

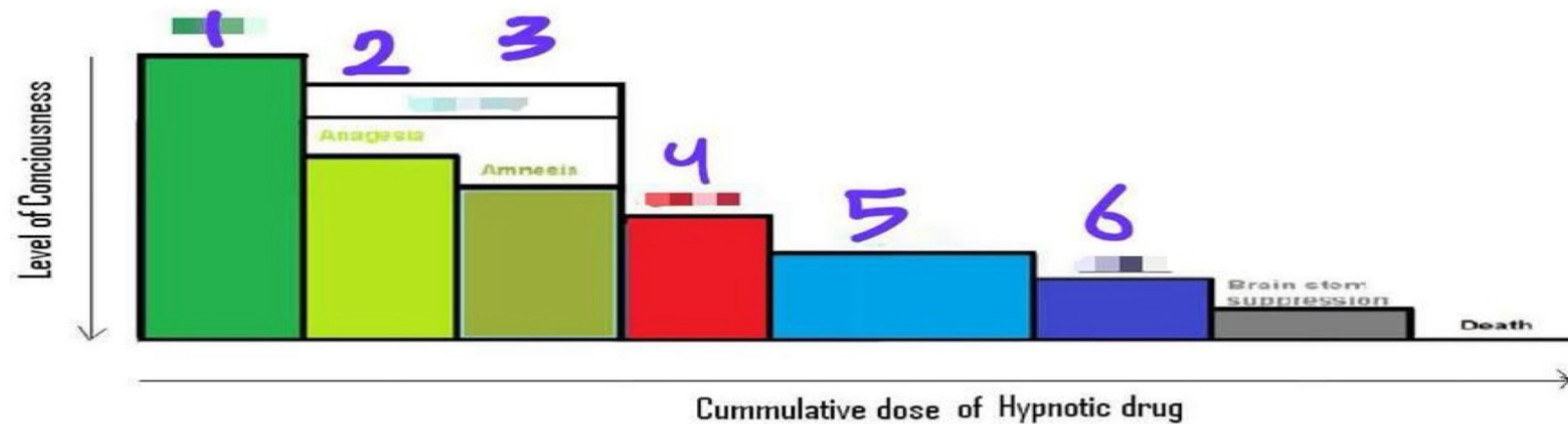
وَلِلَّهِ غَيْبُ السَّمَاوَاتِ وَالْأَرْضِ وَإِلَيْهِ يُرْجَعُ الْأَمْرُ كُلُّهُ فَاعْبُدْهُ وَتَوَكَّلْ
عَلَيْهِ وَمَا رَبُّكَ بِغَافِلٍ عَمَّا تَعْمَلُونَ (123)

MINI OSCE
divided by
lecturers

Lecture 1

Mini Osce

Qb-



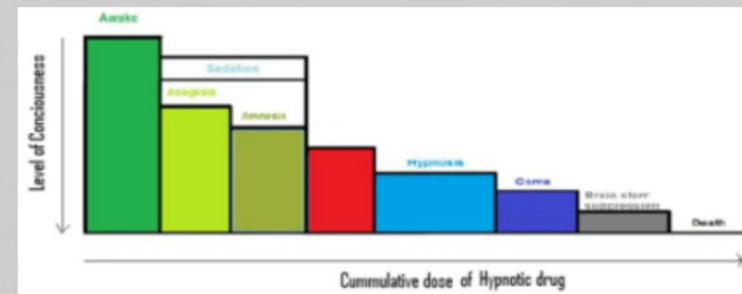
1- in which phase do nausea and vomiting usually occur? 4

2- in which phase there is irregular breathing? 4

3- in which phase does the amnesic effect start? 3

4- in which phase does hypnosis occur? 5

11. the hidden part in the previous chart represent ... ?



ANSWER : Excitement

41. Which of the following is not obligatory in every anesthesia?

- A) Preop evaluation
- B) Hypnosis
- C) Amnesia
- D) Muscle relaxant
- E) Post op care

ANSWER : D



Introduction to anesthesia

45. Choose the correct statement regarding the stages of surgical anesthesia:

- A) Paresis of the diaphragm precedes paresis of intercostal muscles
- B) Regular breathing precedes cessation of REM
- C) Vivid dreams are frequent during these stages

ANSWER : B

Lec 2

Airway

Mini Osce

Q2)



Mention 3 scenarios you would prefer to use B over A:

- 1) Doesn't require muscle relaxation ✓
- 2) Doesn't require neck mobility ✓
- 3) Less tooth and laryngeal trauma ✓

Q13)

Match each of the following photos to the appropriate answer

-General anesthesia for mandibular surgery:



-Hernia repair in a 25 year old male:-



-Laparoscopic cholecystectomy:-



-Nasal septal surgery:-



-What is the expected proper endotracheal tube size?

Non cuff:-5

Cuff:4.5

University Hospital Department of Anesthesia Anesthesia Management Record			Patient Name:
AC-000001			
		Age:	4
		Sex:	♂
		Hospital No.:	XXX.XXXX
		Date:	6/4/2017
1- Pre-Operative Assessment Note			
Patient seen in Pre-operative Anesthesia Clinic? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO			
A- History			
Previous Anesthesia:	Cardiovascular:	Weight	15 kg
NO	free	Height:	91 cm
Complications:		Other:	- Active
Arise Difficulty:	Respiratory:		
N/A	free		- fasting for 6 hours
Allergies:			
-			
Medications:			

Q1:-

Match the following endotracheal tubes with each of the following cases:-

1-Hernia surgery: pic 4

2-Nose job: pic 3

3-Hysterectomy: pic 3 / المعزوفى 4

4-Submandibular abscess:

pic 2 / المعزوفى 2

ANSWERS



A 6 Yr old patient (weighs 20kg) did a tonsillectomy, after 2 days the patient came back with bleeding, answer the following questions:-

1-What is the type of ETT used?

Preformed nasal tube (Non-cuffed)

Q12:-

Answer the questions regarding the following picture:-



- 1- What is the right position? **Sniffing position**
- 2- What you can do if can't see ?
 - 1) **Change blade size or type**
 - 2) **jaw thrust maneuver**
 - 3) **check adequacy of laryngoscope light**
 - 4) **maybe use a fibro-optic bronchoscopy**
- 3- What is the ETT depth in adults?
21-24 cm

Q2-

The proper airway tube for patient 2 y/o?

- laryngeal mask, laryngeal tube & endotracheal tube (non-cuffed)

Q1:-

1- How to check for the proper size?

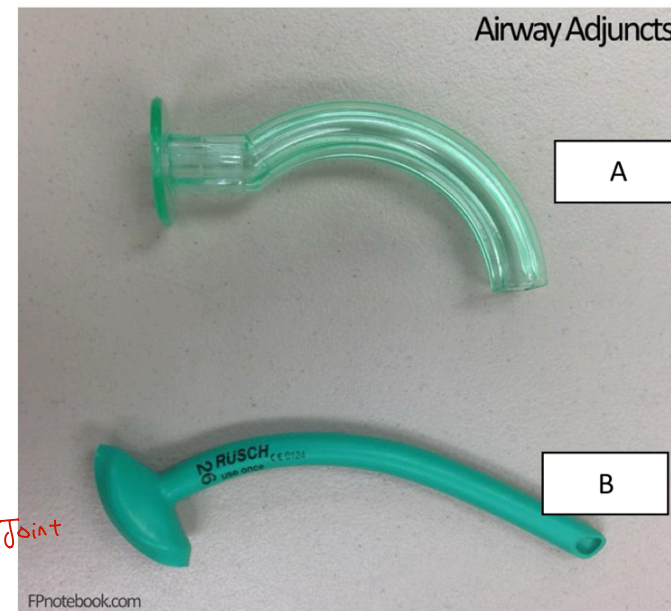
A-(Oral) must equal the distance between the tip of the lip and the mid way point between the angel of mandible and the tragus Temporal Mandibular Joint (TMJ).

