Edited past paper

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Special thanks to
Doctor 018,019,020
Dr Ahmad Alhaj

General GI past papers

1- Regarding abdominal wall hernias:

A. Are 2nd to adhesions as a cause of strangulated intestinal obstruction

B. 20% of inguinal hernias are indirect

C. In women inguinal hernias are less common than femoral hernias

D. The mortality associated with bowel strangulation is over 10%

E. Trial reduction of pediatric inguinal hernias is not recommended

2- Regarding the femoral canal, all of the following statements are true EXCEPT:

A. Lies medial to the femoral vein

B. Has the inguinal ligament as its anterior border

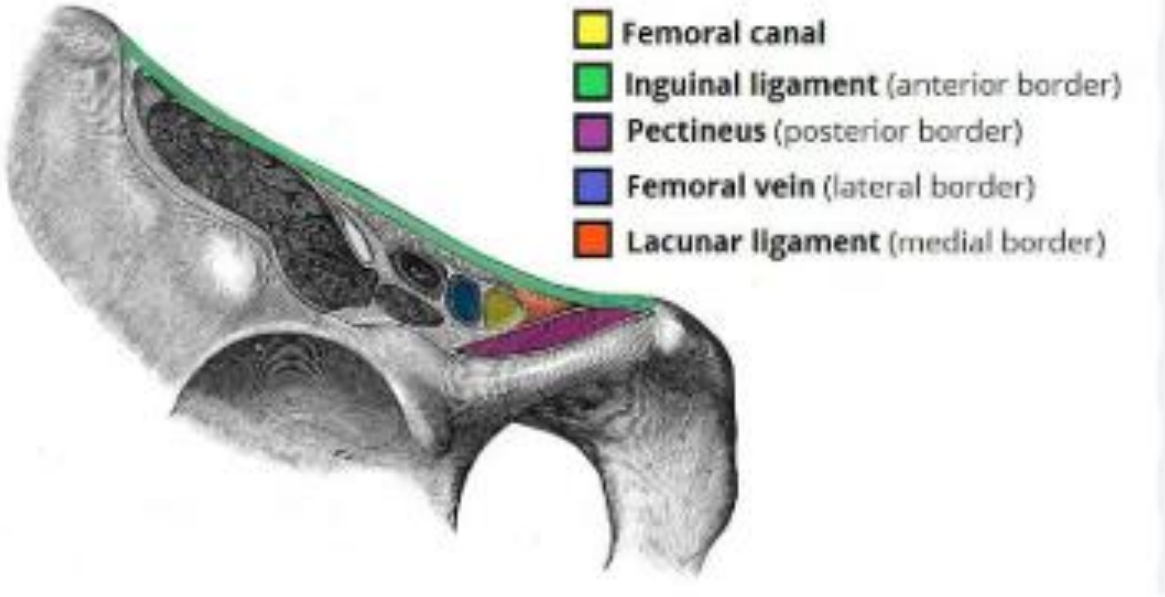
C. Has the lacunar ligament as its lateral border

D. Has the pectineal ligament as its posterior border

E. Contains the lymph node of Cloquet

- D

- C


Femoral canal
Inguinal ligament (anterior border)
Pectineus (posterior border)
Femoral vein (lateral border)
Lacunar ligament (medial border)

3- Which of the following organisms is not a gastrointestinal source of peritonitis?*

- A. Bacteroids
- B. Chlamydia
- C. Escherichia coli
- D. Clostridium
- E. Streptococci

4- All of the following is a risk factor for developing Clostridium Difficile Colitis EXCEPT:

- A. Prolonged intravenous antibiotics
- B. Contraceptive pills
- C. Mal-nutrition
- D. Steroids
- E. Proton pump inhibitor

- B

- B

5- All of the following are true about Fournier gangrene EXCEPT:

- A. More in elderly patient
- B. Affect patient with significant comorbidity
- C. Caused by mixed organisms
- D. If it affects the scrotum in males, debridement and orchidectomy is essential
- E. Carries a high risk of mortality

6- A 23-year-old male patient, presented with right forearm pain for one day duration after aggressive scratching, exam showed an area at the forearm with hotness, redness and tenderness. All of the following is true about the above condition EXCEPT:

- A. Elevation of the patient's arm is part of the treatment
- B. Antibiotics need to be started
- C. The cause of this pathology is most likely gram-positive organism
- D. Underlying osteomyelitis is a common predisposing factor
- E. Axillary lymph node might be palpable

- D

An orchiectomy (or orchidectomy) is a surgical procedure to remove one or both testicles.

