induce loss of consciousness at clinical doses?

A. Sevoflurane

B. Morphine

C. Midazolam

D. Propofol

Answer: A

8. A patient presents to the emergency department after a motor vehicle accident. On examination, there is clear fluid draining from the nose suspected to be cerebrospinal fluid (CSF). Which of the following airway interventions should be avoided?

A. Oral airway insertion

B. Endotracheal intubation

C. Nasal airway insertion

D. Jaw thrust maneuver

Answer: C

9. Which of the following is a side effect of morphine?

A. Tachycardia

B. Diarrhea

C. Bradypnea

D. Mydriasis

Answer: C

10. Which of the following drugs activate opioids receptors in the CNS?

A. Paracetamol

B. Morphine

C. Ibuprofen

D. Ketamine

Answer: B

11) Which anesthesia can lead to nightmares & delirium in the postoperative period?

A. Ketamine
B. Morphine
C. Fentanyl
D. Pethidine

E. Sufentanil

Ans: A

12) A 31-year-old male was in a car accident and is unable to breathe, his neck was unaffected. What is the best way to manage his airway?

A. Tracheostomy
B. Tracheal intubation with chest compression
C. Head tilt / chin lift
D. Jaw thrust

Ans: D

13) Reversal agent of cisatracurium?

A. Atropine
B. Neostigmine
C. Flumazenil
D. Naloxone

Ans: B

14) Which of the following drugs activate opioids receptors in the CNS?

A. Paracetamol

B. Morphine

C. Ibuprofen

D. Ketamine

Ans: B

15) A 32-year-old patient undergoes an elective surgery under general anesthesia. Rocuronium was used for muscle relaxation. At the end of surgery,

spontaneous breathing returns but is inadequate. Which of the following is the proper reversal agent for rocuronium?

A. Neostigmine

B. Atropine

C. Ephedrine

D. Pancuronium

Ans: A (as well as sugammadex)

16) A 28-year-old patient undergoes minor orthopedic surgery under general anesthesia. In the recovery room, he reports vivid dreams, visual hallucinations, and feelings of floating. Which anesthetic agent is most likely responsible for these symptoms?

A. Propofol

B. Ketamine

C. Midazolam

D. Sevoflurane

Ans: B

17) During the induction of general anesthesia, at which stage are irregular breathing patterns most observed?

A. Stage I – Analgesia

B. Stage II – Excitement / Delirium

C. Stage III – Surgical anesthesia

D. Stage IV – Medullary paralysis

Ans: B

18) Which of the following best defines "balanced anesthesia"?

A. Use of a single anesthetic agent to achieve all components of anesthesia

B. Combination of drugs and techniques to achieve unconsciousness, analgesia, and muscle relaxation

C. Administration of general anesthesia without analgesics

D. Use of local anesthesia alone for minor procedures

Ans: B

(MED20-MED16)

1. **All are true regarding general anesthesia except:**
   A. Maintains unconsciousness during medical procedures
   B. Is commonly produced by a combination of IV and inhaled anesthetic agents
   C. Is similar to regular sleep
   D. Includes sedation, amnesia, analgesia, & muscle relaxation

Ans: C

2. **Regarding the ASA classification system, the following are correct except:**
   A. ASA 2 patient will have mild to moderate systemic disease not related to surgery
   B. ASA 5 is a patient who is very sick and has little chance of survival

C. The letter E stands for a patient who will have an elective procedure D. The ASA can be used as an index of how sick the patient is

Ans: C

3. Midazolam is an example of:

A. Short-acting benzodiazepine

B. Long-acting benzodiazepine

C. Short-acting analgesics

D. Short-acting narcotic

E. Long-acting narcotic

Ans: A

4. The American Society of Anesthesiologists (ASA) Classification is used to determine:

A. Timing of the surgical intervention

B. Risks to the patient

C. Choice of anesthesia options

D. Mode of induction

Ans: B

5. A 7-year-old girl who needs general anesthesia for elective adenoidectomy has a past medical history of insulin-dependent diabetes mellitus for 4 years. The patient's condition is well controlled on medications. Otherwise, the patient is healthy with no problems with breathing and normal upper airway anatomy. Her ASA classification is:

A. ASA class 3E

B. ASA class 2

C. ASA class 4

D. ASA class 1

E. ASA class 3

Ans: B

6. Give one example of an intravenous induction agent for general anesthesia:

A. Rocuronium

B. Propofol

C. Fentanyl

D. Midazolam

Ans: B

7. Intravenous anesthetics include all of the following EXCEPT:

A. Midazolam

B. Flumazenil

C. Morphine

D. Ketamine

E. Fentanyl

Ans: B

8. The effects of intravenous anesthetic agents depend on the following:

A. Inspired concentration

B. Flow rate of anesthetic

C. Blood-gas partition coefficient

D. Target organ concentration

E. Minute volume

Ans: D

9. All of the following are true about Propofol side effects EXCEPT:

A. Has no analgesic effect

B. Leads to intraoperative hypotension

C. Leads to postoperative vomiting

D. Painful on injection

E. Provides clear recovery

Ans: C

10. The following features of the Laryngeal Mask Airway are true EXCEPT:

A. Easy to insert

B. Stays above the larynx

C. Can be used orally

D. Has a cuff at the distal end

E. Can be used nasally

Ans: E

11. Which anesthetic can lead to nightmares and delirium in the postoperative period?

A. Ketamine

B. Morphine

C. Fentanyl

D. Pethidine

E. Sufentanil

Ans: A

12. IV anesthetic agent effects depend on:

A. Inspired concentration

B. Flow rate of anesthetic

C. Minute volume

D. Target organ concentration

Ans: D

13. Which of the following is correct regarding general anesthesia?

A. Ketamine for IV induction

B. Sevoflurane for IV induction

C. Propofol for inhalation

D. Thiopental for IV induction

Ans: A

14. A 30-year-old diabetic patient came for drainage of a foot abscess. He is asthmatic controlled on Ventolin only with heavy exercise. His ASA classification is:

A. I

B. II

C. III

D. IV

Ans: C

15. Regarding general anesthesia, which of the following is correct?

A. Ketamine for IV induction

B. Sevoflurane for IV induction

C. Propofol for inhalation

D. Thiopental for inhalation

Ans: A

16. According to ASA physical state classification, which of the following is class III?

A. Normal health patient

B. Patient with mild systemic disease

C. Patient with severe systemic disease

D. Patient with a disease that is a constant threat to his life

E. Patient not expected to survive without operation

Ans: C

17. A male patient known to have diabetes mellitus and is asthmatic on inhalers controlled is going through surgery. What is his ASA classification?

A. Class I

B. Class III

C. Class II

D. Class IV

Ans: C

18. The following features of the laryngeal mask airway are true:

A. Can only be used orally

B. Can only be used nasally

C. Can only be used above the larynx

D. There is a cuff at the middle 10 cm below the tip

E. Can only be used deflated

Ans: C

(Both A & C are correct but in rare cases such as trauma or anatomical abnormalities LMA can be interned through nose using smaller size)

19. A 31-year-old male was in a car accident and is unable to breathe; his neck is affected. What is the best way to manage his airway?

A) Tracheostomy

B) Tracheal intubation with chest compression

C) Head tilt/chin lift

D) Jaw thrust

Ans: D

20. Which of the following medications prevent postoperative nausea and vomiting?

A. Ondansetron

B. Fentanyl

C. Sevoflurane

Ans: A

21. Most commonly used anxiolytic?

A) Midazolam

B) Diazepam

C) Lorazepam

Ans: A

22. Which of the following is a fast-acting muscle relaxant and it is depolarizing?

A) Rocuronium

B) Anticholinesterase

C) Succinylcholine

Ans: C

23. Antidote for benzodiazepines?

A) Flumazenil

B) Naloxone

C) Atropine

Ans: A

24. A long case of a patient with IDDM on insulin, he also has coronary artery syndrome with bypass surgery 2-3 years ago. He performs his daily activities normally, scheduled for emergency surgery; blood glucose is 10 mmol (180). What's his ASA score?

A) 1E

B) 2E

C) 3E

D) 4E

Ans: B OR C (not sure)

25.A patient has an accident, and on examination, his mouth opening is 2cm, Mallampati score not able to be done, and he has blood coming from his mouth.

What will you do?

A) Difficult airway and need fiber-optic insertion

B) Easy airway and need fiber-optic insertion

C) Difficult airway and intubation

D) Easy airway and intubation

Ans: A

26. A patient with DM, HTN, and ischemic heart disease had a stent insertion 2 years ago. He is admitted for emergency femoral replacement surgery. What is his ASA?

A) ASA 1E

B) ASA 2E

C) ASA 3E

D) ASA 4E

Ans: C

27. One of those drugs has a bronchodilator effect?

A) Ketamine

B) Isoflurane

C) Sevoflurane

Ans: A

28. 28 y/o female scheduled for emergency laparoscopic appendectomy, fasting for 8h, medically free, no comorbidities. What is the appropriate anesthesia plan?

A) Intravenous conscious sedation with inguinal nerve block

B) General anesthesia with rapid sequence induction and endotracheal intubation

C) General anesthesia with Laryngeal mask airway (LMA)

D) Spinal anesthesia

Ans: B (we don't use LMA with laparoscopic procedure)

29. 23 y/o had lower limb fracture fixation surgery. With 3 days of nausea and vomiting. Use general anesthesia due to?

A) Heart rate 100

B) Location of fracture is proximal to femur

C) Improve nausea and vomiting

D) Patient was using opioids for chronic pain

Ans: C or D (not sure)

30. Which one of the following is the accurate definition for MAC?

A) It is the minimum alveolar concentration at which 100% of patients do not respond to the surgical incision

B) It is the minimum alveolar concentration at which 50% of patients do not respond to the surgical incision

C) It is the minimum alveolar concentration at which 25% of patients do not respond to the surgical incision

D) It is the minimum alveolar concentration at which 75% of patients do not respond to the surgical incision

Ans: B

31. Young female patient, known case of SLE, past medical history positive for pleural effusion and hemothorax multiple times requiring chest tube, ANA positive, now mild dyspnea and malar rash. What is her ASA class?

A) 1

B) 2

C) 3

D) 4

Ans: C

32. What is true regarding succinylcholine?

A) Causes fasciculations that may lead to painful myalgia

B) Safe for malignant hyperthermia

C) Considered a non-depolarizing agent

D) Stimulates only muscarinic cholinergic receptor

Ans: A

33. Non-depolarizing agent?

A) Atropine and sugammadex

B) Neostigmine and glycopyrrolate

C) Rocuronium and vecuronium

Ans: C

34. Which of the following is considered difficult intubation?

A) Non-responding to CPAP

B) Truncal obesity

C) History of smoking

D) Increased neck circumference

Ans: D

35. Uncontrolled DM, lung fibrosis, and use O2 daily?

A) Class 4

B) Class 3

C) Class 2

Ans: A

36. Difficult for mask ventilation?

A) Dense beard

B) High Mallampati score

C) Obesity

Ans: A

37. Anesthetic drug by inhalation?

A) Nitrous oxide

B) propofol

C) fentanyl

Ans: A

38. In pregnancy we change the dose of the medication because of?

A) Decreased MAC

B) Increased blood volume

C) Hormonal changes

Ans: A

39. Obese, smoker, which of the following made this patient difficult for intubation?

A) Increased neck diameter

B) Short neck

C) Poor oral hygiene

Ans: A

40. What's the most accurate way for detecting esophageal intubation?

A) Bilateral chest movement

B) Unilateral breath sounds

C) Capnography

Ans: C

(Capnography is the most accurate method)

41. Patient is seen in the surgical ward after operation, developed respiratory depression with shallow breathing. His medication list includes: Fentanyl, Morphine, Cefazolin, Midazolam, Sevoflurane, Propofol, Ondansetron. What will you give the patient?

A) Flumazenil

B) Naloxone

Ans: B

42. Case with a patient smoker that has uncontrolled diabetes and uncontrolled HTN. What is his ASA score?

A) 1

B) 2

C) 3

D) 4

Ans: C

43. All of the drugs below lead to N/V except?

A) Propofol

B) Morphine

C) Nitrous oxide

D) Sevoflurane

Ans: A

44. Bupivacaine blocks __ channels?

A) Sodium

B) Potassium

C) Chloride

D) Calcium

Ans: A

45. What is a sign of difficult intubation?

A) Increased neck diameter

Ans: A

46. MAC (Minimal Alveolar Concentration) is the concentration at which 50% of patients:

A) Do not respond to surgical incision

B) Do not remember surgical incision

C) Not awake when closure of wound

Ans: A

47. A patient with BMI 50, the risk for complications?

A) Difficult mask bag ventilation

B) Hypothermia

C) Chronic pain

Ans: A

48. Reversal agent of cisatracurium?

A) Atropine

B) Neostigmine

C) Flumazenil

D) Naloxone

Ans: B

49. A 80-year-old patient came with a thick beard, no teeth, and was snoring. How many signs or indicators for difficult intubation?

A) 1

B) 0

C) 3

D) 2

Ans:A or B

(not sure ينحسب غالباً مثلاً السمنة بسبب انو حدد إذا ف الشخير سبب ايش حدد ما بالسؤال difficult intubation)

50. A 45-year-old male patient with a known case of controlled hypertension undergoing urgent laparoscopic appendectomy. What is his ASA score?

A) ASA E2

B) ASA E1

C) ASA E3

Ans: A (ASA 2E)

51. Which drug causes the strongest cardiac depression?

A) Ketamine

B) Thiopental

C) Propofol

D) Midazolam

Ans:B

(thiopental as it causes severe cardiac depression suddenly at once but propofol causes cardiac depression gradually and according to dose so technically both are correct but thiopental is generally known to cause stronger cardiac depression)

52. Which of the following puts the patient to sleep?

A) Sevoflurane

B) Fentanyl

C) Isoflurane

Ans: A

53. Which of the following airways should be done in a patient with head trauma?

A) Laryngeal mask airway

B) Spontaneous breathing with sedation

C) Endotracheal tube

Ans: C

54. Which of the following drugs decrease the incidence of postoperative nausea and vomiting?

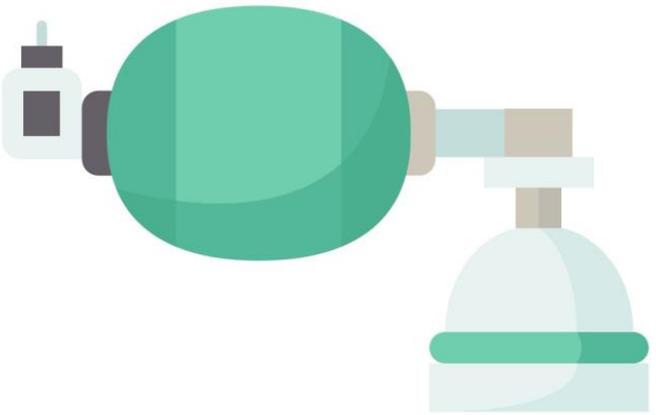
A) Propofol

B) Ondansetron

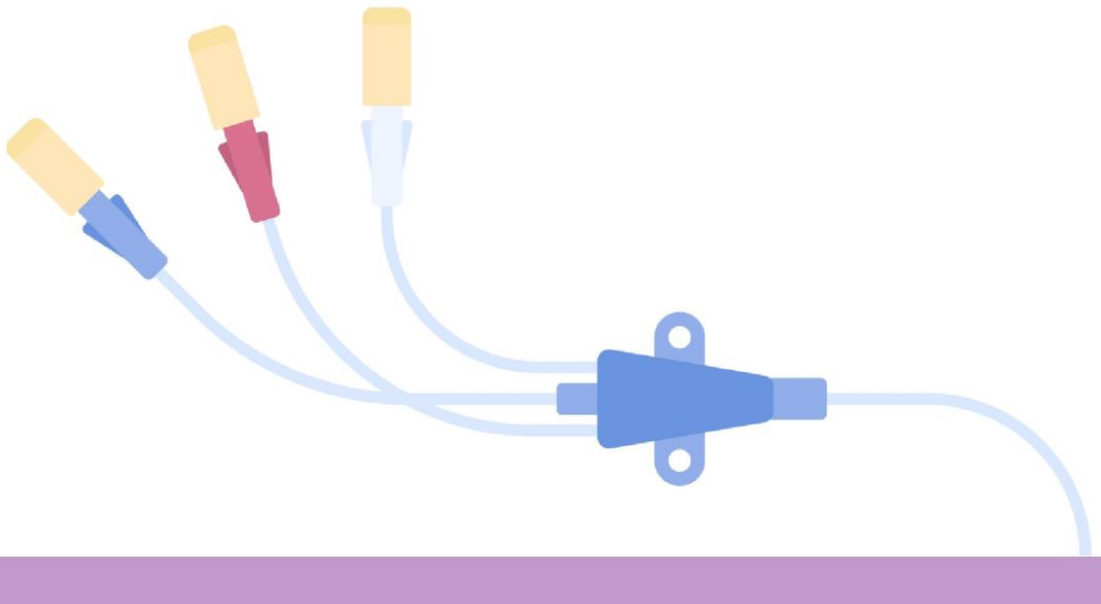
C) Dexamethasone

Ans: B

(Propofol is more neutral regarding N/V)



اللهم أخرجنا من ظلمات الوهم،
وأكرمنا بنور الفهم، وافتح علينا بمعرفة العلم،
وحسّن أخلاقنا بالحلم، وسهل لنا أبواب فضلك
وانشر علينا من خزائن رحمتك،
يا أرحم الراحمين



L2 – General Anesthesia 2

(34 Q's)

(MED22 Mix)

1- What's true about pulse oximetry?