B-(Nasal) must equal the distance between the tip of the lip and the tragus Nose

2- How to insert:

A-(Oral) insert first half while it facing upward then rotate it while continue insertion

B- (Nasal) insert it directly without going upward (parallel to the palate) floor of Nose (without forcing)

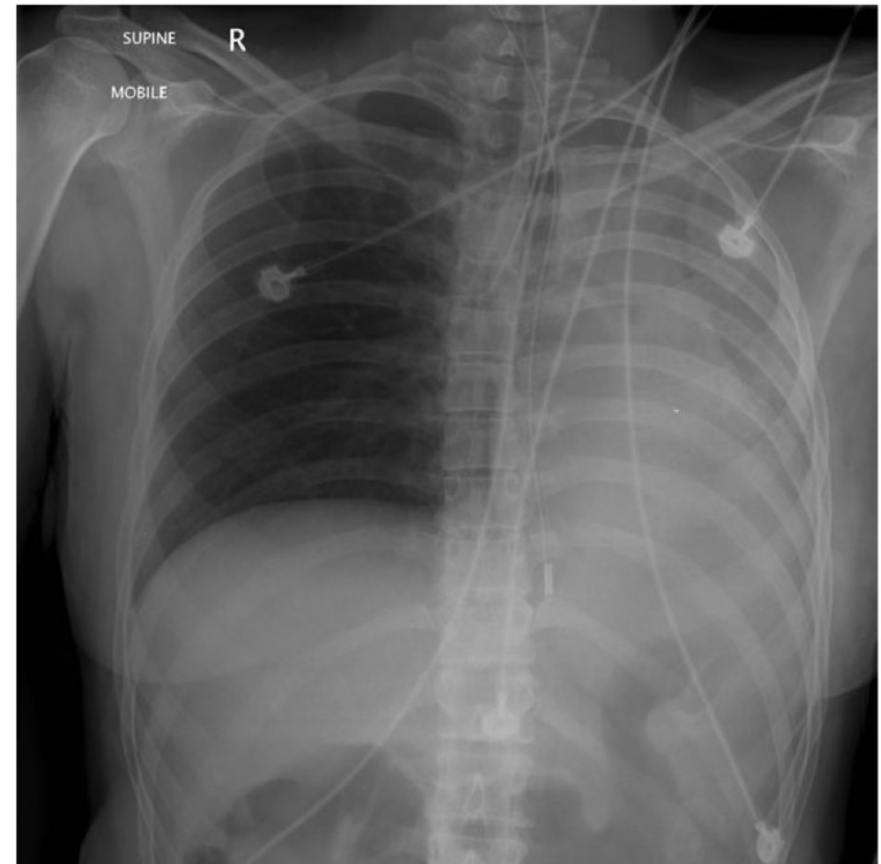


Q12:-

What is shown in this CXR? And
whats the initial management?

**1-this is Right endobronchial
intubation**

**2-Pull the tube back slightly to
ensure it is positioned centrally in
the trachea, +- 2cm from Carina.**



Q3:- A 4-year-old child requires an anesthesia plan for a tonsillar abscess drainage, but IV access could not be established, he had been fasting for 6 hours and he weighs 20kgs, Answer the following:-

2-What are the possible complications?

- **Airway obstruction**
- **Aspiration risk**
- **Difficult intubation**
- **Laryngospasm**
- **Bleeding**

(From chatgpt)

4-What type of endotracheal tube should be used, and what is its appropriate size?

Non-Cuffed ETT, 5 mm

Q4:- A 54-year-old male patient with controlled hypertension requires an assessment based on the provided larynx and pharyngeal images. Answer the following:



4-What is the appropriate endotracheal tube (ETT) size for this patient?

8? (Should be 7.5 – 9mm)

Q14:- Regarding this picture:-

1-What is the pressure of 1 ?

15-22 mmhg

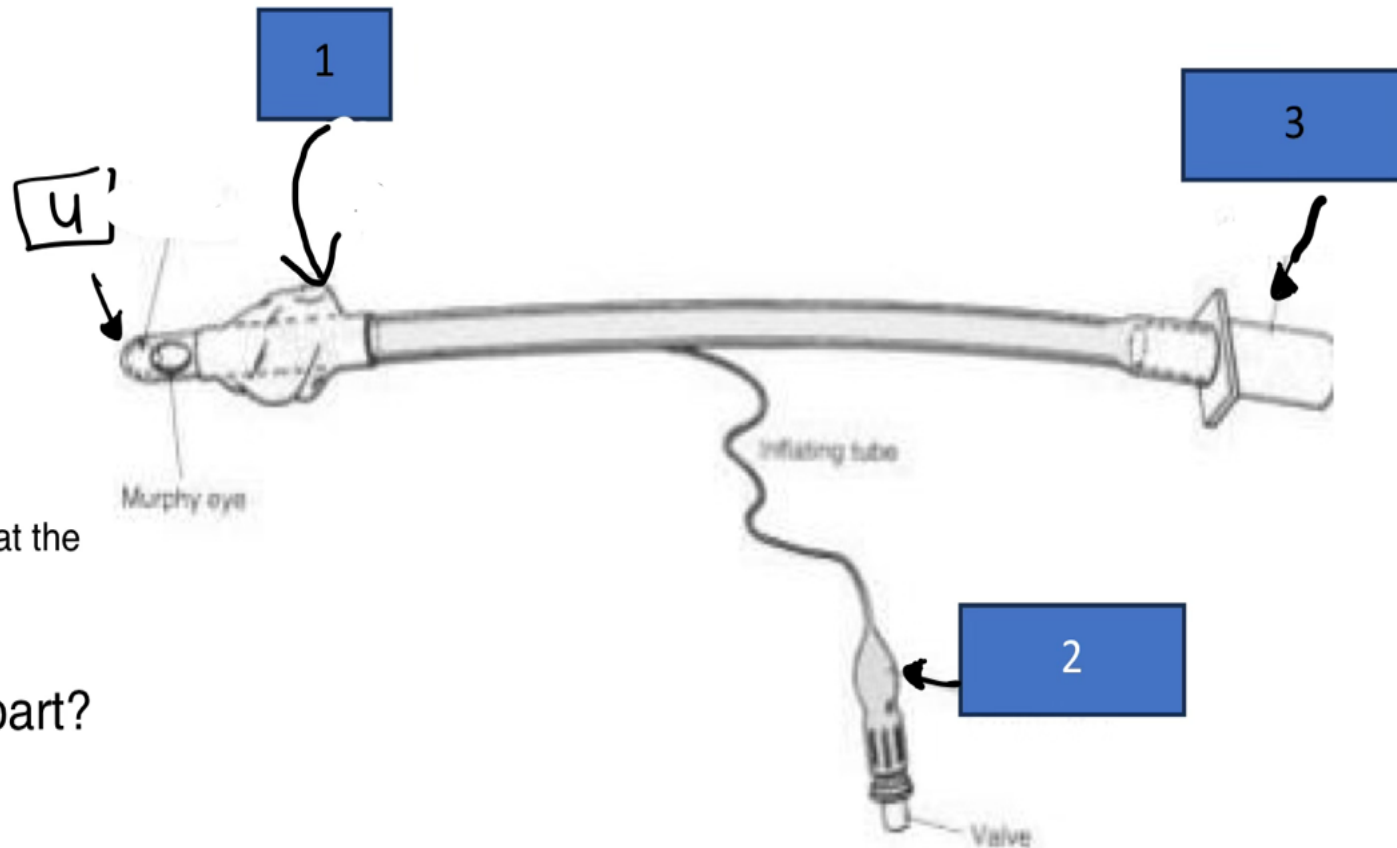
2-What is the function of part 2 ?

this is the pilot balloon, being inflated assures that the cuff is also inflated with no defects in it

3-What is the function of the blue part?
radioopaque on x ray

4-What is the external diameter of part 3 ?

15 mm



Q5:- (Picture of a baby with a central line) it had nothing relevant to it

4 year old child with IV access, 16 kg, surgery for hypospadias repair, answer the following questions:-

1-what is the best drug for induction?

Propofol (since iv is established, not sure)

2-What is the tube size and depth for this patient when put on intubation?

Cuffed ETT → size $3.5 + \left(\frac{4}{4}\right) = 4.5 \text{ mm}$

Size is 5 mm → if it's non cuffed.

Depth is 14 cm → $12 + \left(\frac{4}{2}\right) = 14 \text{ cm}$

Q9:- (It was a picture of Anesthesia monitor showing capnography readings suddenly dropping to zero)

1-Give differentials to why this happened?


- **ETT disconnection/Extubation**
- **Airway obstruction or kinking**
- **Cardiopulmonary arrest**
- **equipment malfunction or disconnection**

2-What is your immediate next step?

This patient could be in cardiac arrest, before starting CPR we need to make sure that his airway and circulation are good, and also check the ETT connection, and all other tubes connection.

If there is no circulation and breathing you start CPR (According to guidelines)

Q14:-

Jordan University Hospital Department of Anesthesia Anesthesia Management Record		 CLN F223/4		Patient Name: _____	Age: 63 YO	Sex: MALE
I- Pre-Operative Assessment Note Patient seen in Pre-operative Anesthesia Clinic? <input type="checkbox"/> YES <input type="checkbox"/> NO						
A- History		Cardiovascular:		Weight: 70KGS kg Height: _____ cm		
Previous Anesthesia:		Respiratory:		Age:		
Complications?				Past Med. Hx.:		
Airway Difficulty?				Fasting Status:		
Allergies:				Other:		
Medications:						
B- Physical Examination						
Vital Signs:		Cardiovascular:		Other:		
R/P						
Pulse		Respiratory:				
Temp						
R/R		Airway:				
Pain		Mouth Opening:		H&N movement:		
		Mallampati class:		Tracheal Shift?		
		Teeth:		Thyromental Distance:		
				Other:		
C- Investigations:						
Full Blood Count:		Chest X Ray:		Other:		
Electrolytes:						
Arterial Blood Gases:		ECG:				
D- Assessment Outcome:						
ASA:		Possible Modalities of Anesthesia:		Anesthesia & Pain management Plan discussed with Patient/ Family?		Consent taken yet?
				<input type="checkbox"/> YES <input type="checkbox"/> NO		<input type="checkbox"/> YES <input type="checkbox"/> NO
E- PLAN:						
Anesthetist's Name:		Signature :		Date/ Time:		

4- what is his ETT size?