Fournier’s gangrene is necrotizing fasciitis of EXTERNAL genitalia.

- D

7- Which statement regarding the management of hypernatremia is INCORRECT:

- A. Hypernatremia, if not corrected, has a high mortality rate
- B. It may exist in the presence of low, normal or high effective circulating volume
- C. Hypotonic fluid therapy may be given by mouth, by tap water enema or parenterally
- D. The aim of fluid replacement is to decrease serum osmolality gradually by about 10 mOsm/hour
- E. May be associated with major burn

8- A 70 kg man with pyloric obstruction resulting from ulcer disease is admitted to the hospital for resuscitation after 1 week of prolonged vomiting. What metabolic disturbance is expected to occur?*

- A. Hypokalemic hyperchloremic metabolic acidosis
- B. Hyperkalemic hypochloremic metabolic alkalosis
- C. Hyperkalemic hyperchloremic metabolic acidosis
- D. Hypokalemic hypochloremic metabolic alkalosis
- E. Hypokalemic hypernatremic hypochloremic metabolic acidosis

- D

Most clinicians recommend correction rate **below 0.5 mEq/L/hr** and at most drop 10–12 mEq/L in 24 hrs for patients with hypernatremia, unless hypernatremia has developed in few hours [8].

- D

Important question… to be memorized….

10- Which group of the following cells is NOT phagocytic in nature?

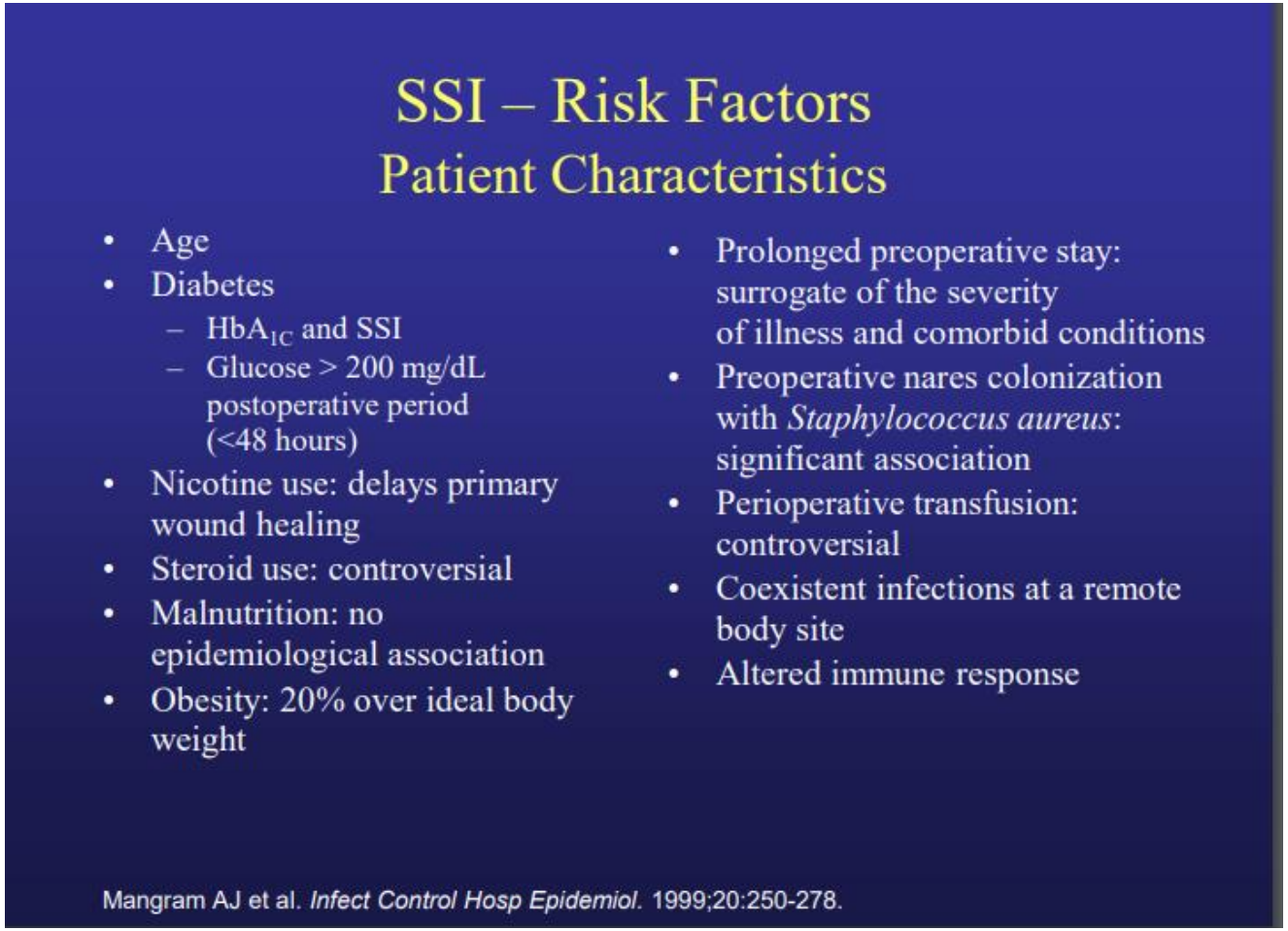
- A. Neutrophil polymorphonuclear leucocytes.
- B. Lymphocytes.
- C. Microglial cells.
- D. Macrophages.
- E. Kupffer cells.