A. Uses spectrophotometry
B. ..reliable and most accurate
C. ..

Ans: A

2- A patient with BMI 50, what's the anesthesia complication?

A. Interfere with neuromuscular agent
B. Difficult mask ventilation
C. ..
D. ..

Ans: B

(MED22 FEMALE)

1- A patient is scheduled for emergency surgery due to bowel obstruction. He has been fasting for 8 hours. What is the most appropriate anesthetic approach?

A. General anesthesia with rapid sequence induction and intubation
B. General anesthesia without rapid sequence induction and intubation

Ans : A

***2- Malignant hyperthermia question** (No further info)

(MED21)

1. Which of the following is an essential component of rapid sequence induction?

A. Insertion of nasogastric tube
B. Pre-oxygenation
C. Administration of long-acting opioids such as morphine
D. Use of local anesthetics

Answer: B

2. A patient with a family history of anesthesia-related death back in Pakistan. develops muscle rigidity, hypercapnia, and hyperthermia shortly after induction of general anesthesia. Which of the following is the most appropriate next step in management?
A. Cool the room and administer antipyretics
B. Administer succinylcholine and deepen anesthesia
C. Switch to total intravenous anesthesia (TIVA) and give dantrolene
D. Discontinue surgery and observe the patient

Answer: C

3. A patient undergoes rapid sequence induction with succinylcholine. Shortly after, he develops muscle rigidity, tachycardia, and hyperthermia. What is the most appropriate antidote?
A. Naloxone
B. Flumazenil
C. Dantrolene
D. Neostigmine

Answer: C

4. Which of the following is an indication of rapid sequence induction?
A. Patient who ate a large meal 2 hours ago
B. Patient with Mallampati class I
C. Patient undergoing elective cosmetic surgery after 8 hours of fasting
D. Patient with a history of mild asthma, currently asymptomatic

Answer: A

5) In the context of general anesthesia, which of the following represents an extra monitoring equipment?

A. Pulse oximeter
B. Central Line
C. Nerve stimulator
D. Invasive blood pressure monitor
E. End tidal Co2 monitor

Ans: B?

6) Which agent is associated with the risk of inducing malignant hyperthermia?

A. Succinylcholine
B. Ibuprofen
C. Propofol
D. Lidocaine
E. Nitrous oxide

Ans: A

7) Which of the following is considered primary (mandatory) monitoring equipment for all patients undergoing general anesthesia?

A. End-tidal CO_2 ($EtCO_2$)
B. Central venous pressure (CVP) monitor
C. Arterial line (invasive BP)
D. Pulmonary artery catheter

Ans: A

8) A 3-year-old child is scheduled for elective hernia repair. The child is anxious, uncooperative, and has no intravenous access. Vital signs are stable and airway examination is unremarkable. The anesthesiologist decides to proceed with induction of anesthesia without IV access. What is the most appropriate method of induction in this patient?

A. Intravenous propofol bolus
B. Intramuscular ketamine
C. Inhalational induction with sevoflurane in oxygen
D. Rapid sequence induction with thiopentone

Ans: C

9) A 17-year-old male undergoes orthopedic surgery under general anesthesia with sevoflurane and succinylcholine. Twenty minutes after induction, he develops rapidly rising end-tidal CO_2 (>65 mmHg) despite increased ventilation, generalized muscle rigidity, tachycardia, metabolic acidosis, hyperkalemia, and a rapid rise in core body temperature. Dark-colored urine is noted in the urine bag. What is the MOST appropriate next step in management?

A. Increase minute ventilation and deepen anesthesia
B. Discontinue volatile anesthetic and administer propranolol
C. Administer intravenous dantrolene immediately and apply a cooling measure
D. Apply active cooling measures only

Ans: C

10) A 19-year-old male with no significant past medical history undergoes emergency appendectomy under general anesthesia. Shortly after induction with sevoflurane and succinylcholine, he develops masseter muscle rigidity, rapidly rising end-tidal CO_2, tachycardia, metabolic acidosis, hyperkalemia, and a sudden increase in core body temperature. Dark urine is noted in the Foley catheter. What is the most likely diagnosis?

A. Inadequate depth of anesthesia
B. Anaphylaxis to neuromuscular blocking agent
C. Malignant hyperthermia
D. Light anesthesia with sympathetic response

Ans: C

(MED20-MED16)

1. In the case of a 5-year-old female patient who experienced significant postoperative bleeding following an elective adenoidectomy, what is the most appropriate method to induce general anesthesia for subsequent surgical intervention?

A) Rapid sequence induction with cricoid pressure

B) Rapid sequence induction without cricoid pressure

C) Routine intravenous induction with midazolam

D) Inhalation induction using sevoflurane

E) Routine intravenous induction with ketamine

Ans: A

2. For a 3-year-old male patient requiring general anesthesia for adenoidectomy, which method of induction is deemed most suitable given the patient's otherwise healthy status and normal upper airway anatomy?

A) Rapid sequence induction with cricoid pressure

B) Rapid sequence induction without cricoid pressure

C) Inhalation induction using sevoflurane

D) Routine intravenous induction with midazolam

E) Routine intravenous induction with ketamine

Ans: C

3. In a 3-year-old male patient with a 22-gauge intravenous cannula in place, what is the most appropriate approach for inducing general anesthesia for elective adenoidectomy?

A) Rapid sequence induction without cricoid pressure

B) Rapid sequence induction with cricoid pressure

C) Inhalation induction using sevoflurane

D) Routine intravenous induction with ketamine

E) Routine intravenous induction with propofol

Ans: E

4. What is the mode of inheritance for malignant hyperthermia?

A) True (autosomal dominant)

B) False

Ans: A

5. For a patient with a known family history of malignant hyperthermia scheduled for a diagnostic muscle biopsy under general anesthesia, which of the following agents is considered safe to administer?

A) Midazolam

B) Ketamine

C) Naloxone

D) Desflurane

E) Fentanyl

Ans: A

6. Is total intravenous anesthesia (TIVA) the preferred approach for managing patients with a history of malignant hyperthermia?

A) Yes

B) No

Ans: A

7. During the maintenance phase of general anesthesia, which of the following represents a routine monitoring requirement?

A) Invasive blood pressure monitoring

B) Transesophageal echocardiogram

C) Pulse oximetry

D) Central venous pressure (CVP)

E) Neuromuscular transmission monitor

Ans: C

8. What is a potential acute postoperative complication associated with endotracheal intubation?

A) Vocal cord paralysis

B) Tracheomalacia

C) Epistaxis

D) Laryngeal stenosis

E) Laryngeal polyps

Ans: C

Note:If it was nasal.

9. In the context of general anesthesia, which of the following represents a standard monitoring requirement?

A) Pulse oximeter

B) Central line

C) Nerve stimulator

D) Invasive blood pressure monitor

E) End-tidal CO2 monitor

Ans: A

10. Which agent is associated with the risk of inducing malignant hyperthermia?

A) Succinylcholine

B) Ibuprofen

C) Propofol

D) Lidocaine

E) Nitrous oxide

Ans: A

11. For an 18-year-old male patient who is obese, asthmatic, and diabetic, scheduled for laparotomy to perform a colectomy due to cancer, what is the most appropriate form of anesthesia?

A) Local anesthesia

B) Regional anesthesia

C) General anesthesia

D) No anesthesia required

E) Spinal anesthesia

Ans: C

12. A pediatric patient experiences signs of malignant hyperthermia during a biopsy procedure. The mother reports a family history of malignant hyperthermia, including a previous incident where her son passed away after receiving anesthesia. What should be your immediate action?

A) Cool the patient and administer Dantrolene

B) Implement conservative management and administer Dantrolene

C) Proceed with the procedure and finish it as soon as possible

D) Stop the surgery and close the incision

Ans: A

13. A patient with a known peanut allergy presents with anaphylaxis characterized by lip swelling and angioedema. This patient has a previous history of difficult intubation. What is the best management approach?

A) Rapid sequence intubation

B) Awake intubation

C) General anesthesia without intubation

D) Standard intubation

Ans: A

14. In a patient who has experienced a cardiac arrest, which of the following parameters is considered least useful in estimating the likelihood of a favorable outcome upon discharge?

A) End-tidal carbon dioxide (ETCO2)

B) Neurological status alterations

C) Resolution of metabolic acidosis

D) Coronary artery pressure post-chest compression

Ans: D

15. Which of the following drugs is primarily used to induce sleep in a patient?

A) Midazolam

B) Cisatracurium

C) Sevoflurane

D) Propofol

Ans: D

16. What is the mode of inheritance for malignant hyperthermia?

A) Autosomal Dominant (AD)

B) Autosomal Recessive (AR)

C) X-linked

D) Variable

Ans: A

17. During the maintenance phase of anesthesia, anesthesiologists ensure that which of the following occurs? A) Amnesia (loss of memory)

B) Excitatory phase of anesthesia

C) Muscle relaxation

D) Analgesia

Ans: A

18. Which of the following conditions is an indication for rapid sequence induction?

A) Acute abdomen

B) Pregnant woman at 8 weeks gestation

C) Patient who consumed a cheese sandwich 7 hours prior to surgery

D) Gastroesophageal reflux disease (GERD) on medication

Ans: A

19. In which of the following scenarios should rapid intubation be performed?

A) Severe GERD not on medication

B) Pregnant woman at 4 weeks gestation

C) Acute abdomen

D) Obstructive sleep apnea

Ans: A

20. Which of the following is an essential component of "rapid sequence induction"?

A) Insertion of a nasogastric tube

B) Pre-oxygenation

C) Administration of long-acting opioids such as morphine

D) Use of local anesthetics

Ans: B

L3 – Crisis Resource Management

(30 Q's)

(MED22 Mix)

1- A question about the leader distributing tasks, what concept is he utilizing?

A. Fixation error
B. Resource management
C. ..

Ans: B

(MED22 Female)

1- Which of the following principles in crisis resource management is correct?

A) Exercising followership and leadership are equally important
B) The leader should carry the entire burden of the situation
C) The leader is solely responsible for the patient's outcome
D) The leader can withhold important information from his followers

Ans : A

2- You injected the inducing medications and are now trying to intubate but you're having difficulty intubating and are distracted by the noise of the surgeon and nurse fussing about an equipment they need in one hour. What do you do?

A) Tune out their noise and focus on the intubation
B) Clearly tell them to quiet down so you can focus
C) Stop what your doing and help them
D) Tell them out loud to leave the room

Ans : B

3- A patient received an incorrect blood transfusion and developed a transfusion reaction. Instead of immediately stopping the transfusion and managing the patient, the doctor and the team focused on identifying the type of blood given and investigating the cause of the error. As a result, the patient's condition deteriorated. What type of Crisis Resource Management (CRM) error occurred?

A) Fixation error
B) Tuned-out error
C) Closed-loop communication error

Ans : A

(MED21)

1. A patient develops an unexpected difficult airway immediately after induction of general anesthesia. Both mask ventilation and endotracheal intubation attempts have failed, and a laryngeal mask airway cannot be inserted. What is the most appropriate next step in management?

A. Call for help

B. Request fiberoptic assessment

C. Attempt nasotracheal intubation

D. Watch unless the patient resolves

Answer: A

2. Which of the following principles in crisis resource management is correct?

A. Exercising followership and leadership are equally important

B. The leader should carry the entire burden of the situation

C. The leader is solely responsible for the patient's outcome

D. Giving senior staff more work

Answer: A

3. Which of the following principles in crisis resource management is correct?

A. Exercising followership and leadership are equally important

B. The leader should carry the entire burden of the situation

C. The leader is solely responsible for the patient's outcome

D. The leader can withhold important information from his followers

Answer: A (This question was duplicated in our exam, with different wording but identical idea.)

4. During a prolonged surgery, the patient develops an air embolism and begins to crash. The-anesthesiologist instructs the surgical interns to start CPR, calls for airway security, and requests the crash cart. What CRM principle is the leader effectively using ?

A. Re-evaluating the situation

B. Cross-checking actions

C. Allocating attention wisely

D. Mobilizing all available resources

Answer: D

5) A patient is deteriorating into crisis, and a nurse informs the doctor about a mismatched blood transfusion. Instead of focusing on the patients' vital signs, the doctor and two team members begin to assign the blame for the mistake. What principle of CRM did the team fail to uphold in this situation?

A. Action error
B. Turnout error
C. Fixation error
D. Communication error

Ans: D

6) If the team leader instructs you to administer 1 g of a medication when the correct dose is 1 mg, what should you do?

A. Follow the leader's instructions and clarify afterward
B. Confirm with the leader whether its 1g or 1 mg
C. Assert that the leader is incorrect and take charge
D. Administer the correct dose without confirming

Ans: B

7) During induction of anesthesia, a resident mistakenly administers the neuromuscular blocker before giving the hypnotic agent. The patient becomes aware but cannot move or communicate. This type of medication error is called:

A. Commucation error

B. Fixation error

C. Sequence error

D. Tuned in error

Ans: C

8) During a cardiac arrest in the operating room, the team leader instructs you to get the emergency medications and simultaneously asks another team member to get the defibrillator. What is the most appropriate action?

A. Only get the medications because the leader asked you specifically

B. Refuse to help with the defibrillator since it is not your task

C. Get the medications and ensure the defibrillator is available, coordinating tasks if needed

D. Wait for someone else to bring both medications and defibrillator

Ans:C

(MED20-MED16)

1. The trauma nurse informed the trauma team leader that the patient's left pedal pulse is absent. The leader and two other members checked the pedal

pulse above, asked for ultrasound, and no one noticed the vitals; the patient crashed. The following exacerbated the crisis the most:

A) Hazard attitude

B) Closed-loop communication

C) Everything is okay

D) Proper leadership

E) "Tuned-in" attention error

Ans: E

2. Members of the code blue team will "close the loop" of communication when one of the following conditions is met:

A) The anaesthesiologist understood what he said but did not confirm if others heard it.

B) The completion of actions taken by the respiratory therapist is confirmed once completed.

C) The nurse has done what she/he felt needed at her own judgment.

D) What the leader said is shouted out.

Ans: B

3. The following statement is accurate during times of medical crisis:

A) All members should share leadership for optimum patient outcomes.

B) Lack of knowledge and clinical expertise is the leading cause of failure during crisis management.

C) "Anything but this" is an example of attention errors.

D) Extreme stress significantly impairs attention span and performance.

Ans: D

4. The objective of debriefing the ICU team following a simulated crisis should be:

A) To prepare for defending the case in court.

B) To enable team members to analyze and evaluate their reactions during the crisis.

C) To report them to the hospital administration.

D) To identify the most ineffective team member.

Ans: B

5. The following statements regarding anesthesia simulation are true, EXCEPT:

A) A fiction contract may facilitate the learners' engagement.

B) It facilitates the learning of rare anesthesia crisis management.

C) A confidentiality agreement helps secure the privacy of the learning experience.

D) Consent should not be required to utilize the students' performance for assessment purposes.

Ans: D

6. Team leaders should adhere to the following principle:

A) Always do things yourself as you cannot trust others with every task.

B) Do not declare a lack of knowledge in front of their team members.

C) Watch the monitors themselves as that is their main role.

D) Ask for help as early as possible.

Ans: D

7. Key principles of crisis resource management (CRM) in anesthesia include all of the following EXCEPT:

A) Communicate effectively.

B) Cross (double) check.

C) Establish multiple leaders during a single crisis.

D) Debriefing after the crisis occurs.

Ans: C

8. In the context of medical crisis resource management (CRM): A)

Team members should assign themselves during a crisis.

B) Using calculators, books, or electronic aids during a crisis delays patient resuscitation.

C) "Always fly ahead of the plane" refers to team members correcting a team leader's wrong decisions.

D) CRM begins before the crisis occurs.

Ans: D

9. The following statement is correct during times of medical crisis:

A) Lack of knowledge and clinical expertise is the leading cause of failure during crisis management.

B) Extreme stress significantly impairs attention span and performance.

C) ECG monitors are the first thing applied once arriving at the scene.

D) All members should share leadership for optimum patient outcomes.

Ans: B

10. During surgery, a patient begins to feel pain, and you administer morphine. Suddenly, the patient becomes tachycardic and hypertensive. You realize that you mistakenly gave epinephrine instead of morphine. What is the first action you should take?

A) Document the mistake to avoid medicolegal issues

B) Instruct the nurse to document the incident

C) Call the senior anesthesiologist for assistance immediately

D) Stabilize the patient without notifying anyone

Ans: C

11. If the team leader instructs you to administer 1g of epinephrine, but you know the correct dose is 1mg, what should you do?

A) Administer the dose as directed and inform the leader afterward

B) Address the discrepancy with the leader before administration

C) Confront the leader and assert your authority

D) Ignore the instruction and proceed with the correct dose

Ans: B

12. A patient is deteriorating into crisis, and a nurse informs the doctor about a mismatched blood transfusion. Instead of focusing on the patient's vital signs, the doctor and two team members begin to assign blame for the mistake. What principle of CRM did the team fail to uphold in this situation?

A) Action error

B) Turnout error

C) Fixation error

D) Communication error

Ans: D

13. After a team member completes intubation, what should they confirm?

A) The therapist closes the loop

B) The patient is stable

C) The leader approves the procedure

D) The nurse has documented the process

Ans: A

14. A sickle cell patient receives a routine RBC transfusion and suddenly develops angioedema, rash, and bronchospasm. The nurse quickly identifies a transfusion reaction due to a blood group mismatch. The team leader communicates with the team every five minutes about management plans. What CRM principle is the leader applying?