8 mm (there were choices from 1-8)

Q3:-Match the following pictures with each type of surgery:-



A



B



C



D

A: LMA B: Cuffed ETT C: double lumen ETT D: non cuffed ETT (not sure)

1-left lung resection

C

2- Dilatation and curettage procedure:

A

3-Diagnostic Laparotomy

B

4-Emergency for hematuria after lower abdominal trauma

B

* توبيخ :-

- 1 Left lung resection
نحتاج isolation لل lung → لازم double lumen ETT .
إجابتك C صحيحة. ✓
- 2 Dilatation and curettage (D&C) procedure
عملية قصيرة جداً، نسائية سطحية، Aspiration risk منخفض
إذا المريضة fasting .
الأفضل LMA .
إجابتك A صحيحة. ✓
- 3 Diagnostic laparotomy
عملية فتح بطن → طويلة، Intra-abdominal. Aspiration risk عالي.
لازم cuffed ETT (تأمين airway + controlled ventilation) .
إجابتك B صحيحة. ✓
- 4 Emergency for hematuria after lower abdominal trauma
Trauma + lower abdominal surgery → Aspiration risk عالي + ممكن نزيف .
لازم cuffed ETT .
إجابتك B صحيحة. ✓

Q10

Choose the correct intubation for each patient

- Cystectomy in a 50 years old male

ETT 4

- A woman with endometrial thickening

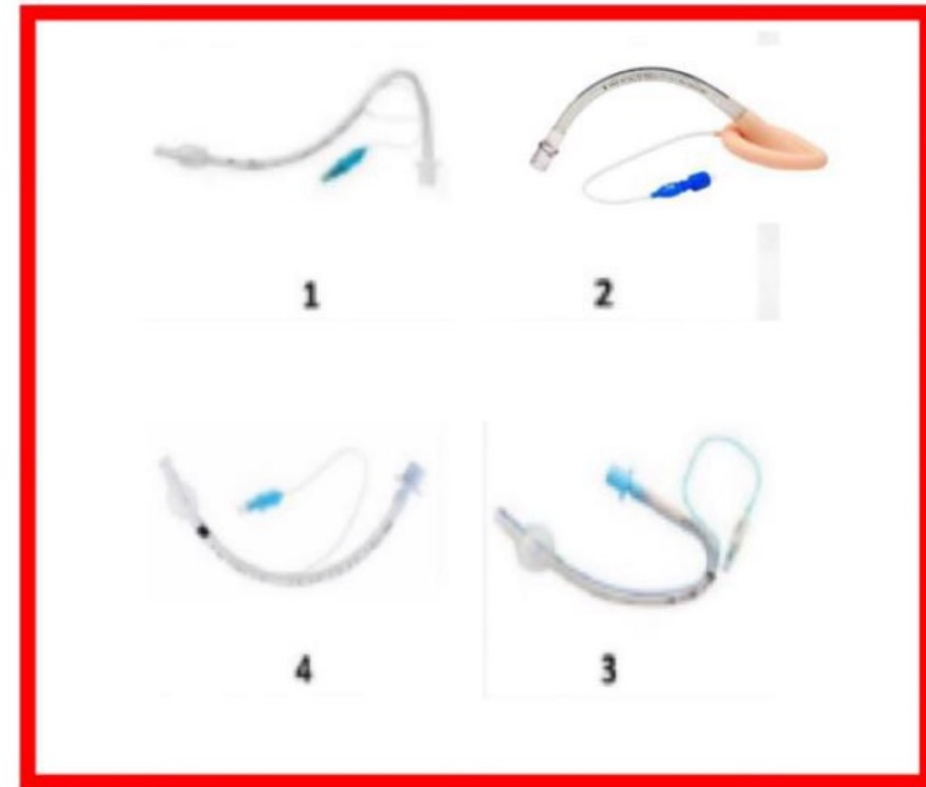
LMA 2

- Nasal septal defects

South endotracheal tube 3

- Maxillary or tonsillar procedure

North endotrecheal tube 1



الحالة: امرأة عندها endometrial thickening رايحة تعمل hysterectomy أو D&C (gynecological procedure).
 ليش نستخدم LMA (Laryngeal Mask Airway) وما نعمل Endotracheal Tube (ETT) Intubation.
 نوع العملية: الإجراء عادة قصير (minutes) ما يحتاج شلل عضلي عميق ولا تهوية مع ضغط عالي. الـ LMA مناسب للإجراءات القصيرة والسطحية. الخطورة من الشفط (Aspiration risk): في هذه المريضة إذا ما عندها عوامل خطورة (pregnancy, GERD, obesity, full stomach) aspiration risk منخفض. إذا ETT بنفخ لانه بيأمن مجرى التنفس بشكل محكم. المخاطنة بين LMA و ETT: الأسرع، أقل سعال، recovery، أسهل إدخال، LMA: التهاب خلق. مناسب للعملات الطويلة أو U. aspiration. أكثر أمان ضد: ETT. تحتاج تهوية قوية مع ضغط. الخلاصة الإيمتانية: في minor gyneco procedures (D&C أو hysterectomy) لـ endometrial thickening الـ LMA preferred لأنه: العملية قصيرة، المريضة غالباً fasting، aspiration risk قليل، أقل مضاعفات بعد العملية، أو العملية high aspiration risk نستخدم فقط إذا المريضة طويلة/معتدة.

cystectomy

هو الخيار (ETT Endotracheal Tube) ✓

العملية طويلة → LMA غير مناسب للجراحات الممتدة.

تحتاج تهوية مضبوطة مع LMA → muscle relaxation ما

يتحمل ضغط تهوية عالي.

خطر aspiration موجود (جراحة بطن + طول العملية + وضعيات

مختلفة) → ETT أكثر أمان.

فقد دم ممكن و fluid shifts → لازم مجرى هواء مضمون 100%.

✗ LMA (D&C, فقط لعمليات قصيرة و سطحية).

hysteroscopy, minor gyne procedures).

الخلاصة الإيمتانية: ✗

Cystectomy → General anesthesia + ETT تحت

وحاجة aspiration غير مناسب بسبب طول العملية وخطر LMA controlled ventilation.

BLS

Q3-



A- what is it and define it?

The chain of survival is a chain of events that must occur in rapid succession to maximize the chances of survival from sudden cardiac arrest

B-what is the second and third steps stand for?

2nd: early CRP

3rd: early defibrillation

Slide # 28

Inspect the chain of survival.

- 1- What do rings 1 & 3 stand for in the chain?

Ring 1: Early recognition and call for help.
Ring 3: Early defibrillation

- 2- What is the importance of rings 1 & 3?

Ring 1: to prevent CA
Ring 3: to restart the heart

CHAIN

OF SURVIVAL

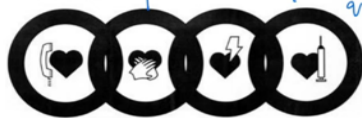


Slide # 25

- 1- What does rings 1 & 3 stand for in the chain?

- 2- What is the importance of rings 1 & 3?

CHAIN OF SURVIVAL



early recognition & call for help
to prevent cardiac arrest

Early CPR
to buy time
Post Resuscitation care
to restore quality of life
Early defibrillation
to restart heart

Slide #: 8

1. What is the Resuscitator doing?

Chest compressions

2. Describe the position of her hands.

One hand above the other, interlocked fingers, heel on sternum, locked elbows.

3. How deep should she move the chest wall?

5-6 cm

4. How often should she give breaths to patient?

After every 30 compressions (30:2)



Slide # 11

Inspect the attached patient position.

1. What is it called? Recovery position

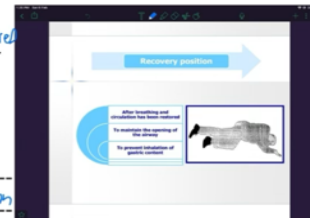
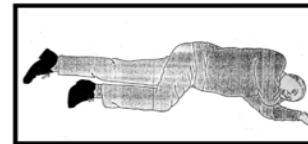
2. When is it used?

after breathing & circulation restored

3. Mention two of its advantages when used in that context?

A. Maintain airway

B. prevent aspiration



Slide #: 8



من فافو الكوال

Two of the rings in this chain of survival are evidence-based. What are they?

1. Early CPR (External cardiac massage)
2. DC shock → Early defibrillation

Slide #:

- A. What is the resuscitator in figure 1 doing?

Checking if the patient is responsive.

Shaking the patient gently



- B. How do the two resuscitators in figure 2 synchronize their job?

2 one second breaths every 30 compressions

OR the answer could be by planning actions before pausing the CPR and assigning roles



not that clear

Slide #: 14

1. Which group of patients are put in this position after CPR?

After breathing and circulation is restored.

2. What are the objectives of putting patient in this position after CPR?

Maintaining open airway

Prevent inhalation of gastric content



148. What's the name of this graph?



ANSWER : Chain of survival

160. About a patient with signs of cardiac arrest after colectomy surgery, he is unresponsive to nurse, write BLS steps:

ANSWER :

- Ask for help
- Open or check the airway (head tilt, chin lift and jaw thrust)
- Check circulation and normal breathing sign
- If not breathing start CPR 30:2

**Answer the questions below
regarding the following picture**



202. What do we call this chain? Define it

ANSWER: The chain of survival: a sequence of interventions taken by any medical professional to rescue the patient from his critical condition.