11- All of the following are associated with increased likelihood of surgical site infection after major elective surgery, EXCEPT**

- A. Age over 70 years.
- B. Chronic malnutrition.
- C. Controlled diabetes mellitus.
- D. Long-term steroid use.
- E. Infection at a remote body site.

- B

- C


SSI – Risk Factors
Patient Characteristics
Age
Diabetes
HbA1C and SSI
Glucose > 200 mg/dL postoperative period (<48 hours)
Nicotine use: delays primary wound healing
Steroid use: controversial
Malnutrition: no epidemiological association
Obesity: 20% over ideal body weight
Prolonged preoperative stay: surrogate of the severity of illness and comorbid conditions
Preoperative nares colonization with Staphylococcus aureus: significant association
Perioperative transfusion: controversial
Coexistent infections at a remote body site
Altered immune response
Mangram AJ et al. Infect Control Hosp Epidemiol. 1999;20:250-278.

12- All the following can explain lower limb edema EXCEPT:

- A. Congestive heart failure
- B. Hepatic failure
- C. Deep venous thrombosis
- D. Acute lower limb ischemia
- E. Nephrotic syndrome

13- Blood transfusions may cause all of the following EXCEPT:

- A. Microcirculation thrombosis
- B. Transmission of Cytomegalovirus
- C. Allergic reaction
- D. Bronchospasm
- E. Increased platelets count

- D

- E

Acute Transfusion Reactions

- Hemolytic Reactions (AHTR)
- Febrile Reactions (FNHTR)
- Allergic Reactions
- TRALI
- Coagulopathy with Massive transfusions
- Bacteremia

Chronic Transfusion Reactions

- Alloimmunization
- Transfusion Associated Graft Verses Host Disease (GVHD)
- Iron Overload
- Transfusion Transmitted Infection