A) Preventing fixation errors

B) Exercising leadership

C) Facilitating communication

D) Managing resources effectively

Ans: B

15. During an operation, the anesthesiologist detects an intraoperative pulmonary embolism, and the patient begins to deteriorate rapidly. What is the immediate next step?

A) Administer 500 cc of normal saline

B) Administer thrombolytics

C) Identify this as an emergency and call for help

D) Begin CPR immediately

Ans: C

16. If the team leader instructs you to administer 1g of a medication when the correct dose is 1mg, what should you do?

A) Follow the leader's instructions and clarify afterward

B) Confirm with the leader whether it is 1g or 1mg

C) Assert that the leader is incorrect and take charge

D) Administer the correct dose without confirming

Ans: B

17. What percentage of medical errors is attributed to human factors?

A) 40%

B) 50%

C) 70%

D) 80%

Ans: C

18. During a prolonged surgery, the patient develops an air embolism and begins to crash. The anesthesiologist instructs the surgical interns to start CPR, calls for airway security, and requests the crash cart. What CRM principle is the leader effectively using?

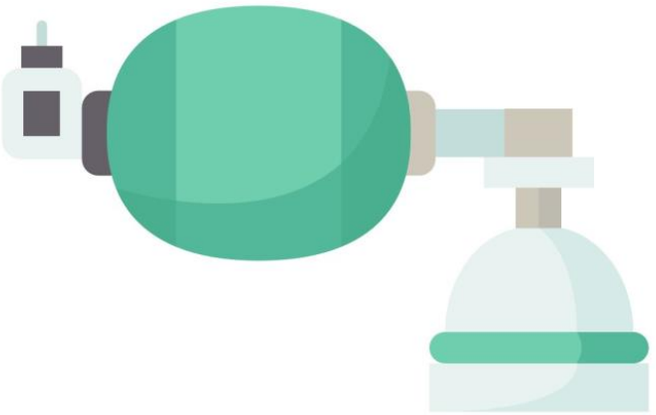
A) Mobilizing all available resources

B) Re-evaluating the situation

C) Cross-checking actions

D) Allocating attention wisely

Ans: A



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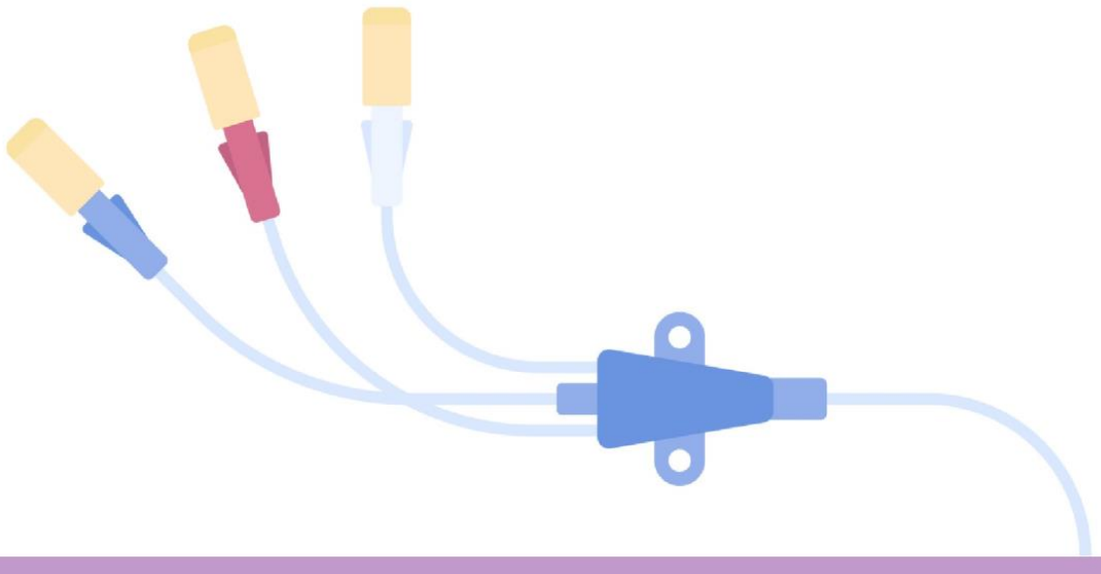


L4 – Regional Anesthesia

(51 Q's)

(MED22 Mix)

1- Which side effect is more common with spinal than epidural?

A. Severe hypotension
B. LAST
C. ..
D. ..

Ans: A

2- In caudal anesthesia , what space is the LA injected in?

A. Intrathecal
B. Epidural
C. Subdural
D. Subarachnoid

Ans: B

3- An elderly male patient with a history of diabetes mellitus presents for surgery due to left foot cellulitis. During hospitalization, he develops septic shock and disseminated intravascular coagulation (DIC) as complications of the infection. Which of the following is the most appropriate anesthetic plan?

A. Spinal anesthesia
B. Epidural anesthesia
C. General anesthesia
D. Popliteal nerve block

Ans: C

(MED22 Female)

1- A pregnant woman, G1P0+0, is scheduled for an elective cesarean section. She is ASA II, BMI 22 kg/m², with a normal airway assessment and normal blood investigations. Which type of anesthesia is most appropriate for this patient?

A) General anesthesia with rapid sequence induction
B) Spinal anesthesia
C) Epidural anesthesia
D) Local infiltration with sedation

Ans : B

2- A patient underwent a right nephrectomy under epidural anesthesia with a continuous infusion. In the recovery room, the patient complains of numbness around the mouth and dizziness. What is the most appropriate immediate action?

A) Stop the local anesthetic
B) Give Ringer's lactate bolus 500 ml
C) Give glucose 20%
D) Intubate immediately

Ans : A

3- What is the effect of the epidural anesthesia on the gastrointestinal system?

A) Increases gastrointestinal motility
B) Improves nausea and vomiting
C) Decreases gastrointestinal motility
D) Causes constipation

Ans : A

***4- Case of femur fracture shortening leg, what is an indication for using general anesthesia ?**

A. Proximal femur fracture
B. Patient using opiod for a chronic pain
C. Patient has nausea and vomiting

Ans : B (Question is not complete but according to these info the answer is B due to Tolerance)

(MED21)

1. What is the best anesthetic plan for a primigravida who will undergo an elective cesareansection?

A. Epidural anesthesia

B. Spinal anesthesia

C. Local anesthesia

D. General anesthesia

Answer: B

2. A 45-year-old patient is scheduled for a surgical procedure expected to last 3 to 6 hours, with minimal anticipated postoperative pain. Which of the following anesthetic techniques is mostappropriate for this case?

A. Spinal anesthesia

B. Epidural anesthesia

C. Local anesthesia

D. General anesthesia

Answer: B

***3. An elderly male patient with a history of diabetes mellitus presents for surgery due to left foot cellulitis. During hospitalization, he develops septic shock and disseminated intravascular coagulation (DIC) as complications of the infection. Which of the following is the most appropriate anesthetic plan?**

A. Spinal anesthesia

B. Epidural anesthesia

C. General anesthesia

D. Popliteal nerve block

Answer: C

4. What is the effect of the epidural anesthesia on the gastrointestinal system?

A. Increases gastrointestinal motility

B. Improves nausea and vomiting

C. Decreases gastrointestinal motility

D. Causes constipation

Answer: A

5. Which of the following is an indication for caudal regional anesthesia?

A. A 4-year-old with tonsillectomy

B. A 60-year-old to remove hemorrhoids

C. A 3-year-old with hypospadias

D. A 2-year-old cleft palate surgery

Answer: C

6. A 45-year-old patient is scheduled for a surgical procedure expected to last 1-2 hours, with nopostoperative pain. Which of the following anesthetic techniques is most appropriate for this case?

A. Spinal anesthesia

B. MAC

C. Local anesthesia

D. General anesthesia

Answer: A

7. Which patient is a suitable candidate for caudal anesthesia?

A. 2-year-old boy for hypospadias repair

B. 18-year-old for appendectomy

C. 5-year-old child for tonsillectomy

D. 3-year-old child for open-heart surgery

Ans: A

8. A 29-year-old woman at 39 weeks gestation is undergoing an urgent cesarean section due to failure to progress. She has no contraindications for regional anesthesia. Fetal heart rate is reassuring. Which is the most appropriate choice of anesthesia for this patient?

A. General anesthesia with endotracheal intubation

B. Epidural anesthesia

C. Spinal anesthesia

D. Local infiltration with IV sedation

Ans: C

9. A 32-year-old woman at 38 weeks gestation is undergoing an urgent cesarean section due to failure to progress. She has a functioning labor epidural in place. Fetal heart rate is reassuring. The obstetrician requests anesthesia for surgery. Which is the most appropriate choice of anesthesia?

A. General anesthesia with endotracheal intubation

B. Top-up of existing epidural anesthesia

C. Single-shot spinal anesthesia

D. Local infiltration with IV sedation

Ans: B

(MED20-MED16)

1. In the context of regional anesthesia, which of the following statements regarding epidural anesthesia and its effects on the lower extremities is incorrect?

A) It decreases blood viscosity.

B) Sympathectomy increases blood flow to the lower extremities.

C) It increases preload to treat hypotension induced by epidural anesthesia.

D) Altered coagulation and hemolysis due to epidural anesthesia will decrease platelet adhesion.

E) It provides effective pain relief without affecting motor function.

Ans: D

2. How many vertebrae comprise the cervical spine?

A) 5 vertebrae

B) 4 vertebrae

C) 12 vertebrae

D) 7 vertebrae

E) 6 vertebrae

Ans: D

3. The sacrococcygeal ligament is located beneath the fifth lumbar vertebral body.

A) True

B) False

C) It is located beneath the second lumbar vertebra.

D) It is located above the sacrum.

E) It is located within the sacrum.

Ans: B

4. Which of the following statements accurately describes an advantage of epidural anesthesia over general anesthesia for hip surgery? A) It decreases blood flow to the extremities.

B) It increases blood loss.

C) It reduces long-term mortality.

D) It presents a greater chance of hypoxia within the first 24 hours.

E) It decreases the incidence of thromboembolic phenomena and deep vein thrombosis (DVT) postoperatively.

Ans: E

5. The spinal cord terminates at the lumbar interspace L1-L2.

A) True

B) False

C) It terminates at L3-L4.

D) It terminates at L5-S1.

E) It continues into the sacrum.

Ans: A

6. During the administration of spinal anesthesia, the needle traverses the following structures in the correct sequence:

A) Skin, subcutaneous tissue, supraspinous ligament, ligamentum flavum, epidural space.

B) Skin, subcutaneous tissue, sacrococcygeal ligament, epidural space, dura mater, and arachnoid to reach the subarachnoid space.

C) Skin, subcutaneous tissue, supraspinous ligament, interspinous ligament, ligamentum flavum, epidural space, dura mater, and arachnoid to reach the subarachnoid space.

D) Skin, subcutaneous tissue, sacrococcygeal ligament, epidural space.

E) Skin, subcutaneous tissue, interspinous ligament, dura mater, and arachnoid.

Ans: C

7. For an 18-year-old male patient weighing 160 kg, what is the most appropriate method for alleviating postoperative pain?

A) Local anesthetic

B) Oral morphine 50 mg

C) Epidural anesthesia

D) No need for painkillers

E) NSAIDs

Ans: C

8. How many vertebrae constitute the thoracic spine?

A) 6

B) 12

C) 5

D) 4

E) 10

Ans: B

9. Following an uneventful spontaneous vaginal delivery with epidural anesthesia, what is the appropriate next step in management for a patient experiencing back pain?

A) Reassure the patient that back pain is a normal occurrence in pregnant women.
B) Administer oral NSAIDs for pain management.
C) Administer intravenous morphine for pain management.
D) Conduct an MRI of the back, consult a spinal surgeon, and inform the anesthesiologist.
E) Schedule follow-up in one week.

Ans: D

10. Which of the following statements about spinal anesthesia and lumbar puncture is correct?

A) Post-dural puncture headache may occur.
B) The needle crosses the pia mater.
C) The ligamentum flavum can be bypassed.
D) The subarachnoid space is not entered.
E) It is a contraindication for patients with anticoagulation therapy.

Ans: A

11. After a spontaneous vaginal delivery with epidural anesthesia, a patient presents with back pain, numbness, and weakness in the lower limbs, 16 hours

post-removal of the epidural. What is the appropriate management step? A) Reassure the patient that back pain is normal.

B) Administer oral NSAIDs for pain management.

C) Administer intravenous morphine for pain management.

D) Perform an MRI of the back, consult a spinal surgeon, and inform the anesthesiologist.

E) Request the anesthesiologist to perform a blood patch.

Ans: D

12. Which of the following statements correctly identifies an advantage of epidural anesthesia compared to general anesthesia for hip surgery? A) It increases blood loss.

B) It decreases the incidence of thromboembolic phenomena and deep vein thrombosis (DVT) postoperatively.

C) It decreases blood flow to the extremities.

D) It presents a greater chance of hypoxia in the first 24 hours.

E) It reduces long-term mortality.

Ans: B

13. All are true regarding epidural anesthesia and lower extremity effects, except:

A) Decrease blood viscosity

B) Sympathectomy increases blood flow to the lower extremities

C) Increase preload to treat hypotension induced by epidural anesthesia D) Altered coagulation and hemolysis due to epidural anesthesia will decrease platelet adhesions

Ans: D

14. Advantage of epidural anesthesia over general anesthesia:

A) Increased blood loss

B) Early mobilization

C) Decrease lower limb perfusion

D) Decrease long-term mortality

Ans: B

15. Advantage of epidural anesthesia over general anesthesia:

A) Increased blood loss

B) Early mobilization

C) Decrease lower limb perfusion

D) Decrease long-term mortality

Ans: B

16. Spinal headache due to lumbar puncture treated by blood patch goes through all these layers, except:

A) Skin

B) Supraspinous, interspinous, and flavum ligaments

C) Epidural space

D) Intrathecal space

Ans: D

16. The spinal cord of a newborn ends at:

A) L1-L2

B) L2-L3

C) L3-L4

D) L4-L5

Ans: C

17. A patient is scheduled for a procedure expected to last 1-2 hours and desires minimal postoperative pain relief. Which anesthetic technique would be most appropriate? A) Spinal anesthesia

B) Epidural anesthesia

C) Local infiltration

D) General anesthesia

Ans: A

18. For a procedure lasting 3-6 hours that requires minimal postoperative pain, which of the following anesthetic techniques is preferred?

A) Spinal anesthesia

B) Epidural anesthesia

C) Local anesthesia

D) General anesthesia

Ans: B

19. A patient with morbid obesity and obesity hypoventilation syndrome requires ankle surgery. What is the most appropriate anesthetic plan?

A) Popliteal nerve block

B) General anesthesia

C) Peripheral nerve block

D) Local infiltration

Ans: A

20. Which of the following is a significant advantage of regional anesthesia?

A) Shorter hospital stay

B) Increased risk of deep vein thrombosis (DVT)

C) Increased blood loss

D) Increased postoperative nausea and vomiting

Ans: A

21. A pregnant patient at 16 weeks of gestation is seeking elective cervical cerclage and has no medical issues other than a history of recurrent miscarriage. What is the most appropriate anesthetic plan?

A) Spinal anesthesia

B) Epidural anesthesia

C) General anesthesia

D) Local anesthesia

Ans: A

22. An obstetric patient receiving an epidural for an elective C-section experiences paresthesia at the T6 level when the procedure becomes an emergency. What is the next appropriate step?

A) Keep the epidural and administer general anesthesia

B) Remove the epidural and proceed with general anesthesia

C) Maintain the epidural and convert to spinal anesthesia

D) Consult with a senior anesthesiologist

Ans: C

23. Which of the following conditions is a contraindication for performing spinal anesthesia?

A) Obstructive sleep apnea

B) Pediatric patients

C) Morbid obesity

D) Patient with a difficult airway

Ans: D

24. What is the effect of epidural anesthesia on the gastrointestinal system?

A) Increases gastrointestinal motility

B) Improves nausea and vomiting

C) Decreases gastrointestinal motility

D) Causes constipation

Ans: B

25. What is the best anesthesia option for a stable pregnant woman planning an elective C-section? A) Spinal anesthesia

B) Epidural anesthesia

C) General anesthesia

D) Local anesthesia

Ans: A

26. Which of the following are common complications associated with epidural anesthesia for a C-section?

A) Hypotension

B) Uterine atony

C) Chronic back pain

D) All of the above

Ans: D

27. What are some potential complications of epidural anesthesia?

A) Back pain

B) Occipital headache

C) Urinary retention

D) Increased intracranial pressure

Ans: A, B, C (All are potential complications)

28. A patient requires an emergency C-section. What is the most appropriate anesthetic approach?

A) Epidural followed by general anesthesia

B) Combined epidural and spinal anesthesia

C) General anesthesia with intubation

D) Local anesthesia

Ans: C

29. What are absolute contraindications for spinal anesthesia?

A) Hemophilia

B) Severe hypovolemia

C) Infection at the injection site

D) All of the above

Ans: D

30. Where does caudal anesthesia target in the body?

A) Epidural space of the sacral area

B) Subdural space

C) Intrathecal space of the lumbosacral area

D) Epidural space of the thoracic area

Ans: A

31. Which of the following is an absolute contraindication for spinal anesthesia?

A) Scoliosis

B) Mitral regurgitation

C) Increased intracranial pressure

D) Pregnancy

Ans: C

32. An elderly patient scheduled for femoral-popliteal graft surgery with significant comorbidities requires an anesthetic plan. Given the surgery will last 1-2 hours and result in minimal postoperative pain, what is the best option?