203. Write the titles and descriptions of the second and third circles.

ANSWER :

Second circle: Early CPR - To buy time

Third circle: Early defibrillation - To restart the heart

Answer the questions below
regarding the following picture



Pulse oximeter

217. Mention four clinical parameters this device provides:

ANSWER :

1-SaO₂

2-HR

3-rhythm

4-presence of cardiac arrest

218. False readings and artifacts can occur due to: (mention 2)

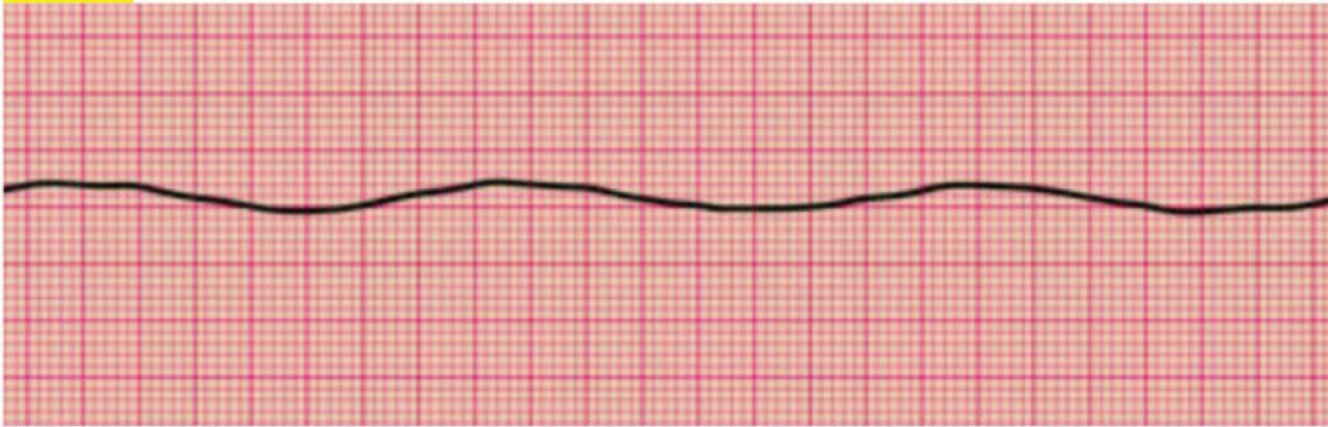
ANSWER :

1-nail polish

2-cautery

Als

Q13)

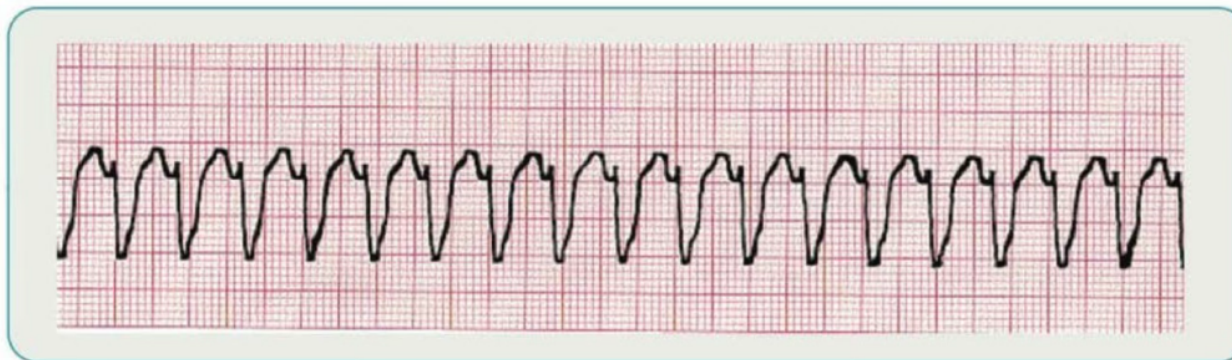


What is the name of this ecg pattern? **Asystole**

What are the next 3 steps?

1-DC shock + chest compressions 2- 1mg Adrenaline 3-Recheck the system

Q14)



Management?

(we dont remember if this was the exact pic in the exam) but this is Vtach
management of vtach:(based on the guidelines):IF unstable :-

synchronized DC shock up to 3 time

IF stable:-(pulseless) 1 shock then resume CPR for 2 minutes (give amiodarone 300m IV
,adrenaline 1 mg after 3rd shock, if not pulseless (based on guidelines)

Q2)

A)what is the following machine?

Defibrillator

B)Which type is the preferable type to use?

Biphasic Defibrillator

C)why did you choose this type?

1)less electrical energy requirement(more efficient)

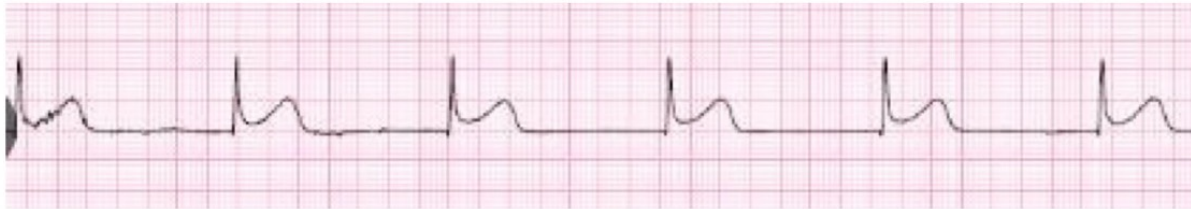
2)fewer chances of burn



Q10)

A 55 year old women with a long term hx of Mi , presented with a low pressure and confusion.

This is her ECG



1-Whats her Heart rate?

40-50 BPM (the image might not be very accurate but just notice the ST elevation and the bradycardia)

2-Do you give this patient treatment and why?

Yes, the pt is unstable , she's having an Mi and she's bradycardic

3-what's the appropriate action to take?

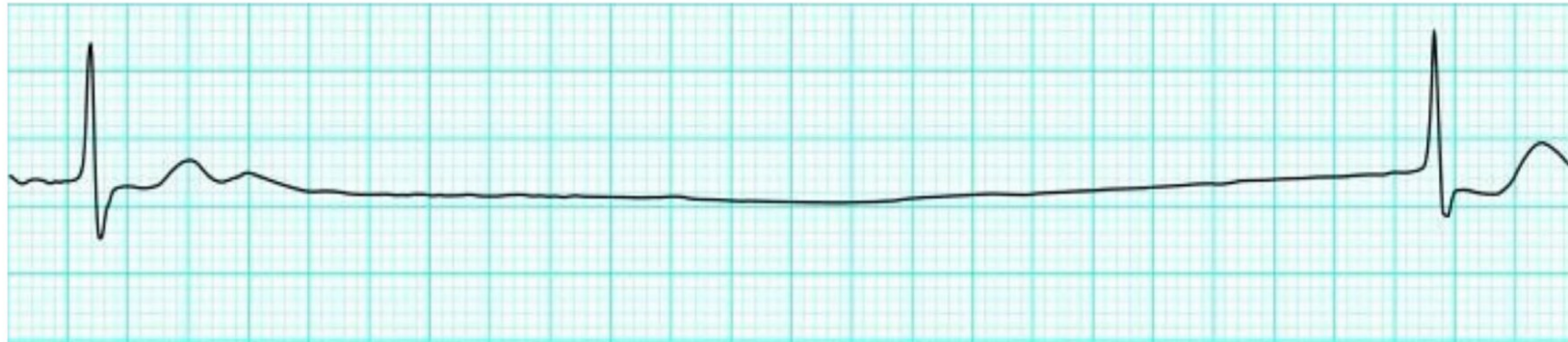
Give atropine 500mcg

4-alternative drug?

Isoprenaline

Q7:-

Regarding this ECG with long case scenario , answer the following:-



1-What is the abnormal finding?

Bradycardia(Ventricular pause >3 sec)

2-Does it need treatment or no? and why?

Yes, because it can lead to cardiac arrest(signs of shock in past papers)

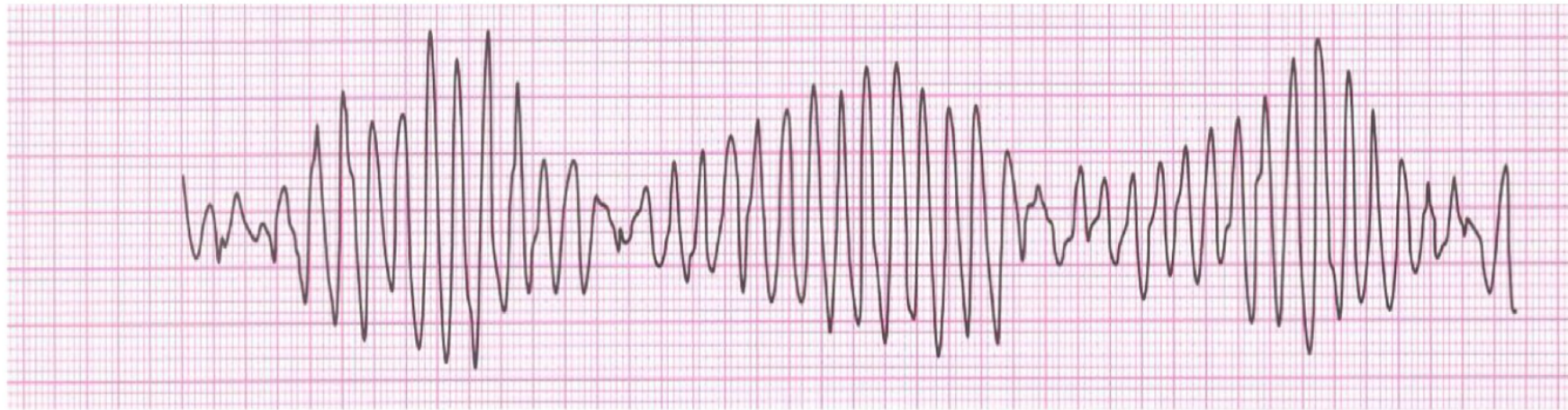
3-If atropine doesn't work, what alternative you give?