14- The first step in treating Ludwig's angina*

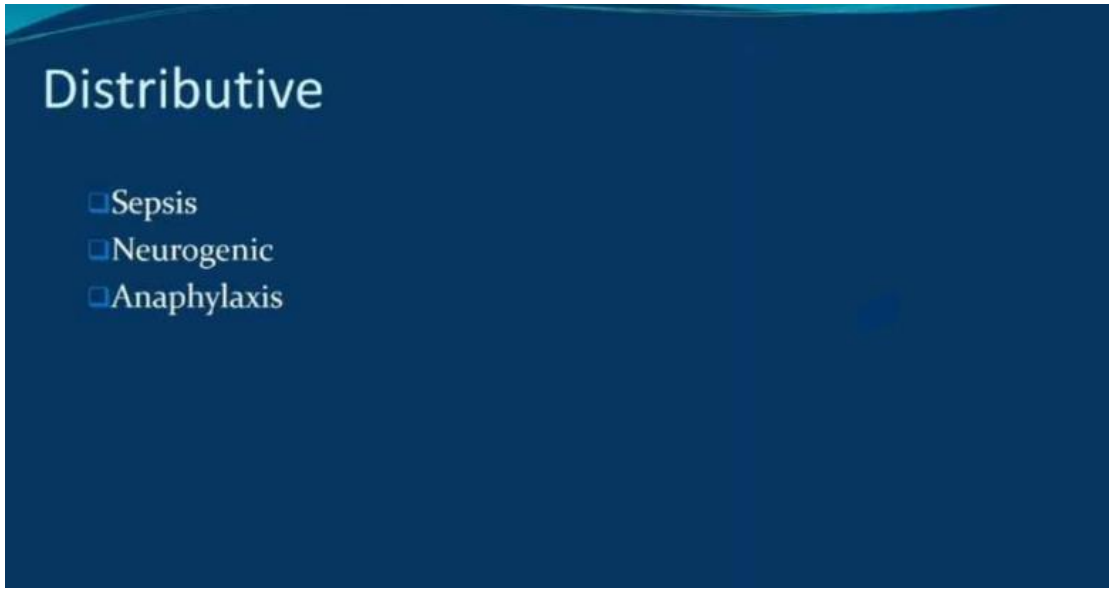
- A. IV antibiotics
- B. Incision and drainage
- C. Treat underlying cause
- D. Secure airway
- E. IV fluids

15- All of the following types of shock are distributive EXCEPT:

- A. Septic shock
- B. Hemorrhagic shock
- C. Addisonian shock
- D. Neurogenic shock
- E. Anaphylaxis

- D

- B



16- The GCS (Glasgow Coma Scale) of a patient who responds with inappropriate words, opens eye to painful stimuli, and flexing in response to pain is*

- A. 6
- B. 8
- C. 7
- D. 10
- E. 9

17- Regarding sepsis and septic shock, all of the following are true EXCEPT*

- A. Sepsis is a clinical syndrome of life-threatening organ dysfunction caused by a dysregulated response to infection.
- B. IV fluids challenge with 20-30 ml/kg is the first method used to restore perfusion.
- C. Intra-venous antibiotics could be delayed up to 6 hours until specimens of blood, have been taken for Gram stain and culture.
- D. The source of infection should be controlled as early as possible.
- E. Estimates of successful reperfusion include ScvO2 (Central Venous saturation) and lactate clearance.