A) General anesthesia

B) Local anesthetic infiltration

C) Spinal block

D) Epidural anesthesia

Ans: C

33. A 22-year-old male with a BMI of 40 is undergoing ankle surgery that will take approximately one hour. What is the best anesthetic plan?

A) Spinal anesthesia with popliteal nerve block

B) General anesthesia with interscalene block

C) General anesthesia with postoperative morphine

D) Sedation with patient-controlled analgesia only

Ans: A

34. For a 1-year-old male undergoing a hip replacement procedure, what is the most appropriate mode of anesthesia?

A) General anesthesia using intravenous induction with caudal block

B) General anesthesia using mask induction with epidural

C) Local anesthesia with sedation

D) Regional anesthesia with femoral nerve block

Ans: A

35. What essential vital signs should be monitored when placing an epidural catheter?

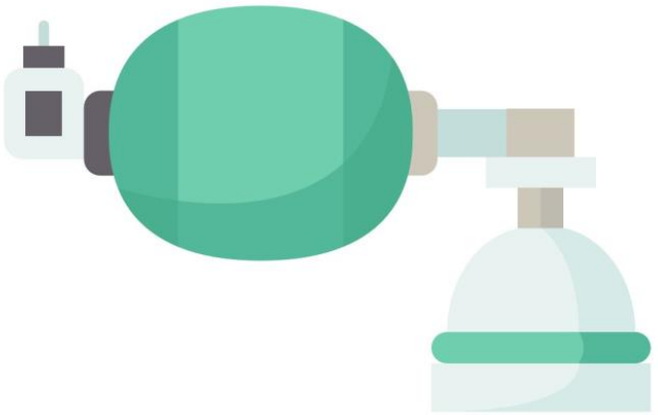
A) Blood pressure and pulse oximetry

B) ECG and blood pressure cuff

C) ECG and pulse oximetry

D) ECG, blood pressure cuff, and pulse oximetry

Ans: D



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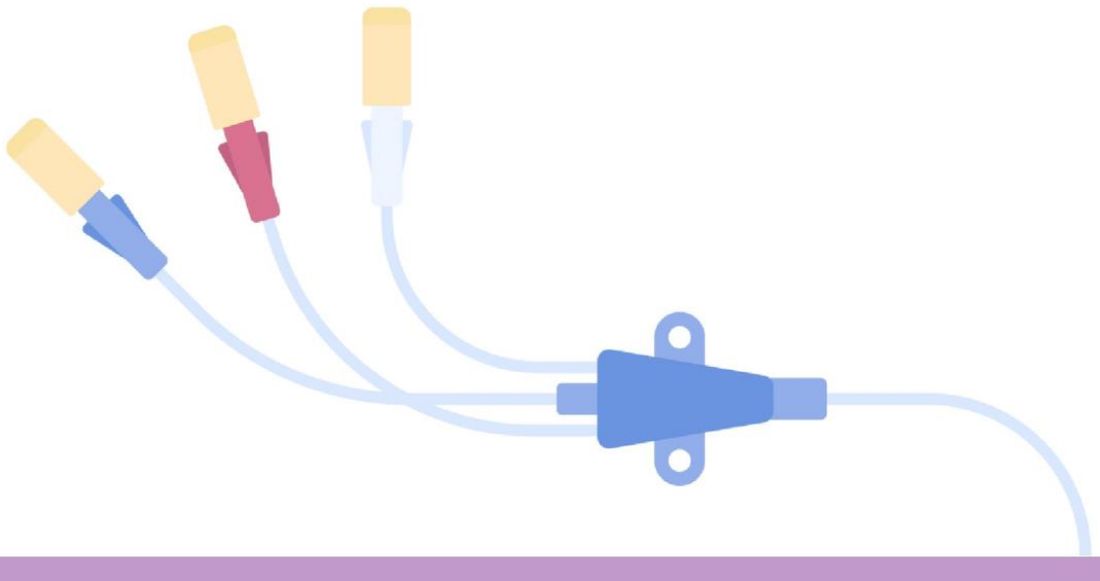


L5 – Pain Management

(53 Q's)

(MED22 Mix)

1- Something about which one is acute and localized

A. Fibromyalgia
B. Surgical site
C. Gets better with gabapentin
D. ..something i don't remember

Ans: B

2- what's the 2nd step in the WHO ladder?

A. Tramadol
B. Morphine
C. NSAIDs
D. GA

Ans: A

(MED22 Female)

1- What is an example of acute pain?

A) Back pain from herniated disc
B) Post surgical pain
C) Arthritis

Ans : B

2- What is on the second step of the analgesia ladder?

A) Tramadol
B) Morphine

Ans : A

3- Which receptor is sharp and localized pain?

A) A delta
B) C fiber
C) A alpha
D) A beta

Ans : A

(MED21)

1. What is the first-line for mild to moderate acute pain?

A. Morphine
B. Tramadol
C. Amitriptyline
D. NSAIDs

Answer: D

2. A patient is scheduled for knee replacement surgery. The anesthesiologist administersparacetamol and ibuprofen preoperatively, along with epidural analgesia before the incision. Which of the following best describes this pain management approach?

A. Enhanced recovery
B. Pain prophylaxis anesthesia
C. Preemptive analgesia/anesthesia
D. Sedation-based anesthesia

Answer: C

3. A cancer patient was initially started on paracetamol for pain management. Over time, her pain has progressed and is no longer controlled. What is the most appropriate next step in moderate to severe pain management ?

A. Tramadol
B. Continue on same regiments
C. Increase the dose of paracetamol
D. Morphine

Answer: A

4. A 49-year-old male recently underwent surgery for gastric cancer. Which of the following medications should be avoided in his postoperative pain management plan?

A. Paracetamol
B. Morphine
C. Ibuprofen
D. Tramadol

Answer: C

5. A 20-year-old man complains of phantom pain in his amputated foot. Where is this pain perceived?

A. Brain
B. Peripheral nerves
C. Skeletal muscle
D. Spinal cord

Answer: A

6) Which pain medication is contraindicated in patients diagnosed with peptic ulcer?

A. Morphine
B. Ibuprofen
C. Paracetamol
D. Ketorolac

Ans: B

7) A cancer patient on morphine for pain relief reports an increase in pain and requests a higher dose. What does this indicate?

A. Opioid tolerance
B. Opioid dependence
C. Pain exacerbation
D. Analgesic failure

Ans: A

8) A patient who underwent a Left hemicolectomy has been taking morphine returns to the hospital four months later still on morphine. How should this pain be classified?

A. Extended acute postoperative pain
B. Chronic pain
C. Neuropathic pain
D. Mixed acute and chronic pain

Ans: B

(MED20-MED16)

1. All of the following are side effects of opioids EXCEPT:

A) Increased gastrointestinal motility

B) Spasm of the sphincter of Oddi

C) Constipation

D) Nausea and vomiting

E) Pruritus

Ans: A

2. A 30-year-old man with severe pain on gentle touch of the forearm, six months post-arteriovenous fistula creation for dialysis, is best described by which condition?

A) Hypoesthesia

B) Hyperalgesia

C) Hypersensitivity

D) Hyperesthesia

E) Allodynia

Ans: E

3. Which of the following statements regarding the pathophysiology of pain is FALSE?

A) A-delta and C fibers transmit pain to the dorsal horn cells

B) Central sensitization is a common finding in neurogenic pain

C) Hyperesthesia and allodynia are signs of neurogenic pain

D) Nociceptive pain can be classified as either somatic or visceral

E) The ascending pathway is excitatory, while the descending pathway is inhibitory

Ans: A

4. Which statement regarding chronic pain management is TRUE?

A) The use of non-pharmacological modalities should be avoided in chronic pain management

B) Opioid use is commonly associated with physical dependence

C) Nonsteroidal anti-inflammatory drugs (NSAIDs) are highly effective in neuropathic pain

D) Chronic use of opioids is rarely associated with tolerance

E) Multimodal therapies are recommended for chronic pain management

Ans: E

5. All of the following are side effects of opioids EXCEPT:

A) Nausea and vomiting

B) Spasm of the sphincter of Oddi

C) Increased gastrointestinal motility

D) Constipation

E) Pruritus

Ans: C

6. Which of the following is considered an antidote for opioids?

A) Nalbuphine

B) Narcotics

C) Neostigmine

D) Naloxone

E) Flumazenil

Ans: D

7. Regarding labor pain, which statement is most accurate?

A) General anesthesia is faster than spinal anesthesia

B) General anesthesia is the best option for labor pain

C) Recovery from general anesthesia is faster than spinal anesthesia

D) General anesthesia can negatively affect the baby's nervous system

E) Regional anesthesia offers no advantages over general anesthesia

Ans: D

8. Which of the following statements about chronic pain is TRUE?

A) Post-operative pain is the most common type of chronic pain

B) It is any pain that persists beyond the healing process

C) It is always of neuropathic origin

D) It is always of nociceptive origin

E) It is any pain that persists beyond 3 months

Ans: B

9. In a patient with bronchial asthma and gastrointestinal bleeding who underwent appendectomy, which analgesic would be most appropriate for postoperative pain control?

A) IM pethidine once daily

B) Parenteral morphine via patient-controlled analgesia

C) Ibuprofen 400 mg

D) No need for pain medication

E) Oral acetaminophen

Ans: B

10. What is the most appropriate definition of neuropathic pain?

A) An unpleasant sensory and emotional experience associated with actual or potential tissue damage
B) Pain resulting from direct injury to nervous tissue
C) Pain that arises without any identifiable cause
D) An unpleasant sensory and emotional response to actual or potential nervous tissue damage
E) Pain that is primarily psychological in nature

Ans: D

11. Which of the following describes the effect of opioids on the gastrointestinal system?

A) Increased motility
B) Constipation
C) Enhanced secretion
D) Diarrhea
E) Normal motility

Ans: B

12. Which of the following statements regarding the use of NSAIDs is FALSE?

A) They can cause gastrointestinal bleeding
B) They may lead to renal impairment with long-term use
C) They are effective for both nociceptive and neuropathic pain
D) They can cause heartburn as a side effect

E) They have a potential for dependency

Ans: E

13. All of the following are opioid derivatives EXCEPT:

A) Morphine

B) Hydrocodone

C) Baclofen

D) Fentanyl

E) Nalbuphine

Ans: C

14. Which of the following statements about chronic pain is correct? A) Opioids, which are mu-receptor agonists, have a ceiling effect.

B) Administering potent IV opioids postoperatively for 2 days does not cause addiction or tolerance.

C) The use of non-pharmacological methods should be avoided.

D) NSAIDs are highly effective for neuropathic pain.

E) Multimodal therapy is NOT recommended for chronic pain.

Ans: B

15. What is pain?

A) An unpleasant sensory and emotional experience associated with actual or potential tissue damage.

B) What the patient describes as pain.

Ans: A

16. On your first day of anesthesia rotation, you are scheduled to assist with the anesthesia of a moderately obese 50-year-old female patient who is scheduled for a hemicolectomy. Your anesthetic plan is:

A) Intercostal nerve blockade is an acceptable method of anesthesia.

B) General anesthesia with thoracic epidural for postoperative pain control.

C) Regional anesthesia is sufficient.

D) Monitored anesthesia care is needed.

E) Postpone the case.

Ans: B

17. A 65-year-old male patient presents with unilateral, sudden, severe, paroxysmal pain involving the right side of the face around the mandible. The pain occurs while brushing his hair and with chewing. Physical examination does not reveal any neurological abnormalities. What is the most appropriate treatment?

A) Perform radiological examination and treat him according to the findings.

B) Assure the patient and prescribe any pain killer.

C) Oral morphine is the treatment of choice.

D) Give NSAIDs.

E) This is a hysterical reaction, needs referral to psychiatry.

Ans: A

18. You are in obstetrics and gynecology, and a patient had an uneventful spontaneous vaginal delivery with epidural anesthesia. She now complains of back pain, numbness, and weakness in the lower limbs. The epidural was removed immediately after delivery, which was 16 hours ago. What is the next step in management?

A) Reassure her that it's normal for pregnant women to have back pain.

B) Give oral NSAIDs for pain management.

C) Give IV morphine for pain management.

D) Do an MRI of the back, call a spinal surgeon, and inform the anesthesiologist.

E) Call the anesthesiologist to perform a blood patch.

Ans: D

19. Your anesthetic plan for a moderately obese 50-year-old female patient scheduled for hemicolectomy is:

A) Intercostal nerve blockade is an acceptable way of anesthesia.

B) General anesthesia with thoracic epidural for postoperative pain control.

C) Regional anesthesia is more than enough.

D) Monitored anesthesia care is needed.

E) Postpone the case.

Ans: B

20. A patient has undergone rotator cuff surgery. Which of the following pain relief strategies is most appropriate for postoperative management?

A) Paracetamol and ibuprofen

B) Interscalene nerve block

C) Fentanyl patch

D) Morphine

Ans: A

21. A patient receiving chemotherapy has undergone surgery for cancer and is experiencing postoperative pain. What is the most common etiology of this pain?

A) Chemotherapy-induced neuropathy

B) Surgical site pain

C) Acute pain syndrome

D) Visceral pain

Ans: A

22. A patient who was prescribed morphine for abdominal pain following surgery returns four months later still experiencing pain. How should this pain be classified?

A) Chronic pain

B) Extended acute postoperative pain

C) Neuropathic pain

D) Mixed pain syndrome

Ans: A (Chronic pain)

23. A patient with rheumatoid arthritis has been using tramadol, NSAIDs, paracetamol, gabapentin, and other medications. She presents with abdominal pain and hematemesis. Which medication is most likely responsible for these symptoms?

A) Tramadol

B) NSAIDs

C) Paracetamol

D) Gabapentin

Ans: B

24. Which medication is classified as a step two drug in the WHO analgesic ladder for cancer pain management?

A) Paracetamol

B) Tramadol

C) Morphine

D) Fentanyl

Ans: B

25. A female patient exhibits clinical features of neuropathic pain, including burning and tingling sensations in her limbs, following treatment for lung cancer. What is the most likely cause of her pain?

A) Peripheral diabetic neuropathy

B) Chemotherapy-induced neuropathic pain

C) Post-surgical pain syndrome

D) Fibromyalgia

Ans: B

26. Which pain medication is contraindicated in patients diagnosed with gastric tumors?

A) Morphine

B) Ibuprofen

C) Paracetamol

D) Ketorolac

Ans: B

27. In a patient with liver failure, which medication poses the highest risk and should be avoided?

A) Paracetamol

B) Ibuprofen

C) Tramadol

D) Aspirin

Ans: A

28. A cancer patient with chronic pain is now experiencing anxiety, immobility, and disability. What is the most likely contributing factor to this condition?

A) Activation of the lateral pain pathway

B) Activation of the inhibitory pain pathway

C) Psychological effects

D) Opioid-induced hyperalgesia

Ans: C

29. What is the term used to describe pain that occurs in response to normally non-painful stimuli, such as light touch?

A) Allodynia

B) Hyperalgesia

C) Neuropathic pain

D) Nociceptive pain

Ans: A

30. A cancer patient on morphine for pain relief reports an increase in pain and requests a higher dose. What does this indicate?

A) Opioid tolerance

B) Opioid dependence

C) Pain exacerbation

D) Analgesic failure

Ans: A

31. Which of the following is a first-line treatment option for nociceptive pain?

A) Ibuprofen

B) Morphine

C) Fentanyl

D) Tramadol

Ans: A

32. A patient with multiple comorbidities has undergone surgery and requires postoperative pain management. What is the most appropriate strategy?

A) Increase morphine and utilize patient-controlled analgesia

B) Prescribe NSAIDs only

C) Use non-pharmacological interventions

D) Recommend a lower dose of analgesics

Ans: A

33. When a person touches a hot object and experiences sharp burning pain in their hand, which type of nerve fibers primarily carry this sensation?

A) A beta fibers

B) C fibers

C) A delta fibers

D) Both A and B

Ans: C

34. Which of the following medications acts on the most peripheral part of the nociceptive pathway?

A) Fentanyl

B) Paracetamol

C) Ibuprofen

D) Morphine

Ans: C

35. Which factor is known to exacerbate chronic pain?

A) Insomnia

B) Regular physical activity

C) Healthy diet

D) Social support

Ans: A

36. What is the most effective pharmacological approach to decrease acute nociceptive pain?

A) Fentanyl

B) Physical therapy

C) Healthy diet

D) Treatment of anxiety

Ans: A

37. In the first stage of labor, which spinal segments are primarily responsible for pain sensation?

A) T10-L1

B) L1-L2

C) T12-L1

D) L1-L3

Ans: A

38. In a patient with a gastric tumor, which medication should be avoided due to potential adverse effects?

A) Paracetamol

B) Ibuprofen

C) Fentanyl

D) Codeine

Ans: B

39. A patient who underwent a left hemicolectomy and has been taking morphine returns to the hospital four months later still on morphine. How should this pain be classified?