Isoprenaline

4-What is the non invasive alternative? **Transcutaneous Pacing**

Q13:-

1) what is this rhythm? Polymorphic VT(Torsades de pointe)

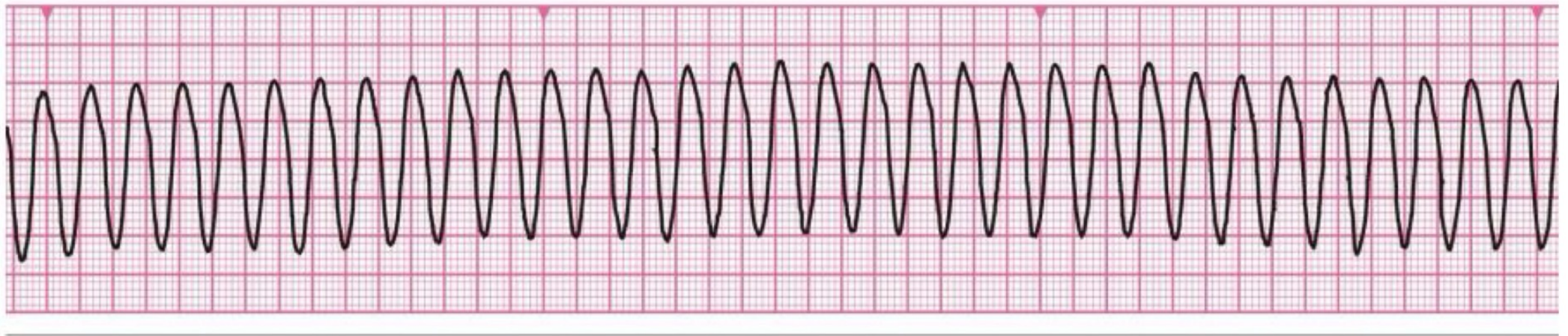


**2) What are the 4 orders that the leader should give for the teamwork?(
Patient's ECG after ROSC)**

**1-Start chest compressions 2-Charge 3- Clear 4- Deliver(with max
energy) (I think also giving adrenaline and amiodarone)**

49. A patient who had a car accident , was admitted to the OR and underwent an operation . after that he was discharged to the ICU . -why we put the patient in ICU post-op ?

ANSWER : for further resuscitation and ventilation.



A- what is that rhythm?

VT

B- what are the steps between 2nd stop of chest compression to the start of the 3rd one?

Check the rhythm, shockable, continue chest compression and charge the defibrillator on maximum voltage, when it ready deliver the shock then continue chest compression

Q8:-

A shocked child comes to ER after RTA

1- mention 2 causes for the patient's cardiac arrest?

Bleeding (hypovolemic shock) and pneumothorax after rib fracture (obstructive shock)

2- mention to steps to save the patient?

Stop the bleeding, give IV fluids and blood

الخلاصة: 🗝

إذا CPR → arrest فوراً + علاج السبب.

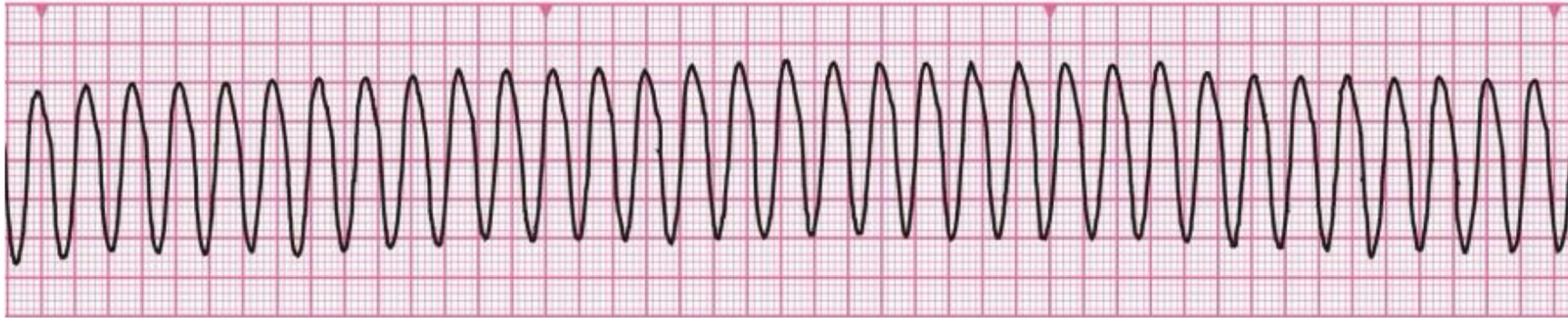
إذا shock شديد بس في pulse → ما بعمل

CPR، بعالج السبب (وقف نزيف، chest tube،

(transfusion).

Q6:-

A collapsed patient, and the cpr leading started Chest compressions



1-Whats the diagnosis?

Ventricular Tachycardia

2-Calculate the HR:- depends on the specific image from the question

3- What should the CPR leader do?

Continue the CPR for 2 minutes, then assess the rhythm, if it persists as VT, shockable rhythm, a shock should be given, then restart CPR for 2 minutes if no signs of life were returned.

Q11:-Regarding the following ECG, answer the questions below:-



1-What is the diagnosis?

Asystole

2-Can you shock this patient?why?

No, this is a non-shockable cardiac arrest, DC shocks are usually to stop a heart that's beating too much or (fibrillating) to the point where it cant pump blood

3-What are your immediate steps after first dose adrenaline injection until restart chest compression?

Reassess rhythm and circulation, check for return of spontaneous circulation, maintain good airway and IV access

Q12:-46 year old male presented to the ER with blood pressure of 75/40, he had a UTI 1 week ago, this is his ECG:-



1-What is his ECG findings?

Sinus tachycardia

2-What to do next?

-the students had 2 answers:-

- Treat this as an unstable tachycardia, so DC shock up to 3 times if unsuccessful Amiodarone 300 mg iv over 10-20 min(ALS guidelines)**
- Treat this as septic shock, so you give iv fluids, iv antibiotics, and vasopressins**

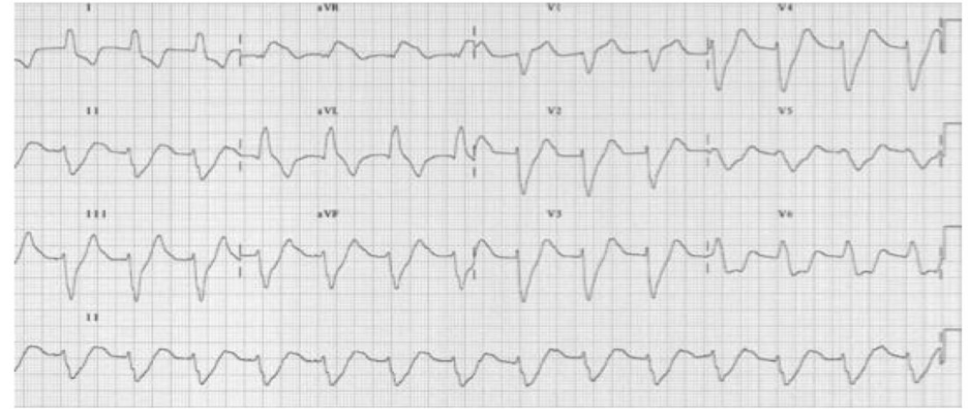
3-Why did you do those steps:-

-if first answer:- because this is an unstable tachycardia, (tachycardia with shock)

-if 2nd answer:- patient has a septic shock (hx of UTI 1 week ago, low bp , and his tachycardia is sinus tachycardia)

Q4

56 years old male patient comes to the ER with chest pain radiating to the jaw, the patient underwent cath stenting in our hospital several months ago due to an MI, the patient is hypotensive confused and unstable



- Does the patient require any treatment for his tachycardia ?

Yes

- What is first management ?

Amidrone 300 mg

Synchronized DC shock

- Why ?

The patient is unstable and at risk of cardiac arrest

Q6

A patient became pulseless and this what his monitor is showing :



- What is this arrhythmia ? **Torsades de pointe (polymorphic ventricular tachycardia)**
- Mention one evidence based procedure you would perform in this case: **cpr, defibrilate**
- As CPR team leader mention the steps you will do from the end of the first cycle until the end of the second (in order) :

Stop compressions — look at the monitor to assess rhythm
— feel for pulse — resume compressions — charge
defibrillator — clear — deliver
shock



Inhalational anesthesia

Q11) 4yo child with hard iv access was meant to have an iv access procedure

Mention 2 ways by which you can reduce his anxiety?