- E

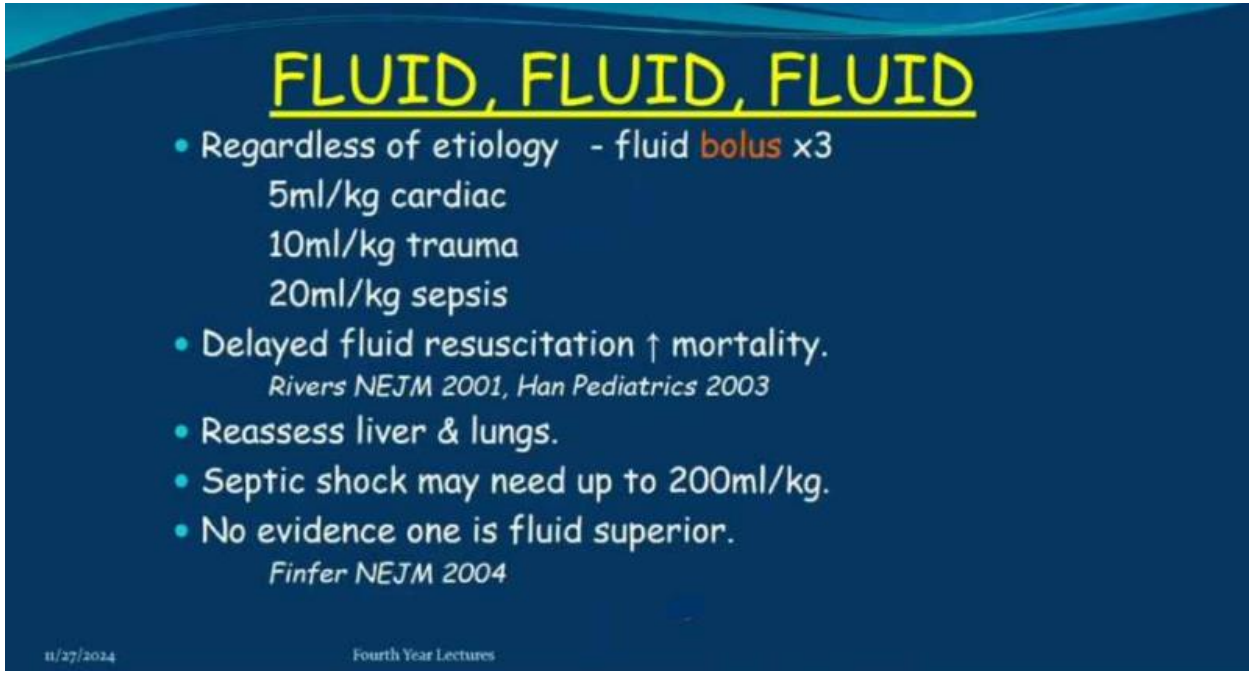
TABLE 38-2

Glasgow Coma Scale

BEHAVIOR	RESPONSE	SCORE
Eye opening response	Spontaneously	4
	To speech	3
	To pain	2
	No response	1
Best verbal response	Oriented to time, place, and person	5
	Confused	4
	Inappropriate words	3
	Incomprehensible sounds	2
	No response	1
Best motor response	Obeys commands	6
	Moves to localized pain	5
	Flexion withdrawal from pain	4
	Abnormal flexion (decorticate)	3
	Abnormal extension (decerebrate)	2
	No response	1
Total score:	*Best response*	15
	Comatose client	8 or less
	Totally unresponsive	3

- C

Give fluids quickly… don’t wait 6 hours



- 18- One of the following does NOT fit the definition of Massive Blood transfusion:
- A. Replacement of one entire blood volume within 24 h.
- B. Transfusion of >10 units of packed red blood cells (PRBCs) in 24 h.
- C. Transfusion of >4 units of PRBCs in 1 h when on-going need is foreseeable.
- D. Replacement of 50% of total blood volume (TBV) within 3 h.
- E. The need to transfuse fresh frozen plasma to correct the Coagulopathy of blood transfusion.