A) Extended acute postoperative pain

B) Chronic pain

C) Neuropathic pain

D) Mixed acute and chronic pain

Ans: B

40. Which medication represents the second step in the WHO analgesic ladder for cancer pain management?

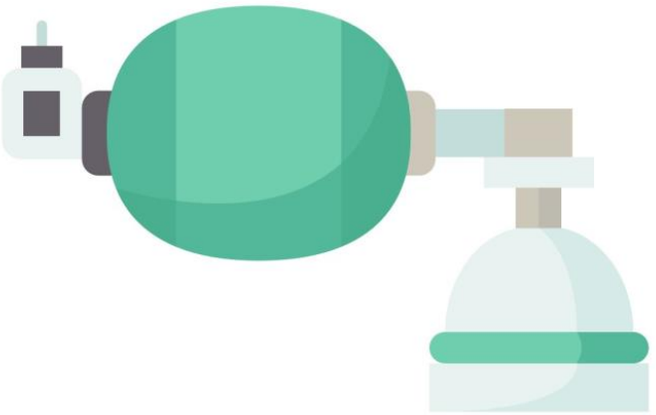
A) Tramadol

B) Morphine

C) Paracetamol

D) Oxycodone

Ans: A



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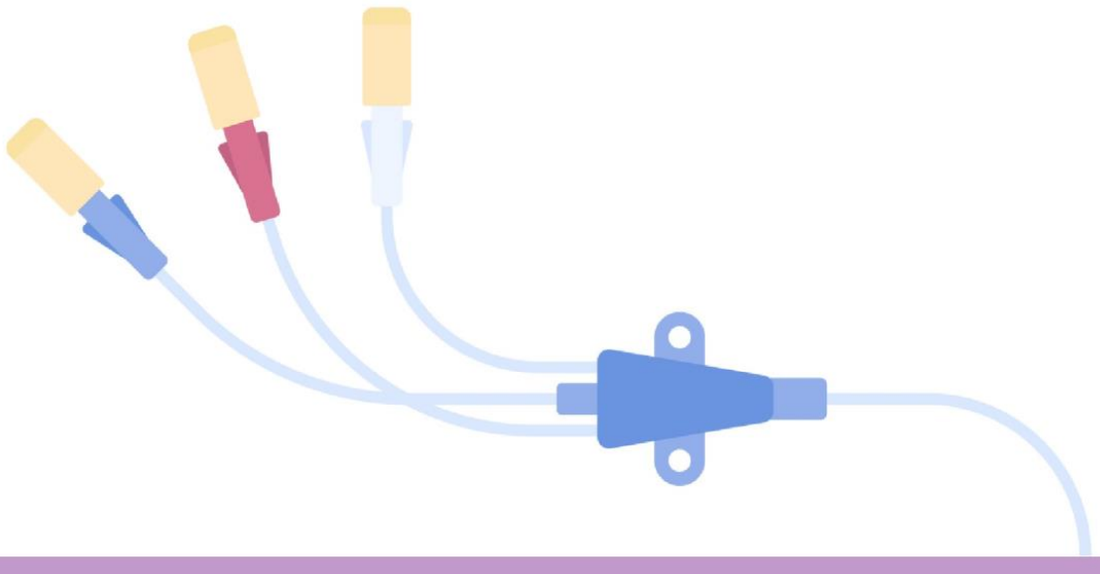


L6 – Pre-operative Assessment

(43 Q's)

(MED22 Mix)

1- What's true about trauma patients?

A. All trauma have increased risk of aspiration
B. Trauma patients are always considered fasting
C.

Ans: A

2- Hypertension controlled on feursomid, takes aspirine 81, will undergo surgery, what to investigate?

A. CBC
B. U&E
C. INR & PTT

Ans: B

(MED22 Female)

1- What is true regarding obstructive sleep apnea ?

A) The only pre-op screening tool is referral for sleep study
B) It only happens in adults
C) It increases the risk of post-op morbidity

Ans : C

2- Fasting guideline for breast milk ?

A) 4 hours
B) 6 hours
C) 8 hours
D) 12 hours

Ans : A

3- Fasting guideline for coffee with milk and sugar ?

A) 4 hours
B) 6 hours
C) 8 hours
D) 12 hours

Ans : B

(MED21)

1. A patient drank coffee with milk 2 hours before a scheduled elective surgery. According to ASA preoperative fasting guidelines, how long should the surgery be postponed?

A. 2 hours

B. 4 hours

C. 6 hours

D. 8 hours

Answer: C

2. A 70-year-old male patient presented to the ER needing an intubation. He has thick beard, no teeth, and obese. How many signs or indicators for difficult intubation?

A. 0

B. 1

C. 2

D. 3

Answer: B

3. A 45-year-old male is being assessed preoperatively. He has a full beard, limited neck extension, mouth opening that permits 3 fingers, Mallampati class II, and thyromental distance >6.5 cm. Which of the following features is most predictive of difficult mask ventilation?

A. Mallampati class II

B. Thyromental distance >6.5 cm

C. Limited neck extension

D. Presence of a beard

Answer: D

4. Which of the following is a goal of pre-operative assessment?

A. Manage chronic pain

B. Diagnose medical condition

C. Treat medical condition

D. Patient counseling

Answer: D

5. A 55-year-old diabetic patient with an HbA1c of 12% and a history of pulmonary fibrosis presents for elective surgery. According to the American

Society of Anesthesiologists (ASA) physical status classification, which class does this patient fall into?

A. ASA I

B. ASA II

C. ASA III

D. ASA IV

Answer: C

6. A 65-year-old male presents for elective surgery. He has a history of diabetes mellitus,hypertension, and ischemic heart disease with a coronary stent placed one year ago. He has been asymptomatic since the procedure with no active cardiac issues. According to the ASA physical status classification, how should this patient be classified?

A. ASA II

B. ASA III

C. ASA IV

D. ASA V

Answer: B

7. A victim of a hit-and-run accident is brought to the emergency department. The patient is hemodynamically unstable and suspected to have internal bleeding. What is the most appropriate ASA physical status classification?

A. ASA III

B. ASA IV

C. ASA V

D. ASA VE

Answer: D

8) Infant for surgery but mother just breast fed him, how long should operation be delayed for?

A. 4 hours
B. 8 hours
C. 12 hours
D. Next day

Ans: A

9) What is the most important pre-anesthesia assessment investigation for a patient with liver Cirrhosis ?

A. Coagulation
B. Serum Albumin
C. Serum Creatinine
D. Serum Sodium Level

Ans: A

10) What is the appropriate fasting guideline for an 11-month-old infant scheduled for surgery at 10:00 AM?

A. Breast Feed until 6 AM
B. Clear Fluids until 7 AM
C. Solid food until 8 AM
D. No feeding after midnight

Ans: A

11) An 80-year-old patient came with thick beard, no teeth, & was snoring. How many signs or indicators for difficult intubation?

A. 1
B. 0

C. 3
D. 2

Ans: A

12) A 35-year-old patient with a history of asthma presents for elective surgery. He is currently asymptomatic, using only a short-acting bronchodilator as needed, and has normal peak flow measurements. What is the most appropriate preoperative management?

A. Cancel surgery until asthma is completely cured

B. Proceed with surgery with continuation of current asthma medications

C. Start high-dose systemic corticosteroids immediately before surgery

D. Administer prophylactic bronchodilator only on the day of surgery

Ans: B

13) A 58-year-old patient with a history of well-controlled type 2 diabetes mellitus and hypertension controlled in is scheduled for elective hernia repair. He is otherwise healthy, with no end-organ damage. What is the appropriate ASA physical status classification for this patient?

A. ASA I

B. ASA II

C. ASA III

D. ASA IV

Ans: B

14) A 35-year-old patient is scheduled for elective surgery. He reports that he drank coffee with milk and sugar 2 hours ago. How long should you wait before it is safe to proceed with surgery?

A. 2 hours

B. 4 hours

C. 6 hours

D. 8 hours

Ans: C

(MED20-MED16)

1. A 6-year-old boy booked for inguinal hernia repair should fast for a period of:

A) 12 hours for solid food

B) From midnight

C) No need to fast

D) 6 hours for solid food

E) 8 hours for clear fluids

Ans: D

2. Preoperative management of a patient booked for emergency laparotomy due to a perforated bowel must include all of the following EXCEPT:

A) Choosing to administer general anesthesia

B) Obtaining a history of allergies

C) Taking a family history of anesthesia-related complications

D) Delaying the surgery until the patient is seen in the anesthesia clinic E) Utilizing rapid sequence induction

Ans: D

3. ALL of the following predict difficulty in airway management EXCEPT:

A) Micrognathia

B) Mallampati grade IV

C) Trismus

D) Mallampati grade I

E) Short thyromental distance

Ans: D

4. For a patient with unstable angina presenting for preoperative assessment, the most appropriate course of action is to:

A) Consult a cardiologist to optimize the patient

B) Adjust the patient's medication dose

Ans: A

5. How long after an uncomplicated myocardial infarction can surgery generally be performed? A) 2 weeks

B) 1 month

C) 3 months

D) 1 year

Ans: C

6. A patient visited your anesthesia clinic two weeks ago. Which of the following scenarios is most concerning for further evaluation?

A) A 20-year-old male with a heart rate of 89 and blood pressure of 80/50

B) A 50-year-old obese woman with a small jaw, large incisors, and a large neck

C) A young boy scheduled for endoscopy

D) A man with hyperactive bowel sounds who just ate

Ans: B

7. A young boy booked for dental rehabilitation should fast for a period of:

A) 6 hours for solid food

B) 12 hours for solid food and liquid

C) No need to fast

D) 2 hours for clear apple juice

Ans: D

8. What is the most important pre-anesthesia assessment investigation for a patient with liver cirrhosis?

A) Coagulation profile

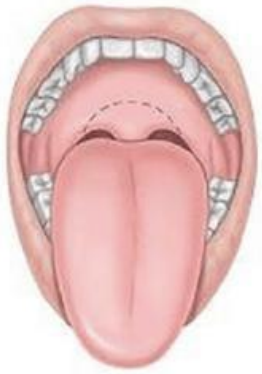
B) Serum albumin

C) Serum creatinine

D) Serum sodium level

Ans: A

9. Given a visual of the Mallampati score, which class does the patient belong to?



A) Class I

B) Class II

C) Class III

D) Class IV

Ans: C

10. A patient with insulin-dependent diabetes mellitus (IDDM) and a history of coronary artery bypass grafting presents for emergency surgery. His blood glucose level is 10 mmol/L (180 mg/dL) on the day of surgery. What is the most appropriate next step?

A) Refer to endocrinology

B) Proceed with surgery and explain the risks and benefits

C) Proceed with surgery without administering insulin intraoperatively

Ans: A

11. A patient is scheduled for general anesthesia at 1 PM and must adhere to fasting guidelines. Which of the following is NOT acceptable according to ASA fasting guidelines?

A) Toast and apple juice at 7 AM

B) Coffee with cream at 10 AM

C) Orange juice at 7 AM

D) Eggs with pancakes at 5 AM

Ans: B

12. A patient with a high BMI presents with symptoms of breathlessness at night. Where would you refer this patient for further evaluation?

A) Sleep study

B) Pulmonary function test

C) Cardiology consultation

D) Weight management program

Ans: A

13. Which statement is true regarding obese patients with obstructive sleep apnea (OSA)?

A) They have a higher risk of postoperative morbidity

B) They exhibit a lower effect from muscarinic blockers

C) They have a higher incidence of difficult bag-mask ventilation

Ans: A

14. A female patient presents on the day of surgery with classic symptoms of iron deficiency anemia (SOB, fatigue, low hemoglobin). What is the appropriate management?

A) Postpone the surgery due to untreated anemia

B) Refer to cardiology

C) Intubate the patient

Ans: A

15. What is the legal age of consent for medical procedures in Saudi Arabia?

A) 18 years

B) 16 years

C) 21 years

D) 15 years

Ans: A

16. Following a myocardial infarction (MI), what is the recommended period to delay elective surgery?

A) 60 days

B) 30 days

C) 10 days

D) 1 day

Answer: A

17. Which statement is true regarding the risk of aspiration?

A) Laryngeal mask airways pose a low risk of aspiration

B) Trauma patients are at an increased risk of aspiration

C) Patients with obesity are not at risk of aspiration

D) General anesthesia eliminates aspiration risk

Ans: B

18. An asthmatic patient is scheduled for hernia repair. Upon auscultation, wheezing is noted. What is the next appropriate action?

A) Cancel the procedure and consult a pulmonologist for optimization

B) Administer a bronchodilator

C) Proceed with surgery and provide oxygen

D) Initiate corticosteroid therapy

Answer: A

19. A patient mentions that her father died from fever following anesthesia. How can you assess if this patient is at risk for malignant hyperthermia (MH)? A) Inquire about her father's condition and whether a diagnostic muscle biopsy was performed

B) Review the family history of anesthetic reactions

C) Perform a physical examination for symptoms of MH

D) Order laboratory tests to assess for MH susceptibility

Ans: A

20. A traveler presents with leg pain and respiratory symptoms. What is the appropriate treatment?

A) Anticoagulants

B) Antibiotics

C) Compression stockings

D) Analgesics

Ans: A

21. A patient scheduled for cataract surgery has well-controlled hypertension and asthma. What additional tests, if any, would you consider?

A) Chest X-ray

B) 12-lead ECG

C) Liver and renal function tests

D) No additional tests needed

Ans: D

22. In a preoperative assessment, a patient with obstructive sleep apnea (OSA) is compliant with CPAP therapy and has a HbA1C of 12%. What is the most appropriate next step?

A) Refer to endocrinology

B) Refer to cardiology

C) Refer to sleep medicine

D) Proceed with surgery and administer insulin infusion

Ans: A

23. What is the appropriate fasting guideline for an 11-month-old infant scheduled for surgery at 10:00 AM?

A) Breastfeed until 6 AM

B) Clear fluids until 7 AM

C) Solid food until 8 AM

D) No feeding after midnight

Ans: A

24. During a preoperative assessment, a woman presents with a hemoglobin level of 6.7 g/dL. What is the appropriate action?

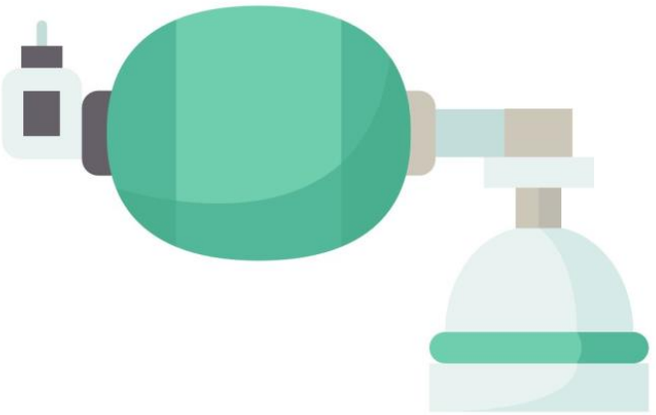
A) Delay the surgery due to uncompensated anemia

B) Proceed with surgery and monitor postoperatively

C) Administer blood transfusion immediately

D) Refer to hematology

Ans: A



اللهم اجعل ألسنتنا عامرة بذكرك،
وقلوبنا بخشيتك،
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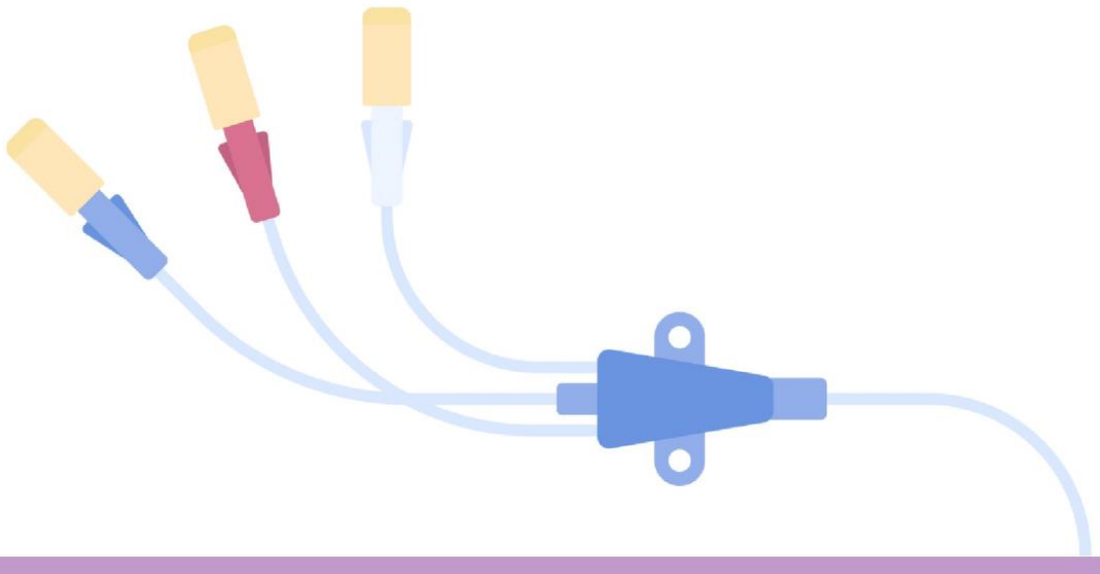
إنك على كل شيء قدير،
وحسبنا اللّٰه ونعم الوكيل.



L7 – Mechanical Ventilation

(39 Q's)

(MED22 Mix)

1-. TV calculation with 60kg in ARDS patient

A. 250 mL
B. 360 mL
C. 480 mL
D. 600 mL

Ans: B

2- What's the benefit of PEEP?

A. Prevent atelectasis
B. Increase Cardiac Output
C. Decrease intrathotacic Pressure

Ans: A

3- 45 year old male TBI present alert and suddenly GSW 5 and hemodynamically stable what's the next step?