How to induce anesthesia in this case? **Inhalational anesthesia**

What to do next? based on the context of the question and guidelines

1-Bring his family
2- give him toys

Q10:-

1-What's the name of this device?

Vaporizer

2-Which one used for induction?

Sevoflurane



3- Which one has the lowest Saturated Vapour Pressure?

Isoflurane

4-Which one needs to be attached to electricity? Desflurane

Q5:- Regarding the inhaled anesthetic agents, answer the following:



A



B



C

1. Which agent is the least potent?

C

- 2. Which agent requires electricity for administration**

C

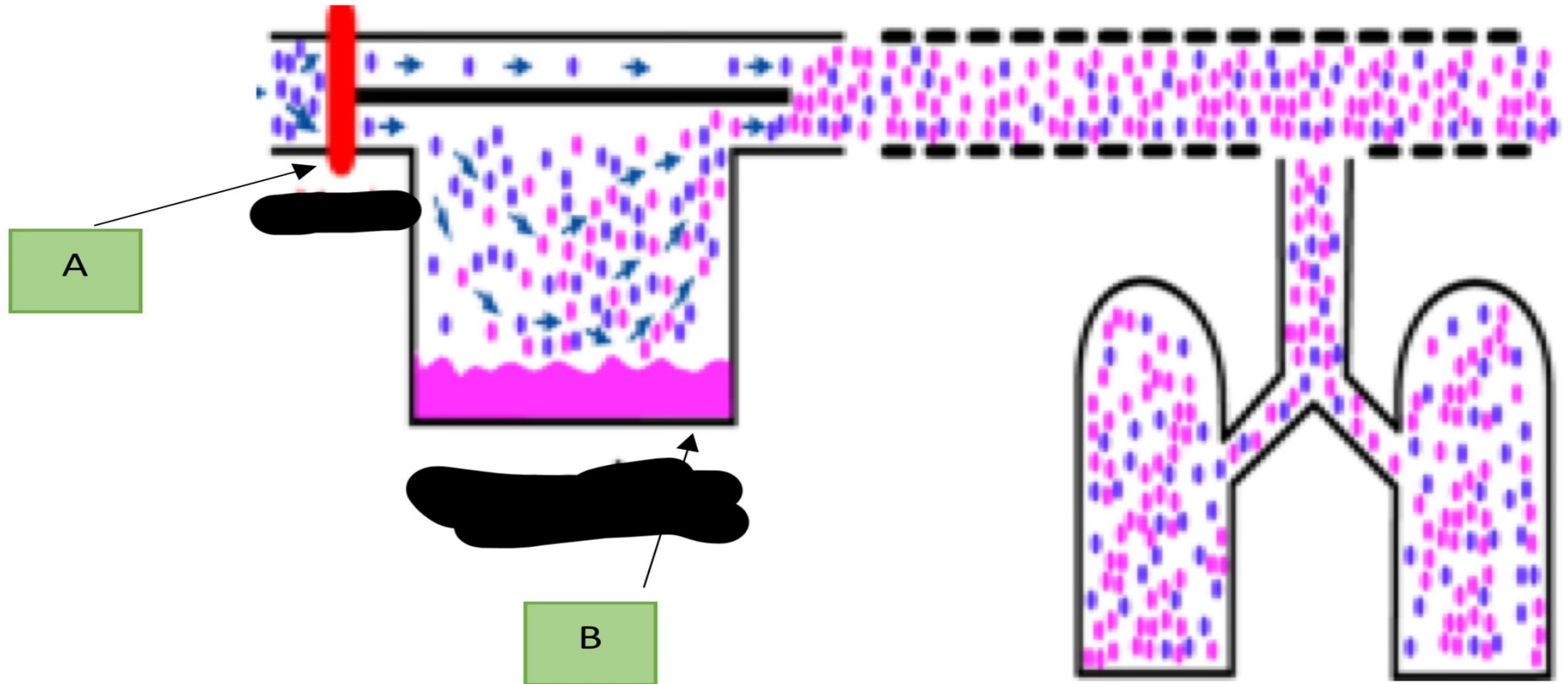
- 3. Which agent has the lowest MAC?**

A

- 4. Which device contains Sevoflurane?**

B

Q7:-



1-What is the name of part A?

Splitting Valve

2-What is the function of part B?

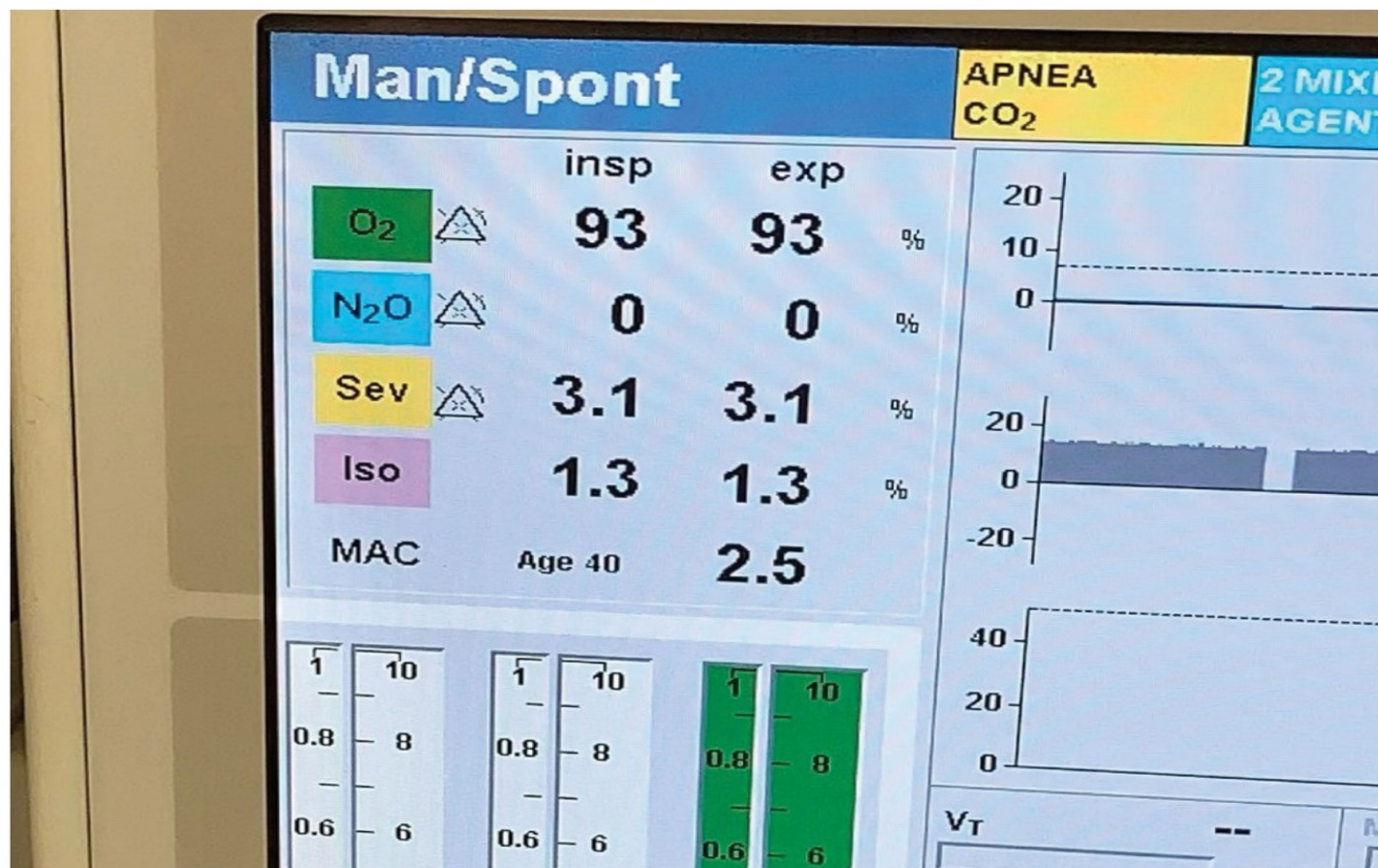
Vaporizer: contains anesthetic agents in a liquid form.

3-What is the MAC of sevo?

$$3.1/2 = 1.5$$

4-Why is the MAC 2.5?

Additive MAC of 2 mixed agents?



Q5

- What is the name of this sign ?

Stepladder sign (breath by breath increase in end tidal CO₂)

- Mention 2 possible causes :

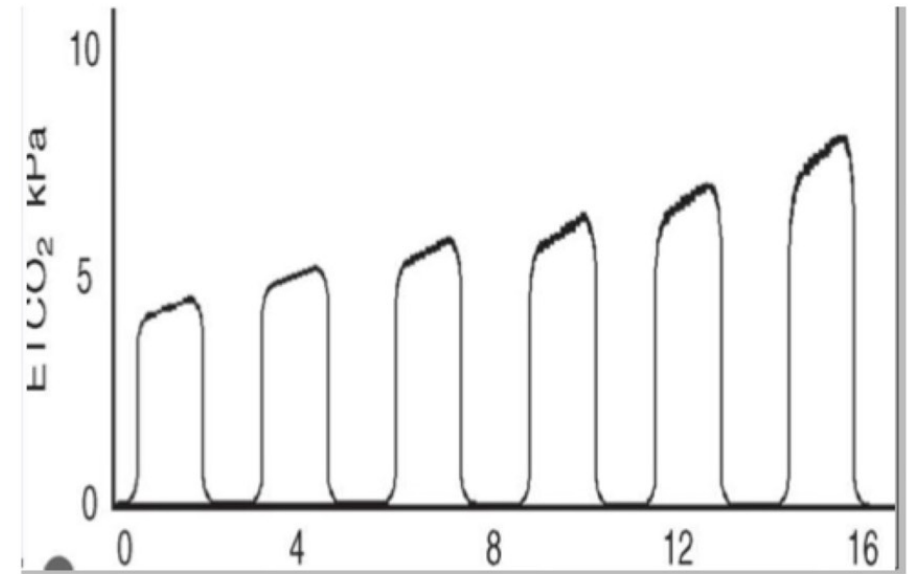
Malignant hyperthermia

ETT obstruction, extubation

- What would you do?