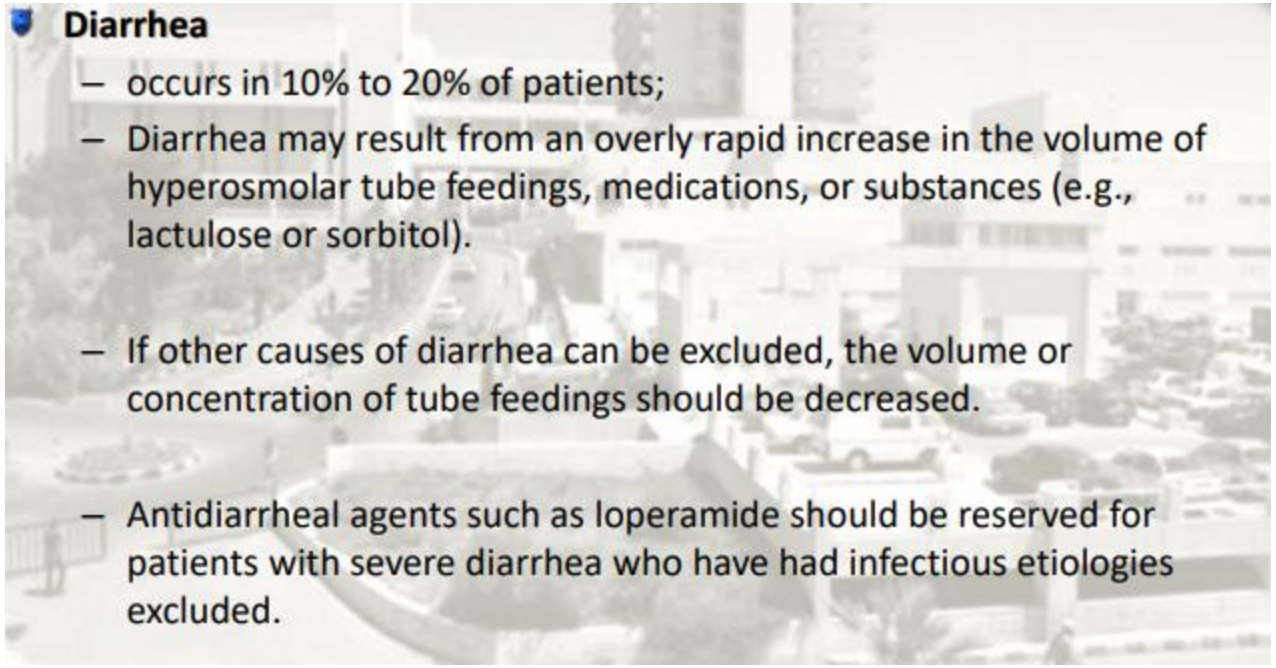
- 19- Regarding Enteral Nasogastric tube feeding, one of the following is CORRECT*
- A. Highly thrombogenic.
- B. Used in patients with the short gut syndrome.
- C. A potential cause of abdominal cramps and diarrhea.
- D. More likely to cause septic complications than parenteral nutrition.
- E. Contraindicated in patients after a cerebrovascular accident.

• E

What is Massive transfusion?

- 10 units of red cells in 24 hours
- Total blood volume is replaced within 24 hours
- Three units over one hour with ongoing bleeding
- 50% of total blood volume is replaced within 3 hours

• C



- 20- All the following are contraindications to major elective surgery requiring general anesthesia, EXCEPT:
- A. Myocardial infarction 2 months ago.
- B. Preoperative serum potassium of 2.5 mmol/liter in a patient on diuretic therapy.
- C. Previous mitral valve replacement.
- D. A resolving upper respiratory tract infection.
- E. Stroke within 4 months before surgery.

- 21- Potential sites of hemorrhage leading to hypotensive shock in children and adolescents include all the following EXCEPT:
- A. Thorax
- B. Abdomen
- C. Intracranial
- D. Pelvis
- E. Femur

- C

- C

Intracranial bleeding occurs at a limited space and in relatively small amounts NOT causing a hypotensive shock

- 22- Which phase of hypermetabolic state can last for an extended period of time leading to adverse nutritional status?
- A. Ebb phase
- B. Flow phase
- C. Cycling phase
- D. Imbalance phase
- E. Healing phase

- 23- All of the following is an obligatory glucose user EXCEPT:
- A. Red Blood Cells
- B. Cardiac Muscles
- C. Renal Medulla
- D. Bone Marrow
- E. Brain

- B

- B

Healthy myocardium uses mainly fatty acids as its major energy source, with little contribution of glucose. However, lactate, ketone bodies, amino acids or even acetate can be oxidized under certain circumstances.