A. CT
B. Blood transfusion
C. Endotracheal tube
D. ..

Ans: C

4- How to confirm esophagus intubation?

A. Chest rise
B. Auscultation of breath sounds
C. Pulse oximetry
D. Continuous waveform capnography ($ETCO_2$)

Ans: D

5- Patient with multiple trauma what's the next step?

6- Which scenario would ETT be used in?

A. Sedated 22 year old male doing diagnostic colonoscopy
B. Non-fasting general anesthesia
C. All trauma patients
D. All the general anesthesia

Ans: B

(MED22 Female)

No Questions Collected

(MED21)

***1. Which of the following interventions is most likely to improve oxygenation?**

A. Decrease tidal volume

B. Administer diuretics

C. Increase positive end-expiratory pressure (PEEP)

D. Reduce FiO_2 to prevent oxygen toxicity

Answer: C (The question was a long case, but the question at the end asks about how to improve oxygenation. I cannot recall all the options, but I know that FiO2 and PEEP are the main manipulators of oxygenation, so adjusting them is crucial.)

2. A 23-year-old medically free woman was presented in the hospital due to weakness in her legs. She had an upper respiratory tract infection. She is diagnosed with Guillain-Barré Syndrome. The doctor intubated her due to respiratory weakness (RR = 8 breaths/min). After 40 minutes on mechanical ventilation, her ABG shows pH = 7.28 and pCO_2 = 69 mmHg. Which of the following ventilator settings should be adjusted to correct her condition?

A. Keep the same settings

B. Increase respiratory rate

C. Increase PEEP

D. Increase FiO_2

Answer: B

3. A 62-year-old patient with a history of COPD presents with hypoxic respiratory failure. Chest X- ray reveals ARDS, and the patient is subsequently intubated. What is the appropriate target oxygen saturation (SpO_2) for this patient?

A. 88–92%

B. Under 85%

C. 96–100%

D. 88–91%

Answer: A

4. A patient is receiving 15 cmH_2O pressure support on mechanical ventilation and develops signs of shock. What is the most likely underlying mechanism contributing to the shock?

A. Increased venous return

B. Decreased venous return

C. Pulmonary embolism

D. Ventilator-induced pneumonia

Answer: B (Maybe From the Shock Topic)

5) Initial parameter for a patient with respiratory distress should include:

A. Tidal volume 6-8mL/kg
B. FiO2 = 30%
C. RR < 4
D. RR > 36

Ans: A

6) What is the initial Tidal volume recommended for a patient with acute respiratory distress syndrome (ARDS) who weighs 55 kg?

A. 300 ml
B. 400 ml
C. 330 ml
D. 430 ml

Ans: C
(6 ml x 55 kg (weight) = 330)

(MED20-MED16)

1. For volume-cycled mode, all of the following statements are correct EXCEPT:

A) A breath is limited by a preset volume

B) Tidal volume is constant and airway pressure is variable

C) Tidal volume is variable and airway pressure is constant

D) Guaranteed tidal volume in assist control mode

E) Patients frequently require sedation if they are on control mode of mechanical ventilation

Ans: C

2. Adequate ventilation is assessed by:

A) PaCO2

B) PaO2

C) PaCO2 and pH

D) Tidal volume

E) Cardiac output

Ans: C

3. A 40-year-old female with severe sepsis from a urinary tract infection (UTI) and tachypnea (respiratory rate of 24) should be placed on which mode of mechanical ventilation?

A) Controlled ventilation (CV)

B) Assist control (AC)

C) Synchronized intermittent mandatory ventilation (SIMV)

D) Pressure control (PC)

Ans: B

4. The initial ventilatory settings include all of the following EXCEPT:

A) FiO2

B) PEEP

C) Respiratory rate

D) Tidal volume (8-10 mL/kg)

E) Lung compliance

Ans: E

5. The primary determinants of CO2 exchange are:

A) Tidal volume

B) Minute ventilation

C) Lung and chest wall compliance

D) Respiratory rate

Ans: B

6. The following is an indication for non-invasive mechanical ventilation (NIPPV):

A) Acute pulmonary edema secondary to myocardial infarction

B) Acute respiratory failure in an immunocompromised patient

C) Acute exacerbation of COPD secondary to pneumonia

D) Acute respiratory failure with hemodynamic instability

Ans: C

7. Supplemental oxygen therapy is mandatory in the initial resuscitation of a critically ill patient EXCEPT:

A) After sustaining an acute coronary syndrome

B) When the patient is in a state of shock

C) In patients who have aspirated gastric contents into the lungs

D) In patients with chronic lung disease with a PCO2 of 80 mmHg, pH 7.15, and oxygen saturation (SpO2) of 92% breathing room air

E) Trauma patients who have sustained extensive lung contusion

Ans: D

8. A 55-year-old female patient with severe sepsis secondary to a urinary tract infection, who has a history of ischemic heart disease, congestive heart failure, and hypertension, presents with tachypnea (RR of 24/min) and appears fatigued. The best mode of mechanical ventilation for her is:

A) Pressure control ventilation

B) Controlled mechanical ventilation

C) Pressure support ventilation

D) Synchronized intermittent mandatory ventilation

E) Assist control ventilation

Ans: E

9. Which of the following is the best indicator for correct intubation?

A) End tidal CO2

B) ECG

C) Oxygen saturation

D) Thoracoabdominal movement

E) Air leak around the endotracheal tube

Ans: A

10. The following is an indication for non-invasive mechanical ventilation:

A) Acute exacerbation of COPD

B) Acute pulmonary edema secondary to myocardial infarction

C) Acute exacerbation of asthma with hypotension

D) Acute respiratory failure with hemodynamic instability

Ans: A

11. The most common complications of mechanical ventilation include all the following EXCEPT:

A) Hypotension

B) Auto PEEP

C) Barotrauma

D) Decrease in intracranial pressure

E) Increased risk of stress ulcer

Ans: D

12. All of the following conditions require ventilation EXCEPT:

A) PCO2 = 55

B) PO2 = 50

C) Tidal volume = 8

Ans: C

13. Respiratory conditions likely to benefit from non-invasive ventilation include all of the following EXCEPT:

A) Cardiogenic pulmonary edema with hemodynamic stability

B) Tachypneic patient with ongoing chest pain

C) Acute exacerbation of COPD

D) Acute exacerbation of asthma

Ans: B

14. The following is an indication for non-invasive mechanical ventilation:

A) Acute exacerbation of COPD secondary to pneumonia

B) Acute pulmonary edema secondary to myocardial infarction

C) Acute respiratory failure in an immunocompromised patient

D) Acute respiratory failure with hemodynamic instability

Ans: A

15. Initial parameters for a patient with respiratory distress should include:

A) Tidal volume 6-8 mL/kg

B) FiO2 = 30%

C) Respiratory rate < 4

D) Respiratory rate > 36

Ans: A

16. All of the following are causes of cyanosis, except:

A) Malfunction of pulse oximeter.

B) Food particulate aspiration.

C) Airway obstruction.

D) Congenital heart diseases.

Ans: A

17. The most common causes of hypotension after initiation of mechanical ventilation include the following, except:

A) Pneumothorax.

B) Narcotics and sedatives used at the time of intubation.

C) Decreased venous return due to positive pressure ventilation.

D) Coughing and bucking during intubation.

Ans: D

18. A boxer presents to the emergency department after a match, exhibiting multiple facial and cervical fractures, including a mandible fracture. He demonstrates stridor upon examination. What is the initial management approach for this patient?

A) Rapid intubation

B) Conservative management, allowing for natural healing

C) Multiple trials of non-invasive mechanical oxygenation

Ans: A

19. In a mechanical ventilation scenario, a patient with a body weight of 60 kg is being assessed. What is the least appropriate tidal volume to initiate ventilation?

A) 180 ml

B) 360 ml

C) 200 ml

D) 600 ml

Ans: A

20. A 45-year-old female patient is admitted to the emergency room with a 3day history of fever and dyspnea. After intubation and mechanical ventilation, her

arterial blood gas results indicate O2 = 80, CO2 = 45, pH = 7.30, respiratory rate = 14, and tidal volume = 500 ml. What intervention would be most effective in improving her condition?

A) Adjust the ventilator to deliver a tidal volume of 6 ml/kg

B) Initiate diuresis

C) Perform bronchoscopy to evaluate for abnormalities

D) Administer a bronchodilator

Ans: A

21. A 9-year-old male patient diagnosed with ARDS weighs 30 kg. What is the calculated tidal volume for this patient using the standard 6 ml/kg guideline?

A) 180 ml

B) 210 ml

C) 350 ml

D) 150 ml

Ans: A

22. Which physiological parameter is known to decrease during pregnancy? A) Functional residual capacity (FRC)

Ans: A

23. A patient with chronic obstructive pulmonary disease (COPD) is admitted for respiratory failure, intubated, and placed on 100% FiO2. Upon stabilization, their arterial blood gas results show pH = 7.42, PaCO2 = 69, and PaO2 = 60. What is the most appropriate treatment option?

A) Continuous positive airway pressure (CPAP)

B) Bilevel positive airway pressure (BIPAP)

C) Assist control mode ventilation

D) Pressure support mode ventilation

Ans: B

24. A mechanically ventilated patient presents with fluffy pulmonary infiltrates on chest X-ray and inadequate oxygenation. What modification should be made to improve oxygenation?

A) Increase respiratory rate

B) Increase tidal volume

C) Increase peak inspiratory pressure (PIP)

D) Increase positive end-expiratory pressure (PEEP)

Ans: D

25. In a case of respiratory distress syndrome (RDS), a patient weighing 80 kg requires a tidal volume calculation. What is the calculated tidal volume based on the 6 ml/kg rule?

Ans: 480 ml (6 ml/kg x 80 kg = 480 ml)

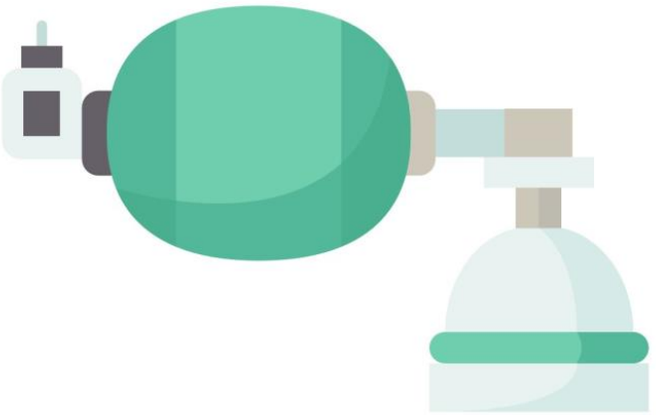
26. What is the initial tidal volume recommended for a patient with acute respiratory distress syndrome (ARDS) who weighs 60 kg?

A) 360 ml

Ans: A

27. In a case of traumatic brain injury, a patient presents with a Glasgow Coma Scale (GCS) score of 6. What is the appropriate next step in management? A) Assess the airway for the presence of an endotracheal tube

Ans: A



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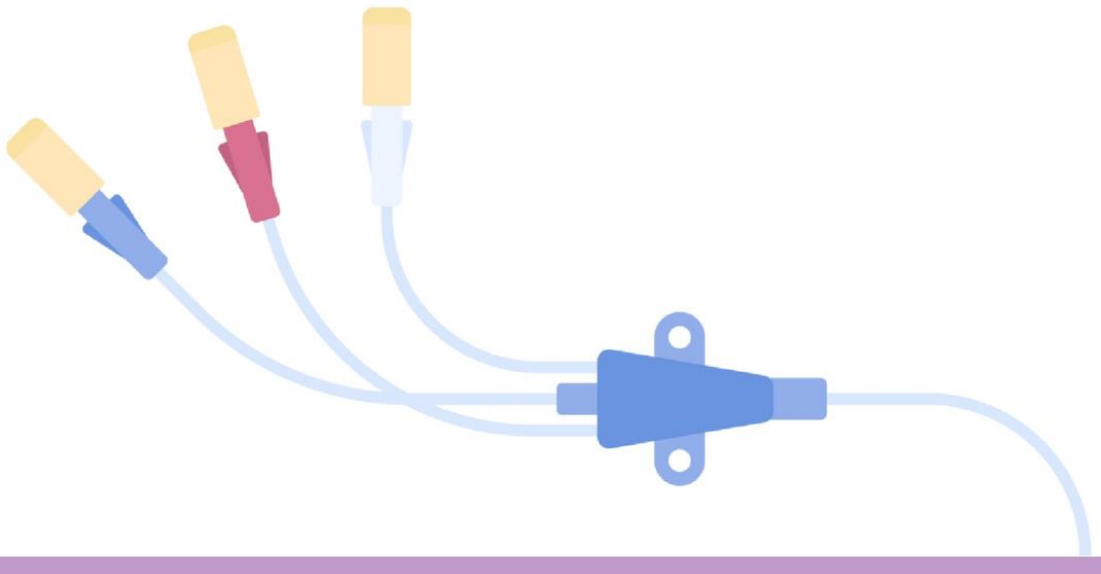


L8 – Acid Base Balance

(45 Q's)

(MED22 Mix)

1- A 52 year old male had lung cancer and went on left lower lobe resection of lung, the extubation was uneventful, in the recovery room he had painful inspiration and they give him immense amount of opioid, what type of acid base dysregulation happened?

A. Metabolic alkalosis
B. Respiratory alkalosis
C. Respiratory acidosis
D. Metabolic acidosis

Ans: C

2- pH=48, pCO2=35, pHCO3= 28, what's the AB disorder?

A. Metabolic acidosis
B. Respiratory alkalosis
C. Metabolic alkalosis
D. Respiratory acidosis

Ans: C

3- A patient presents with the following arterial blood gas results: pH = 7.33, $PaCO_2$ = 55 mmHg, HCO_3^- = 28 mEq/L, Na^+ = 140 mEq/L, Cl^- = 97 mEq/L. Which of the following best describes the patient's acid-base disturbance?

A) Normal values
B) Anion gap metabolic acidosis with concurrent respiratory acidosis
C) Metabolic alkalosis with respiratory compensation
D) Respiratory acidosis with metabolic compensation

Ans: D

(MED22 Female)

(All needs double checking:)

***1- A post-operative patient complains of pain on inspiration. He is given opioid, and 30 minutes which improved her symptoms. What type of acid-base disturbance is most likely to be seen in this patient?**

A) Respiratory alkalosis
B) Respiratory acidosis
C) Metabolic acidosis
D) Metabolic alkalosis

Ans : B

***2- Following three steps: respiratory alkalosis, high anionic gap, metabolic alkalosis** (I think the numbers are important here?)

A) Respiratory alkalosis with metabolic compensation
B) Metabolic alkalosis with respiratory compensation

Ans : ?? (important info are missing here)

***3- Case which when calculated showed metabolic acidosis, normal AG, low bicarbonate levels**

A) Diabetic Ketoacidosis
B) Renal tubular acidosis
C) Aspirin toxicity
D) Lactic Acidosis

Ans : B

(MED21)

1. A post-operative patient complains of pain on inspiration. He is given morphine, and 30minutes which improved her symptoms. What type of acid-base disturbance is most likely to be seen in this patient?

A. Respiratory alkalosis

B. Respiratory acidosis

C. Metabolic acidosis

D. Metabolic alkalosis

Answer: B

2. Which of the following can cause high-anion gap metabolic acidosis?

A. Diabetic ketoacidosis

B. Renal tubular acidosis

C. Diarrhea

D. Vomiting

Answer: A

3. ABG interpretation 1: A 58-year-old woman presents to the emergency department with weakness and vomiting for two days. Her laboratory results show: pH = 7.51, pCO_2 = 49 mmHg, HCO_3^- = 38 mEq/L, Na^+ = 132 mEq/L, and Cl^- = 49 mEq/L. What is the most likely primary acid-base disturbance?

A. Acute respiratory alkalosis

B. Acute anion gap metabolic acidosis with partial respiratory compensation

C. Acute metabolic alkalosis with partial respiratory compensation

D. Chronic metabolic alkalosis

Answer: C

4,5,6. ABG interpretation 2,3,4 = cannot recall the questions

(don't forget to add all ++ and subtract it from --)

7. A 19-year-old female with a history of type 1 diabetes mellitus presents with abdominal pain, vomiting, and deep rapid breathing. Her arterial blood gas shows a pH of 7.20, bicarbonate of 12 mEq/L, and pCO_2 of 28 mmHg. Her blood glucose is 260 mg/dL. What is the most likely diagnosis?

A. Hyperosmolar hyperglycemic state (HHS)
B. Lactic acidosis
C. Diabetic ketoacidosis (DKA)
D. Respiratory acidosis

Answer: C

8. High anion gap metabolic acidosis is seen in:

A. Toxic ingestion of salicylates
B. Patient with end stage renal disease
C. Vomiting
D. Diarrhea

Ans: B

9. A 25-year-old man with type 1 diabetes presents with nausea, vomiting, and abdominal pain. He is confused and dehydrated. Vital signs: BP 90/60 mmHg, HR 120/min, RR 28/min. Laboratory investigations show:
Na: 135 mEq/L, K: 5.2 mEq/L, Cl: 98 mEq/L, HCO3: 12 mEq/L, Blood glucose: 480 mg/dL, Serum ketones: positive
Which of the following is the most likely cause of his acid-base disturbance?