Administer Dantrolene

Cooling measures, cold fluids, bladder and gastric lavage



Q9

Iso + desflurane vaporizers

- What is the MAC of the desflurane vaporizer shown in the picture? **Zero**
- What is the MAC for Isoflurane vaporizer shown in the picture ? **Zero**
- Which agent has the higher boiling point ? **Iso**
- Which one needs to be connected to electricity? **Desflurane**



Q11:-The question was to compare Sevoflurane vs Isoflurane:-

1-Which of the following is connected to electricity? **None**

2-MAC for each one?

Isoflurane:- 1.15% in adults at 1 atm pressure at sea level.

Sevoflurane:- 2.0% in adults at 1 atm pressure at sea level.

Q3:- A 4-year-old child requires an anesthesia plan for a tonsillar abscess drainage, but IV access could not be established, he had been fasting for 6 hours and he weighs 20kgs, Answer the following:-

1-What type of anesthesia should be used?

-inhalational induction with sevoflurane

2-What are the possible complications?

- **Airway obstruction**
- **Aspiration risk**
- **Difficult intubation**
- **Laryngospasm**
- **Bleeding**

(From chatgpt)

Intravenous anesthesia

Q3) Pictures for:


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

Which drug is a NMDA agonist **None**

Which causes pain on induction **Propofol** 

Which has anterograde amnesia property **Medazolam**

Best drug for iv induction of anesthesia **Propofol**

University Hospital Department of Anaesthesia <u>Anaesthesia Management Record</u> AG/MS/11				Patient Name: <u>XXX</u> Age: <u>4</u> Sex: <u>♂</u> Hospital No.: <u>XX-XXXX</u> Date: <u>6/4/2017</u>
1- Pre-Operative Assessment Note				
Patient seen in Pre-operative Anaesthesia Clinic? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO				
A- History				
Previous Anaesthesia: <u>NO</u> Complications? <u>—</u> Airway Difficulty? <u>N/A</u> Allergies: <u>—</u>	Cardiovascular: <u>free</u> Respiratory: <u>free</u>	Weight: <u>15</u> kg Height: <u>91</u> cm Other: <u>Active</u> <u>- fasting for 6 hours -</u>		
Medications:				

4 years
+
Active

-What is the preoperative management for this patient?

Oral midazolam

Q4:-

Select the appropriate answer depending on these pictures:-



A

B

C

D

- 1- Acts on GABA receptor:- **A,B, and D**
- 2- Most potent cardiac depressor:- **B**
- 3- Most potent bronchodilator:-**C**
- 4- Considered an anti emetic drug:- **B**

Q10:-

Remifentanyl /// Morphine /// Precedex(dexmedetomidine)///
Fentanyl /// Tramadol

1-Which of these isn't an opioid? **Precedex(dexmedetomidine)**

Q11:- Drug X is a new local anesthetic(and you are given the drug image) and a concentration of 2%. Answer the following:

1. What is the concentration of the drug in mg/ml?

20 mg/mL

2. If the patient weighs 60 kg, and the maximum dose is 4 mg/kg, how much should you administer in mL?

12 mL

Q13:-:- Regarding these pictures answer the following



1-Which one is contraindicated in egg allergy?
Propofol

2-Which one acts as a bronchodilator?
Ketamine

Q5:- (Picture of a baby with a central line) it had nothing relevant to it

4 year old child with IV access, 16 kg, surgery for hypospadias repair, answer the following questions:-

كلمة Hypospadias repair تعني إصلاح/ترميم الإحليل السفلي

1-what is the best drug for induction?

Propofol (since iv is established, not sure)

Q6:-



1-Which one has anti emetic properties?

Propofol

2-Which one is an NMDA agonist?

NONE

3-Which one causes anterograde amnesia?

Midazolam

4-Which one causes Nausea and vomiting ?

Thiopental

Q11



- Wich casese direct catocholamines release ?

None

- Which has antiemetic properties ?

Propofol

- Which causes pain on induction ?

Propofol + etomidate

- Which creates the kind of anesthesia where the patient may appear conscious but they're unaware of their surroundings ?

Ketamine

- Which works on the NMDA receptor ?

Thiopental, etomidate, propofol

Fluid Management

Slide # 5

Mention the amount of each of the following solutes in the shown crystalloid solution:

Potassium (K⁺): 0 mmol/L.

Sodium (Na⁺): 154 mmol/L.

Calcium (Ca⁺⁺): 0 mmol/L.

Chloride (Cl⁻): 154 mmol/L.



Slide #: 12

#	Name	File #	Age	Gender	Surgery	Surgeon
1	Ahmad XX	67087x	9	male	Rt Inguinal Hernia	Mah. Ali

Examine this excerpt from a pediatric surgery list.

1. If this patient weighs 40 kg and started fasting at 11:00 PM and his surgery starts at 09:00 AM next morning, what is his estimated fluid deficit? 800ml

2. What is the estimated proper endotracheal tube size for this patient? 5.5mm

$$6 \text{ mm} = 4 + \frac{3}{2}$$

Slide # 8

What salt is used in preparing this solution and in what percent concentration is it prepared?

NaCl 0.9% (9gm/1000ml)

What is the final concentration of its dissolved constituents in mmol/ml

constituent	Concentration
1: <u>Na⁺</u>	<u>154 mmol/l</u>
2: <u>Cl⁻</u>	<u>154 mmol/l</u>



Slide #: 10

State two main priorities in treating a bleeding patient.

- Fluid replacement
- Stop bleeding



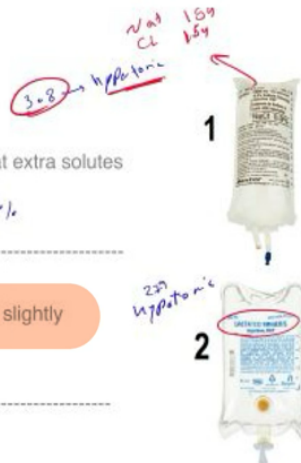
Slide # Ibraheem

Compared to solution 1, what extra solutes are present in solution 2?

5% 2% 2% 1%
K⁺, Ca⁺⁺, lactate

Which of the two solutions is slightly Hypotonic?

2



Please fill in the remaining solutes and their concentrations in this solution.

- lactate : 29 mmol/L pH 6.5
- Na⁺ : 131 mmol/L osmolality
- Cl⁻ : 111 mmol/L 279 mOsm/L
- K⁺ : 5 mmol/L
- Ca⁺⁺ : 2 mmol/L

Ringer's Lactate (Hartmann's)

Age = 121 mmol/L
Ca = 11 mmol/L
Lactate = 28 mmol/L
K = 5 mmol/L
Ca = 2 mmol/L
pH = 6.5
Osmolality = 279 mOsm/L



Slide #: 11

What screening tests are done on the contents of this bag before use?

- ✓ HIV-1, 2
- ✓ HBV / HCV
- ✓ Syphilis Hepatitis C/B
- ✓ CMV



Slide # 26

Mention the solute constituents of this bag of crystalloid solution.

- Lactate 29 pH 6.5 279 osmolality
- Na⁺ 131 Cl⁻ 111
- K⁺ 5 Ca⁺⁺ 2



Slide # 8

ANESTHESIA		Patient		Operation		Hussein Al-Muhammadi				
Order	File	Patient	ID	Address	Ref	Age	Diagnosis	Operation	op. Room	Site
							constipation	rectal biopsy	9	الحمام

Examine the O/R list snapshot shown above. Salah weighs 40 kg, and had been fasting for 8 hours before his operation.

- What is his estimated fluid deficit? 640ml
- What endotracheal tube size likely suits this patient? 6.5mm 3.5 + 2 = 5.5
- At what depth should his endotracheal tube be taped at the lips? 16cm

Slide #: 9

This patient is scheduled for bilateral inguinal hernia repair.