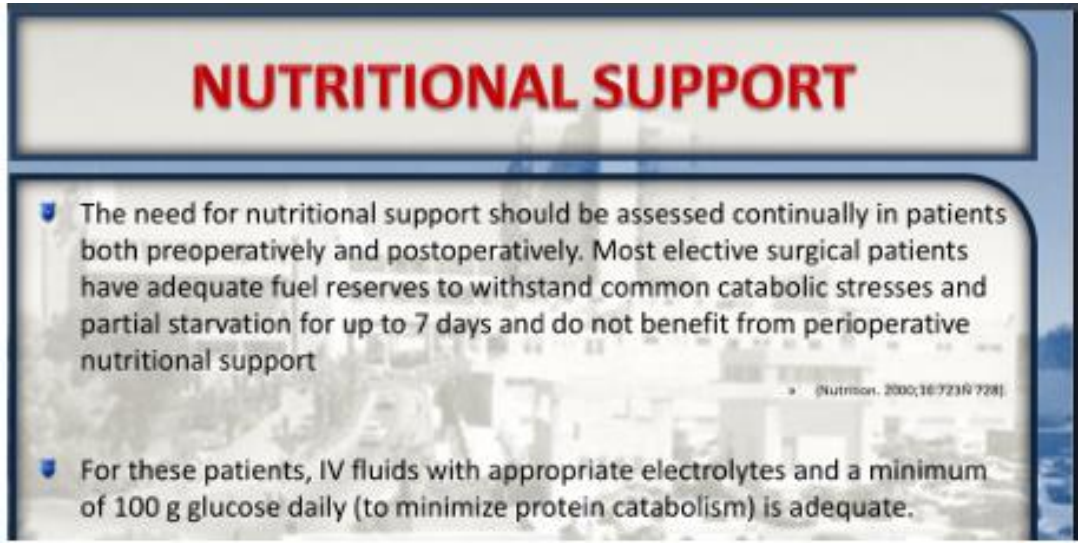
24- To prevent gluconeogenesis, glucose administration must be carefully monitored, the protein sparing effect of glucose administration begins to be manifested after administration of how much glucose?*

- A. 100 gm
- B. 200 gm
- C. 75 gm
- D. 300 gm
- E. 500 gm

25-Regarding abdominal surface anatomy, all of the following are true EXCEPT*

- A. The abdomen can be divided into 4 quadrants.
- B. The trans pyloric plane is at the level of L1
- C. The deep inguinal ring is 1.25cm below the mid inguinal point
- D. McBurney's point in located one third distance between anterior superior iliac spine and the umbilicus
- E. The umbilicus is normally situated mid-way between the xyphoid process and the symphysis pubis

- A



- C
- The deep inguinal ring can be found at the midpoint of the inguinal ligament (1 cm ABOVE and lateral to the femoral pulse at the mid-inguinal point).

26- Surgical wounds are classified based on the presumed magnitude of the bacterial load at the time of surgery. The best to represent a clean/contaminated (class II) wound is*

- A. Penetrating abdominal trauma
- B. Large tissue injury
- C. Elective upper GI surgery
- D. Enterotomy during bowel obstruction
- E. Perforated diverticulitis

27- A 68-year-old woman underwent tracheostomy for prolonged intubation, 2 weeks later she developed brisk bright red bleeding from the tracheostomy site that resolved without intervention. Her Hb is 10.2 g/dL, and coagulation studies are normal. What is the most likely diagnosis?

- A. Pneumonia
- B. Tracheitits
- C. Bleeding of granulation tissue in the stoma
- D. Tracheoinnominate fistula
- E. Bleeding from the anterior jugular vein

- C

- C

Types of Surgery

Clean	Hernia repair breast biopsy	1.5%
Clean-Contaminated	Cholecystectomy Elective bowel resection	2-5%
Contaminated	Emergency bowel resection	5-30%
Dirty/infected	Perforation, abscess	5-30%

28- A 45 year old male, non-diabetic scheduled for laparoscopic cholecystectomy, the best antimicrobial prophylaxis that have significantly lower overall infectious complications is:

- A. Cephazolin
- B. Cefuroxime sodium
- C. Ceftriaxone
- D. Gentamycin
- E. Metronidazole

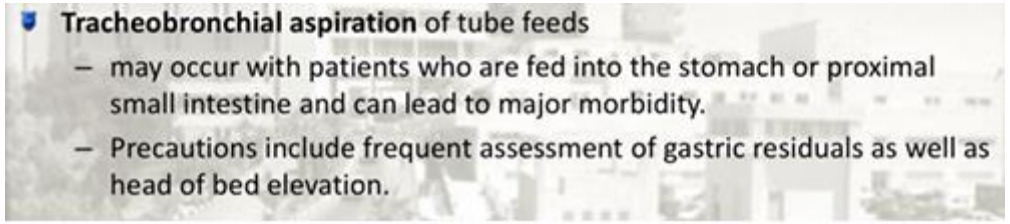
29- For a feeding gastrostomy all are true EXCEPT:

- A. It can be either a temporary or a permanent method of feeding.
- B. Is safer than intravenous feeding.
- C. It is usually created endoscopically.
- D. The risk of aspiration is less than jejunostomy feeding.
- E. Does not require surgical closure after cessation of feeding.