A. Diabetic ketoacidosis (DKA)
B. Diarrhea-induced acidosis

C. Renal tubular acidosis type 1
D. Hyperchloremic acidosis from IV saline

Ans: A

(MED20-MED16)

1. A 65-year-old patient presented to the ER with 3 days of increasing SOB and sputum production. The patient has known COPD. An ABG shows pH 7.25, PCO2 60, and HCO3 26. The likely acid-base disorder is:

A) Normal ABG

B) Respiratory acidosis

C) Respiratory alkalosis

D) Respiratory alkalosis and acidosis

Ans: B

2. Calculate AG, pH 7.36 / Na 140 / HCO3 18 / Cl-103:

A) 19

B) 20

C) 30

D) 44

Ans: A

3. Patient's ABG pH = 7.41, pCO2 = 40, HCO3 = 24, Na = 145, Cl = 100. This patient has:

A) Respiratory acidosis

B) AG metabolic acidosis

C) AG metabolic acidosis with metabolic alkalosis

D) Metabolic alkalosis

Ans: C

4. A patient's ABG shows pH = 7.36 / Na = 140 / HCO3 = 18 / Cl = 103. The AG is:

A) 19

B) 17

C) 16

Ans: A

5. A 58-year-old diabetic woman with cholelithiasis and recurrent pancreatitis undergoes laparoscopic cholecystectomy. She develops shortness of breath 3 days later. Her ABG: pH 7.28, PCO2 30 mmHg, PO2 70 mmHg, HCO3 16. The most correct option is:

A) Increase O2 to 5 L/min to improve oxygenation

B) Give her diazepam to relieve her anxiety

C) Keep watching her in the ward as her BP and oxygen saturation are acceptable

D) Patient needs to be transferred to ICU as tachypnea and metabolic acidosis are important indicators of critical illness

Ans: D

6. High anion gap metabolic acidosis is seen in all the following EXCEPT:

A) Patients with end-stage renal disease

B) Frequent episodes of vomiting

C) Uncontrolled type I diabetes mellitus after missing insulin therapy

D) Toxic ingestion of salicylates

E) Septic shock patients with high levels of serum lactate

Ans: B

7. Calculate AG, pH 7.36 / Na 140 / HCO3 18 / Cl-103:

A) 19

B) 17

C) 16

Ans: A

8. A 75-year-old male patient on regular hemodialysis presented with excessive nausea & vomiting. ABG shows pH = 7.41, pCO2 = 40, HCO3 = 24, Na = 145, Cl = 100. This patient has:

A) Respiratory acidosis

B) Metabolic acidosis

C) AG metabolic acidosis with metabolic alkalosis

D) Metabolic alkalosis

Ans: C

9. A 23-year-old Type I diabetic presented to the emergency room feeling unwell. He has not taken his insulin for approximately 24 hours. ABG parameters: pH 7.36, PaO2 100, PaCO2 33, HCO3 18. The calculated anion gap is:

A) 18

B) 20

C) 12

D) 19

Ans: D not enough information

10. All of the following are true regarding respiratory alkalosis, except:

A) Caused by opioid overdose

B) Can result in syncope

C) Carpopedal spasm is not an uncommon complication

D) Renal compensation through increased secretion of HCO3

Ans: A

11. Acute respiratory alkalosis is characterized by all the following EXCEPT:

A) May present with decreased level of consciousness

B) Could be associated with ventricular arrhythmia

C) Typically seen with opiate overdose

D) Carpopedal spasm is not an uncommon presentation

E) May be caused by acute hysterical state anxiety

Ans: C

12. The following statements regarding acid-base regulation are true EXCEPT:

A) Anion gap (AG) may be affected by the level of serum albumin

B) An elevated plasma [HCO3] can result from metabolic alkalosis or the secondary response to respiratory acidosis

C) The normal plasma PCO2 is 30-45 mmHg

D) Metabolic acidosis or metabolic alkalosis is compensated acutely by changes in respiratory rate

E) The plasma bicarbonate concentration is predominantly regulated by the renal tubules

Ans: C

13. A 75-year-old patient on regular hemodialysis presented with excessive nausea, vomiting, and signs of dehydration. Blood work showed Na: 145 mEq/L, Cl: 100 mEq/L, pH level: 7.4, PCO2: 40, HCO3: 24. The patient acid-base interpretation shows:

A) Anion gap metabolic acidosis

B) Metabolic alkalosis

C) Normal ABG

D) Anion gap metabolic acidosis and metabolic alkalosis

Ans: D

14. Diarrhea typically leads to which of the following acid-base disturbances?

A) Metabolic acidosis

B) Metabolic alkalosis

C) No effect

Ans: A

15. A 65-year-old patient presented to the ER with 3 days of increasing SOB and sputum production. The patient is a current smoker with known COPD. An ABG shows pH 7.25, PCO2 60, and HCO3 26. The likely acid-base disorder is:

A) Normal ABG

B) Respiratory acidosis

C) Respiratory alkalosis

D) Respiratory alkalosis and acidosis

Ans: B

16. An acute respiratory alkalosis is characterized by all the following EXCEPT:

A) Carpopedal spasm is not an uncommon presentation

B) May present with decreased level of consciousness

C) Could be associated with ventricular arrhythmia

D) May be caused by an acute hysterical disorder

E) Typically seen with opiate overdose

Ans: E

17. All of the following are true regarding respiratory alkalosis, except:

A) Caused by opioid overdose

B) Can result in syncope

C) Carpopedal spasm is not an uncommon complication

D) Renal compensation through increased secretion of HCO3

Ans: A

18. High anion gap metabolic acidosis is seen in all the following EXCEPT:

A) Patients with end-stage renal disease

B) Frequent episodes of vomiting

C) Uncontrolled type I diabetes mellitus after missing insulin therapy

D) Toxic ingestion of salicylates

E) Septic shock patients with high levels of serum lactate

Ans: B

19. A 23-year-old Type I diabetic presented to the emergency room feeling unwell. He has not taken his insulin for approximately 24 hours and reports nausea and vomiting. The following parameters were noted: pH 7.36, PaO2 100, PaCO2 33, HCO3 18. The calculated anion gap is:

A) 18

B) 20

C) 12

D) 19

Ans: D not enough information

20. The following complications are typical of metabolic acidosis EXCEPT:

A) May present in a shocked state

B) Cardiac arrhythmias are not uncommon

C) Usually present with hyperventilation

D) Characteristically manifests with hypokalemia

Ans: D

21. Given the following arterial blood gas results: pH = 7.51, CO2 = 49 mmHg, HCO3 = 38 mEq/L, Cl = 49 mEq/L, Na = 132 mEq/L, what is the primary acid-base disturbance?

A) Acute respiratory alkalosis

B) Acute anion gap metabolic acidosis with partial respiratory compensation

C) Acute metabolic alkalosis with partial respiratory compensation

D) Chronic metabolic alkalosis

Ans: C

22. A patient presents with the following arterial blood gas results: pH = 7.47, CO2 = 53 mmHg, HCO3 = 38 mEq/L, Cl = 89 mEq/L, Na = 140 mEq/L. What is the most likely acid-base disturbance?

A) Chronic metabolic alkalosis

B) Anion gap metabolic acidosis with concurrent metabolic alkalosis

C) Metabolic alkalosis

D) Respiratory alkalosis with concurrent anion gap metabolic acidosis

Ans: A

23. A patient's arterial blood gas results show pH = 7.56, CO2 = 22 mmHg, HCO3 = 19 mEq/L, Cl = 100 mEq/L, Na = 147 mEq/L. What is the most accurate diagnosis of the acid-base status?

A) Metabolic alkalosis with respiratory compensation

B) Anion gap metabolic acidosis with concurrent respiratory alkalosis C) Metabolic alkalosis with concurrent anion gap metabolic acidosis and respiratory acidosis

D) Respiratory alkalosis with concurrent metabolic alkalosis and anion gap metabolic acidosis

Ans: D

24. A patient presents with the following arterial blood gas results: pH = 7.34, CO2 = 57 mmHg, HCO3 = 31 mEq/L, Cl = 100 mEq/L, Na = 143 mEq/L. Which of the following best describes the patient's acid-base disturbance?

A) Normal values

B) Anion gap metabolic acidosis with concurrent respiratory acidosis

C) Metabolic alkalosis with respiratory compensation

D) Respiratory acidosis with metabolic compensation

Ans: D

25. In a patient with the following arterial blood gas values: pH = 7.32, CO2 = 72 mmHg, HCO3 = 22 mEq/L, Cl = 109 mEq/L, Na = 146 mEq/L, what is the primary acid-base disturbance?

A) Respiratory acidosis

B) Respiratory acidosis with concurrent anion gap metabolic acidosis C) Respiratory alkalosis with concurrent anion gap metabolic acidosis and metabolic alkalosis

D) Respiratory acidosis with concurrent anion gap metabolic acidosis and metabolic alkalosis

Ans: B

26. A 19-year-old female presents with fainting spells, and friends report that she avoids a "fat look." She has a diagnosis of anorexia and induces vomiting. What is the likely acid-base disturbance associated with her condition?

A) Metabolic acidosis

B) Metabolic alkalosis

C) Respiratory alkalosis

D) Mixed acid-base disorder

Ans: B

27. A patient with a stab wound has lost approximately 25% of his blood volume. What acid-base disturbance is most likely in this scenario?

A) Metabolic acidosis

B) Respiratory acidosis

C) Metabolic alkalosis

D) Normal acid-base balance

Ans: A

28. An 18-year-old boy arrives at the emergency room with a fruity odor to his breath. His lab results indicate glucose = 890 mg/dL, pH = 7.25, Cl = 94 mEq/L, Na = 134 mEq/L, HCO3 = 10 mEq/L, CO2 = 24 mmHg. What is the acid-base disturbance present in this patient?

A) High anion gap metabolic acidosis with inadequate respiratory compensation

B) High anion gap metabolic acidosis with concurrent respiratory acidosis

C) Non-anion gap metabolic acidosis with inadequate compensation

D) Respiratory acidosis with metabolic compensation

Ans: A

29. A 75-year-old male presents with confusion and anxiety. His history reveals generalized anxiety and the presence of several medications (aspirin, acetaminophen) at the scene. He is hemodynamically stable. Laboratory results show: Na = 140 mEq/L, K = 3.3 mEq/L, Cl = 105 mEq/L, and his arterial blood gas values are pH = 7.48, CO2 = 30 mmHg, HCO3 = 24 mEq/L. What is the likely acidbase disturbance?

A) Respiratory alkalosis only

B) High anion gap metabolic acidosis + respiratory alkalosis

C) Metabolic alkalosis + respiratory acidosis

D) Non-anion gap metabolic acidosis + metabolic alkalosis

Ans: A

30. In the case of an aspirin overdose, the patient exhibits the following arterial blood gas results: pH = ?, CO2 = ?, HCO3 = ?. What is the expected acid-base disturbance?

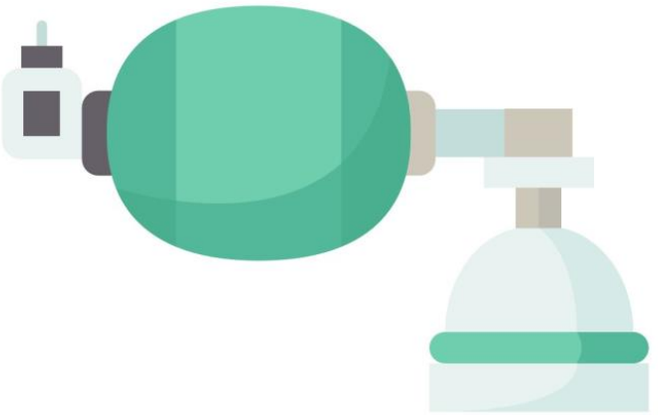
A) Respiratory alkalosis and metabolic acidosis

B) Respiratory acidosis and metabolic alkalosis

C) Metabolic alkalosis only

D) Normal acid-base status

Ans: A



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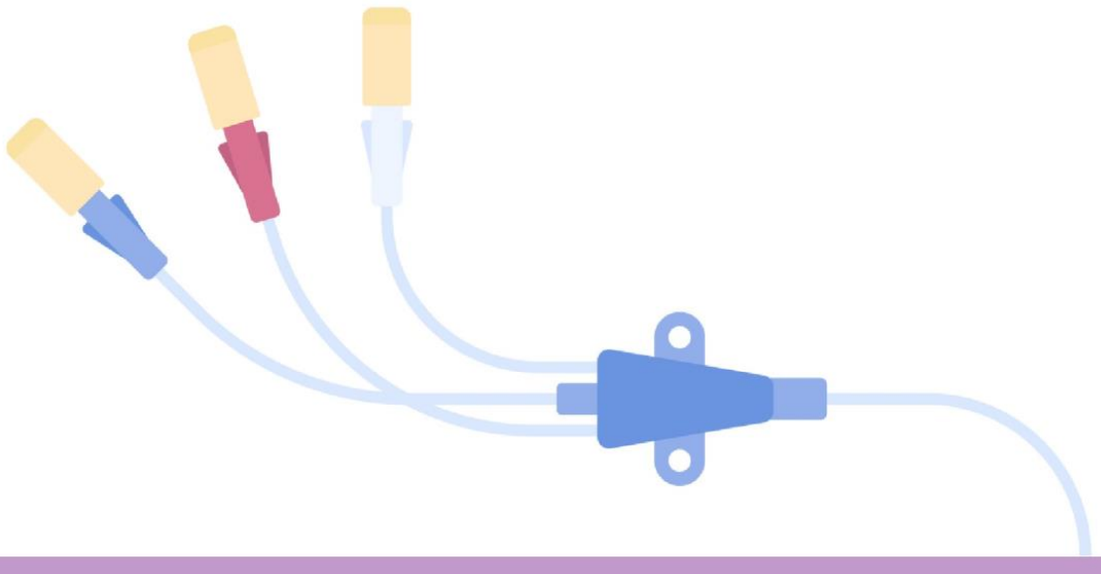


L9 – Shock

(46 Q's)

(MED22 Mix)

1- Cardiogenic Shock

A. Low CO, High SVR, High PCWP
B. High CO, Low SVR, Low PCWP
C. High CO, Low SVR, High PCWP
D. Low CO, Low SVR, Low PCWP

Ans: A

2- something about someone having a femur fracture i think, and he is hypotensive . What kind of shock?

A. Cardiogenic
B. Neurogenic
C. Hyovolemivc
D. Septic

Ans: C

(MED22 Female)

1- What is the hemodynamic abnormality in a cardiogenic shock?

A) ↑ CO , ↑ PCWP , ↑ SVR
B) ↓ CO , ↑ PCWP,↑ SVR
C) ↓ CO , ↓ PCWP , ↑ SVR
D) ↓ CO , ↓ PCWP , ↓ SVR

Ans : B

2- Which of the following neuroendocrinal changes in shock?

A) Decreased renin-angiotensin system
B) Increased catecholamine
C) Decreased cortisol

D) Increased insulin

Ans : B

3- What is a marker of inadequate perfusion?

A) MAP 65 mmHg
B) CVP 13 mmHg
C) Urinary output 15 ml in one hour

Ans : C

4- Hypovolemic shock patient given crystalloid but vitals are still not stable, what is the best plan?

A) Use colloid because it's better
B) Continue crystalloid and add norepinephrine
C) CVP is the best indicator or fluid status

Ans : B

5- A diabetic patient has lethargy, fever, tachycardia, hypotension, altered mental status, diffuse abdominal tenderness, what is the likely type of shock?

A) Hypovolemic shock
B) Distributive shock (neurogenic)
C) Distributive shock (sepsis)
D) Cardiogenic shock

Ans : C

(MED21)

1. What is the hemodynamic abnormality in a cardiogenic shock?

A. ↑ CO , ↑ PCWP , ↑ SVR
B. ↓ CO , ↑ PCWP, ↓ SVR
C. ↓ CO , ↓ PCWP , ↑ SVR
D. ↓ CO , ↓ PCWP , ↓ SVR

Answer: B

2. Which of the following neuroendocrinal changes in shock?

A. Decreased renin-angiotensin system
B. Increased catecholamine
C. Decreased cortisol
D. Increased ADH

Answer: B

3. A patient is receiving 15 cmH_2O pressure support on mechanical ventilation and develops signs of shock. What is the most likely underlying mechanism contributing to the shock?

A. Increased venous return
B. Decreased venous return
C. Pulmonary embolism
D. Ventilator-induced pneumonia

Answer: B
(Maybe from Mechanical Ventilation Topic)

4) A 34 y/o presents to the ER after dining at a restaurant where shortly after eating the first few bites of her meal, became anxious, diaphoretic, began wheezing, noted diffuse pruritic rash, nausea, and a sensation of her. "Throat closing off". She is currently hypotensive, tachycardia and il appearing.
What should to do?
A. ABC
B. Give cortisone
C. Patients with cardiogenic shock
D. Co low, PAWP high, SVR high

Ans: A

5) What is shock ?

A. systemic state of inadequate oxygen utilization at the cellular level
B. generalized failure of circulatory homeostasis leading to hypotension
C. condition of impaired cardiac output resulting in organ dysfunction
D. systematic state of tissue hypoperfusion

Ans : D

6) In a case of saddle embolism, what is the recommended treatment?

A. IV thrombolytics
B. Aspirin
C. Heparin
D. Inferior vena cava filter

Ans: A

7) A 62-year-old man with a history of hypertension and diabetes mellitus presents to the emergency department with diffuse abdominal pain for 1 day. On examination, he is febrile, hypotensive, and tachycardic. His skin is cool and dry, and he appears confused. What is the MOST likely diagnosis?