1. What is his fluid deficit?

$$75 \times 6 = 450 \text{ mL}$$

64 mL

2. What is his expected proper endotracheal tube size?

Age = 10

$$\text{Internal diameter} = \begin{cases} \text{cuffed} \rightarrow 3.5 + 2.5 \\ \text{uncuffed} \rightarrow 4 + 2.5 \end{cases} \quad \text{wt} = 35 \rightarrow \begin{cases} 6.5 \text{ mm} \\ \text{L. Markham} = 35 + 40 = 75 \text{ mL/s} \end{cases}$$

$$\text{Length} = 12 + \frac{10}{2} = 17 \text{ cm}$$

University Hospital Department of Anesthesia Anesthesia Management Record	
Patient No. XXX	Age: 10 Sex: ♂
Hospital No. XXXXXX	Date: 6/4/2017
1- Pre-Operative Assessment Note	
Patient seen in Pre-operative Anesthesia Clinic? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
A- History	
Previous Anesthesia: NO	Cardiovascular: free
Complications: —	Respiratory: free
Urinary Difficult: N/A	Allergies: —
Medications: —	
B- Physical Examination	

Examine this anesthesia record extract

1. If this patient's surgery is going to be at 12:00:, what is his fluid deficit then?

$$264 \text{ mL}$$

2. If his surgery necessitates endotracheal intubation, what will be the proper tube size?

$$3.5 \text{ mm uncuffed}$$

Jordan University Hospital Department of Anesthesia Anesthesia Management Record	
Patient Name: XXX.XXX	Age: 10/2 Sex: ♂
Hospital No.: XXXXXX	Date: 2/11/2017
1- Pre-Operative Assessment Note	
Patient seen in Pre-operative Anesthesia Clinic? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
A- History	
Previous Anesthesia: NO	Cardiovascular: No CVS problems. Active
Complications: —	Respiratory: —
Urinary Difficult: —	Allergies: No URTI, No fever
Weight: 12 kg Height: 90 cm	
Other: —	

$$\begin{aligned} 6 \text{ hr fast} & \rightarrow 44 \text{ mL/hr} \\ 12 \text{ kg} & \rightarrow 44 \times 6 = 264 \text{ mL} \end{aligned}$$

Pain

Slide #: 4

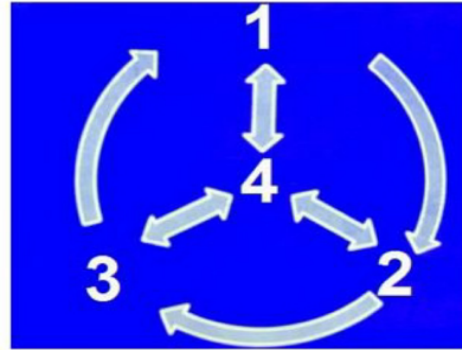
This diagram summarizes the interaction between **Pain** and its psychological side issues : **anxiety**, **sleep deprivation**, and "**fear and helplessness**". Match each one with its corresponding location number.

Pain : ---4---

Anxiety: ---2---

Sleep deprivation: ---3---

Fear and helplessness: ---1---



Slide # 7

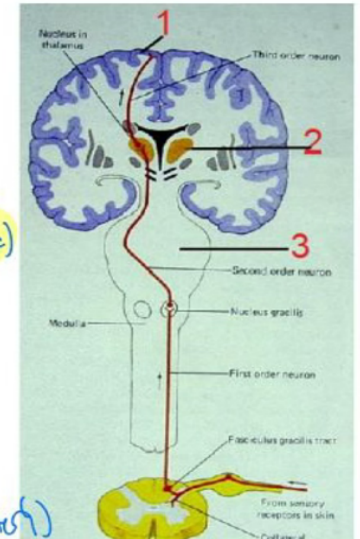
Inspect this attached figure of pain pathways

A- Identify the structures indicated by red numbers:

- 1- _____ *Cortex (Primary sensory area of Parietal lobe)*
 2- _____ *Thalamus*
 3- _____ *Pons (Brainstem)*

B- What is the function of the structure number 3?

_____ *Regulates breathing*
 _____ *(May the breathing center)*



Slide # 10

1. Which group of drugs does this drug belong to?

_____ *opioids*

2. Based on your answer in 1, classify this drug

_____ *strong acting drug*
 _____ *(synthetic)*



3. How do you reverse its effect?

_____ *Naloxone*

Slide #:

1. What is this tool called?

_____ *Visual analogue scale*

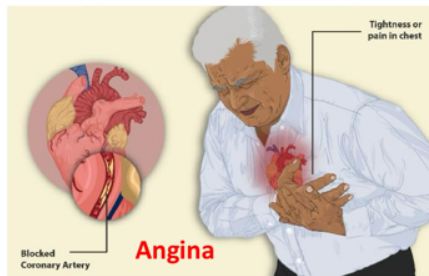
2. How is it used?

_____ *you make a mark on the line*
 _____ *depending on your pain level*



Q7)

Choose the correct type of pain:- (Nociceptive/Neuropathic)



Nociceptive pain



Neuropathic pain



Nociceptive pain



Nociceptive pain

Q5:-

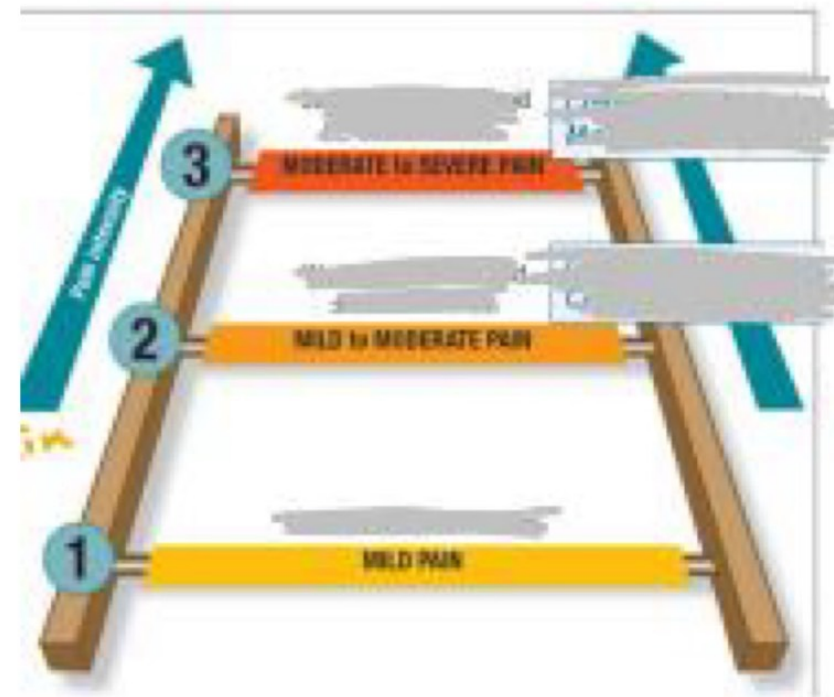
Select the appropriate severity of pain in which each of these drugs can be used:

1-Voltarine: **mild to moderate**

2-Morphine: **Severe**

3-Paracetamol: **All**

4-Tramadol: **Moderate**



Q10:-

Remifentanyl /// Morphine /// Precedex(dexmedetomidine)///
Fentanyl /// Tramadol

1-Which of these isn't an opioid? Precedex(dexmedetomidine)

2-Which is given mainly by infusion? Remifentanyl (Precedex can be aswell)

3-Which one is the most common Post-op? Morphine

4-Which one is least potent? Tramadol

5-?

Q9:- Regarding the following pictures, answer the following questions:-



1-Which one is naturally occurring?

Codeine

2-Which one is 100 times stronger than morphine?

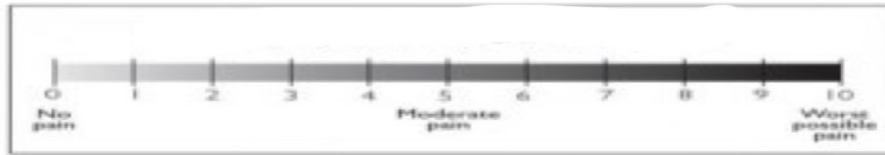
Fentanyl

3-Which one has a nicotinic anticholinergic effect?

Meperidine

Q15:-

Name the following pain scores:-



Numerical rating scale



Visual analog scale



Verbal rating scale



Wong baker FACES rating scale

Q12



- Which cases Histamine release ? **A,C,D.** (According to chat gpt only morphine)
- Which affects the NMDA receptor ? **None**
- Which one is 10 times more potent than morphine? **Fentanyl**
- Which administration participates lung edema? **Naloxone**

- Which is mainly metabolized by plasma esterases ?

Remifentanyl

Neuromuscular blocking Agents

Q3:-

Select the appropriate drug in each of the following

1- Competitive Non depolarizing agent:- Rocuronium

2-Antidote:- Neostigmine, Sugammadex

3-Competitive depolarizing agonist:- Succinylcholine

4-Direct depolarizing muscarinic antagonist:- none

Q10:- The question presents the following NMBA (Neuromuscular Blocking Agents): ~~Rocuronium~~, Neostigmine, Suxamethonium, and Cisatracurium. Answer the following: (The question had images of the drugs)

1. Which one should be given in emergency to a patient with pseudocholinesterase (pAChE) deficiency?

Rocuronium and Cisatracurium

2. Which one is augmented by atropine?

Neostigmine

3. Which one does not work competitively on its receptor

Suxamethonium (Succinylcholine)

Q2:-



1-Which of these drugs is a non-competitive agonist?

Succinylcholine

2-Which one is degraded in the blood by the body's Ph and Temp.?

Cisatracurium

3-which one is used for rapid induction for someone with pseudocholinesterase deficiency?

Rocuronium

4-Which one is augmented by concomitant atropine?

Neostigmine???

تم بحمد الله

لا تنسوني من صالح دعائكم 🌸🌸