A. Hypovolemic shock
B. Cardiogenic shock
C. Anaphylactic shock
D. Septic shock

Ans: D (late/ cold phase shock)

8) A 28-year-old male is brought to the emergency department after a shotgun injury to the left scapular region. He is pale, restless, and diaphoretic. Vital signs are: BP 80/50 mmHg, HR 132/min, RR 28/min, SpO_2 94% on oxygen. Two large-bore IV cannulas are inserted, and the patient receives 2 liters of normal saline with minimal improvement in blood pressure. Active bleeding is suspected. Blood samples have been sent for type and crossmatch. What is the MOST appropriate next step in management?

A. Continue crystalloid resuscitation
B. Transfuse type-specific packed red blood cells

C. Transfuse uncross-matched type O packed red blood cells
D. Wait for crossmatched blood before transfusion

Ans: C

9) A 55-year-old man presents to the emergency department with hypotension, tachycardia, cold clammy skin, and altered mental status. Laboratory tests show elevated lactate. What is the primary mechanism underlying the pathophysiology of shock?

A. Excessive blood pressure causing organ hyper-perfusion
B. Tissue hypo-perfusion leading to cellular hypoxia
C. Increased cardiac output causing pulmonary edema
D. Hypervolemia leading to tissue congestion

Ans: B

(MED20-MED16)

1. A 65-year-old gentleman presents to the emergency department with cough, fever, and yellow sputum. His symptoms started 4 days ago. His past history is remarkable for diabetes mellitus and ischemic heart disease. His triage vitals show heart rate 120/min, blood pressure 80/40 mmHg, respiratory rate 28/min, and oxygen saturation 85% on air. His physical examination reveals a confused man and decreased breath sounds over the right chest. What is the most appropriate first action in managing this patient?

A) Administration of an IV fluid bolus.

B) Insertion of a central venous catheter.

C) Administration of oxygen by a non-rebreathing mask.

D) Intubation and mechanical ventilation.

E) Administration of a vasopressor.

Ans: C

2. Someone gets stabbed in his left flank (hypovolemic shock symptoms): pale, tachycardic, low blood pressure. How will you manage him?

Ans: Consent him for ventilation and give IV bolus 1000 mL 0.9% NaCl

3. The following types of shock states may NOT benefit from repeated fluid challenges (consisting of crystalloids and colloids):

A) Patients in severe sepsis

B) After sustaining an anterior wall myocardial infarction

C) State of anaphylactic shock

D) In case of adrenal insufficiency

E) After some forms of drug overdose

Ans: D

adrenal insufficiency is written in the slides as a cause of persistent hypotension despite fluid administration

4. The following types of shock states may benefit from repeated fluid challenges except:

A) Anaphylactic shock

B) Severe sepsis

C) After sustaining an anterior wall myocardial infarction

D) In case of adrenal insufficiency or after some forms of drug overdose

Ans: D

adrenal insufficiency is written in the slides as a cause of persistent hypotension despite fluid administration

5. A 56-year-old female with a perirectal abscess was admitted to the ER complaining of severe perianal pain. She is conscious, febrile at 38.9°C, hypotensive with BP: 85/40, HR 100 beats/min, RR 26 breaths/min, and O2 saturation of 92% on room air. Which one of the following is most appropriate?

A) Hyperbaric oxygenation

B) Applying O2 by face mask, give IV boluses 500-1000 cc of isotonic crystalloids, start broad-spectrum antibiotics immediately after taking culture

C) Do not start antibiotics until you get results of the culture

D) Wait until you put a central line, then start fluid therapy

Ans: B

6. A 28-year-old male patient is admitted to the ER following a motor vehicle accident, diagnosed with a fractured right femur. His vital signs show BP 70/40 mmHg, HR 140 bpm, and RR 18/min. He is fully conscious, oriented, but appears pale and in pain. All of the following statements are true EXCEPT:

A) Insert 2 wide-bore cannulas and give 500-1000 mL of 0.9% NaCl over 30 minutes.

B) Do not give more than 1.5 L of 0.9% NaCl as he may develop pulmonary edema.

C) Cross-match 2 units of PRBCs and call orthopedic surgeons.

D) Give him adequate analgesia for pain control.

Ans: B

7. A 22-year-old patient is admitted to the ER following a motor vehicle incident where he was stabbed in the left flank. He is pale and clammy with BP 78/58 mmHg, HR 125 bpm, and RR 26 breaths/min. Regarding the immediate resuscitation of the patient, which one of the following is true:

A) Push the patient to the radiology department for a CT abdomen.

B) Intubate and connect him to mechanical ventilation, and start 1000 cc of 0.9% NaCl as a fluid bolus.

C) First, do an ultrasound of the abdomen to search for the cause of shock, then start resuscitation.

D) Send for CBC and do not transfuse blood unless the hemoglobin is less than 7 g/dL.

Ans: B

8. A patient presents with confusion, hypotension, and tachycardia, with bacteria detected in his urine. Based on the qSOFA criteria indicating septic shock with organ failure, what type of shock does this represent?

Cardiogenic shock

Distributive shock

Hypovolemic shock

Neurogenic shock

Ans: B

9. In the emergency department, which patient should be prioritized for cardiac catheterization?

A) Stable angina

B) NSTEMI and hemodynamically stable

C) STEMI with cardiogenic shock

D) Unstable angina

Ans: C

10. A patient weighing 45 kg presents with various vital signs. Which of the following indicates inadequate hypoperfusion?

A) CVP 13 mmHg (Normal range: 8-12)

B) MAP 65 mmHg (Normal range: 60-70)

C) Urine output 15 ml in the last hour (Normal range: 800-2000 ml)

D) Heart rate of 110 bpm

Ans: C

11. In a case of septic shock with hypotension, after administering fluids and vasopressors, what should be done next to improve survival?

A) Administer antibiotics within the first hour of hypotension

B) Administer corticosteroids

C) Perform early source control

D) Increase fluid resuscitation

Ans: A

(early administration of broad-spectrum antibiotics is critical - Med21 edited slides 44)

12. A 40-year-old male patient presents with fever, hypotension, tachycardia, and a hot, mottled appearance of his lower limbs. What is the next best step in management?

A) Administer intravenous bolus

B) Initiate norepinephrine

C) Administer antibiotics

D) Provide fluid resuscitation

Ans: D

13. A 20-year-old patient, a victim of a hit-and-run, arrives in the emergency room with hypotension and tachycardia. After receiving 2 liters of normal saline, his vitals remain unstable. He is diaphoretic with cold, clammy skin.
What is the next step?

A) Administer 2 liters of Lactated Ringer's

B) Administer 1000 ml of 5% albumin

C) Administer 2 units of non-specific type blood (O-)

D) Administer 2 units of specific type blood

Ans: C

14. In the case of anaphylactic shock, what is the first-line treatment?

A) Epinephrine

B) Antihistamines

C) Corticosteroids

D) Oxygen therapy

Ans: A

15. What is the effect of sympathetic stimulation on the cardiovascular system?

A) Increased heart rate

B) Decreased heart rate

C) Decreased cardiac output

D) Increased peripheral vascular resistance

Ans: A

16. A preoperative patient presents with low blood pressure and tachycardia. What type of shock does this indicate?

A) Hypovolemic shock

B) Cardiogenic shock

C) Distributive shock

D) Obstructive shock

Ans: A

17. What is correct regarding systemic oxygen saturation (ScO2) in the context of shock?

A) Decreased ScO2 indicates poor tissue perfusion

B) ScO2 remains normal in all types of shock

C) Increased ScO2 is a sign of effective resuscitation

D) ScO2 cannot be measured during shock

Ans: A, C?

18. Which statement is correct about shock?

A) Increased anaerobic respiration occurs because oxygen demand exceeds delivery

B) Oxygen demand and delivery are equal

C) Lactate levels are normal in shock

D) Only metabolic demand increases in shock

Ans: A

19. As the anesthesiologist on call, you arrive to assess a pregnant patient lying supine who suddenly feels ill, experiencing nausea and rapid breathing, with a blood pressure of 80 mmHg. What is your first action?

A) Administer 500 cc normal saline

B) Reassure the patient and administer a vasopressor

C) Administer an IM antiemetic

D) Instruct her to lay on her left side

Ans: D (This position allows for optimal blood flow from the inferior vena cava.)

20. In the scenario of a hit-and-run victim with hypotension and tachycardia, after administering 2 liters of normal saline with no stabilization, what would you do next?

A) Administer 2 liters of Lactated Ringer's

B) Administer 1000 ml of 5% albumin

C) Administer 2 units of non-specific type blood (O-)

D) Administer 2 units of specific type blood

Ans: (Repeated question; see question 13)

21. In a trauma case, which type of shock is most likely present?

A) Hypovolemic shock

B) Cardiogenic shock

C) Obstructive shock

D) Distributive shock

Ans: A

While hemorrhage is the most common cause of shock in the trauma patient, other causes of shock are to remain on the differential. Obstructive shock can occur in the setting of tension pneumothorax and cardiac tamponade. Cardiogenic shock can occur in the setting of cardiac contusion and stress induced MI. Neurogenic shock can occur with cervical trauma.

22. In a long case scenario indicating septic shock, what type of shock is this?

A) Hypovolemic shock

B) Cardiogenic shock

C) Distributive shock

D) Obstructive shock

Ans: C

23. In a case of a male patient involved in a road accident presenting with tachycardia and hypotension, with one leg appearing shorter than the other, what type of shock is this?

A) Neurogenic shock

B) Hypovolemic shock

C) Anaphylactic shock

D) Septic shock

Ans: B

The description of one leg being shorter than the other raises suspicion for a potential pelvic fracture or femoral neck fracture. Such injuries can lead to significant hemorrhage due to vascular compromise in the pelvic area, contributing to hypovolemic shock

24. What differentiates septic shock from hypovolemic shock?

A) Warm and flushed skin

B) Cool and clammy skin

C) Presence of fever

D) Response to fluid resuscitation

Ans: Both A and C are correct?

25. In a case of saddle embolism, what is the recommended treatment?

A) IV thrombolytics

B) Aspirin

C) Heparin

D) Inferior vena cava filter

Ans: A

26. In a typical case of septic shock, what is the standard initial management?

A) Fluid resuscitation, vasopressors, and oxygen administration

B) Administering corticosteroids and diuretics

C) Performing early source control

D) Monitoring vital signs only

Ans: A

27. 60y male ,in the ICU with septic shock due to hospital acquired pneumonia 2 days later he developed severe acute respiratory distress syndrome (ARDS) ,SaO2 dropped to 88% if we give him fluids. What do we expect to happen with his SvO2 ?

A. Increase O2 in the SVC as delivery to tissue will decrease

B. Decease O2 in the SVC as delivery to tissue will decrease

C. No change

D. Decease O2 in the SVC as delivery to tissue will increase

Ans: D

28. Patient in shock and the CVP is 0 ,if you give a NACL fluid what will happen to SVCo2 saturation?

A. Improves as the o2 delivery to tissue

B. improves Increases because it will be congested

C. Decreased because it will be hypoxic

D. Remain unchanged

Ans: A

29. Target blood sugar level in management of septic shock:

A. 80-110 mg/dl
B. 110-150 mg/dl
C. 150-200 mg/dl
D. 200-250 mg/dl

Ans: B not in

the slides

30. The adequacy of perfusion to the vital organ could be assessed by:

A. Skin temperature and capillary refill
B. Measure blood pressure and heart rate
C. Assess level of consciousness and orientation
D. Urine output
E. All of the above

Ans: Urine output - Med21 Edited slides 23

Unknown

(13 Q's)

(Probably Very old unrelated Quistions)

1. Fluid in the ultrasound?

A) hyperechoic (white)

B) isoechoic (light gray)

C) hypoechoic (dark gray)

D) anechoic (black)

Ans: D

2. Common practice to reduce infection during lumbar Puncture ?

A) Wearing gown and gloves

Ans: A

3. A 56-year-old female with a perirectal abscess, appropriate management: A. Hyperbaric oxygenation.

B. Applying O2 by face mask, give IV boluses 500-1000 cc of isotonic crystalloids, start broad spectrum antibiotics immediately after taking culture. C. Do not start antibiotics until you get results of the culture.

D. Wait until you put a central line then start fluid therapy.

Ans: B

4. The following signs are indications of airway obstruction:

A. Cyanosis.

B. Altered respiratory pattern and rate.

C. Use of accessory respiratory muscles.

D. Altered level of consciousness.

E. All of the above are correct.

Ans: E

5. A 58-year-old, diabetic woman with cholelithiasis develops shortness of breath... the most correct:

A- Increase O2 to 5 L/min to improve oxygenation

B- Give her diazepam to relieve her anxiety

C- Keep watching her in the ward as her BP and oxygen saturation are acceptable

D- Patient needs to be transferred to ICU as tachypnea and metabolic acidosis are important indicators of critical illness

Ans: D

6. The following clinical conditions may all cause sudden complications EXCEPT:

A- Massive pulmonary embolism

B- Acute blood loss

C- Chronic tuberculous pericardial effusion

D- Drug toxicities

Ans: C

7. In a patient with a history of acute asthma, all of the following can be used in treatment except:

A- Salbutamol puffer

B- Inhalation agent

C- Systemic steroids

D- Muscle relaxant

Ans: D

8. All of the following are true regarding assessment of critically ill pt Except:

A- Primary and secondary survey approach is recommended in critically ill pt

B- Concurrent diagnosis and therapeutic interventions are recommended in further deterioration

C- Detailed history and examination are required before starting therapy

Ans: C

9. A 41-year-old woman is admitted to ICU for a 1-day history of progressively worsening alertness and jaundice. The most appropriate next step in management is:

A. Abdominal CT

B. Diagnostic paracentesis

C. Dopamine infusion

D. Hydrocortisone

Ans: D

10. A 75-year-old male patient on regular hemodialysis comes with excessive nausea & vomiting. The next appropriate step in management is:

A. Abdominal CT

B. Diagnostic paracentesis

C. Dopamine infusion

D. Hydrocortisone

Ans: D

11. All the following are considered high risk surgical procedure EXCEPT:

A- Peripheral vascular surgery

B- Prolonged surgical procedure

C- Intraperitoneal and intrathoracic procedures

D- Emergency surgery in the elderly

Ans: C

12. A 41-year old woman is admitted to ICU for a 1 – day history of progressively worsening alerted mental state and jaundice. Her medical history is significant for autoimmune hepatitis, which was diagnosed 10 years ago. On physical examination, temperature is 33 C (91.4 F), blood pressure is 105/55 mmHg, pulse rate is 110/min, and respiratory rate is 27/min; BMI is 18. She is unresponsive to sternal rub and is jaundiced. The lungs are clear, and cardiac examination is normal. Abdominal examination reveals a distended abdomen with a detectable fluid wave. The extremities are warm and well perfused.

Laboratory studies reveal the following: Leukocyte count: 9800/ul. Serum creatinine: 1.6 mg/dl (141 umol/L) lactic acid level: 6 mg/ dl (0.7 mmol/L). A chest radiograph is normal, and examination of the urine is unremarkable. Blood and urine culture results are pending. IV fluids and empiric broadspectrum antibiotics are begun. Which of the following is the most appropriate in the nextstep in management:

A- abdominal CT

B- diagnostic paracentesis

C- dopamine infusion

D-hydrocortisone

Ans: D

12. 58-year-old, diabetic women with cholelithiasis and recurrent pancreatitis, underwent laparoscopic cholecystectomy. She developed shortness of breath 3 days later; she became anxious and slightly confused. Her vital signs are as follows: BP: 110/60, HR: 115 bpm, RR: 28 breath/min, Temp: 37.80 C, SPO2 95% on Nasal cannula 3 L/min. Her ABG: PH 7.28, PCO2 30 mmHg, PO2 70 mmHg, HCO3 16, lactic acid 4.8 mmol/L. Which one of the following is most correct:

A) Increase O2 to 5 L/min to improve oxygenation

B) Keep watching her in the ward as her blood Pressure and oxygen saturation is acceptable

C) Give her diazepam to relieve her anxiety

D) Patient needs ICU admission as tachypnea and metabolic acidosis are important

indicators of critical illness

Ans: D

13. Adequacy of perfusion to the vital organs could assessed by all of the following EXCEPT:

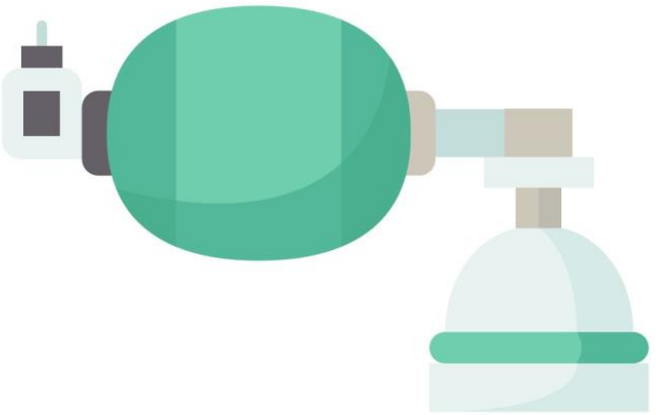
A) Assess level of consciousness and orientation

B) Measure urine output

C) Skin temperature and capillary refill in all extremities

D) Measuring respiratory rate

Ans: D



اللهم إني أستودعك ما قرأت
وما حفظت، وما تعلمت،
فرده لي عند حاجتي إليه،
إنك على كل شيء قدير،
حسبنا اللَّه ونعم الوكيل