- A

- Cefazolin for perioperative wound infection prophylaxis (covers S. aureus)

- D



- 30- For a 70 kg man, the minimum acceptable urine output is:
- A. 7 ml/ hour.
- B. 70 ml/ hour.
- C. 35 ml/ hour.
- D. 100 ml/ hour.
- E. 105 ml/ hour.

- 31- Sequence of return of gastrointestinal motility after abdominal surgery is*
- A. intestine, stomach, colon
- B. stomach, intestine, colon
- C. colon, intestine, stomach
- D. colon, stomach, intestine
- E. stomach, colon, intestine

- C

Normal urine output in a healthy individual should be between 0.5-1.5 mL/kg/hour.

- A

- 32- The principal types of proliferating cells in granulation tissue are:
- A. Fibroblasts and macrophages
- B. Fibroblasts and endothelial cells
- C. Leukocytes and endothelial cells
- D. Lymphocytes and fibroblasts
- E. Macrophages and leukocytes

- 33- Deficiency of which of the following vitamins influence wound healing?*
- A. Vitamin A
- B. Vitamin B6
- C. Vitamin B12
- D. Vitamin C
- E. Vitamin D

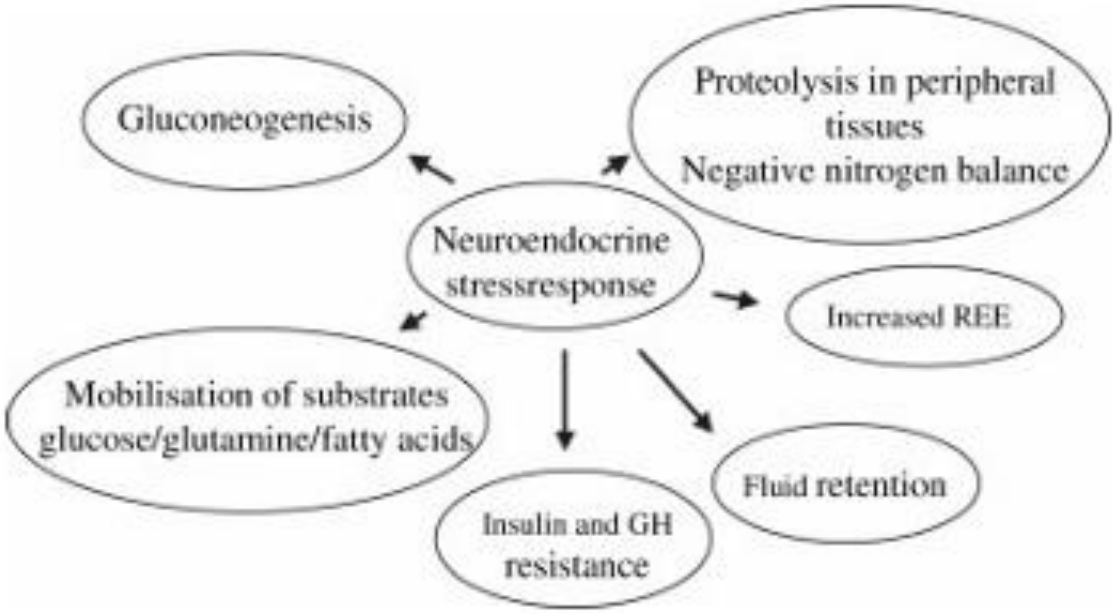
- B
- C

- 34- For a 70 kg healthy patient the postoperative maintenance fluids should be around*
- a. 1800 ml per 24 hours.
- b. 2800 ml per 24 hours.
- c. 3800 ml per 24 hours.
- d. 4800 ml per 24 hours.
- e. 5800 ml per 24 hours

- 35- All the following are metabolic effects of injury and sepsis EXCEPT:
- a. fluid retention
- b. insulin resistance and glucose intolerance
- c. positive nitrogen balance
- d. hypoalbuminemia
- e. increased gluconeogenesis and protein catabolism

- B

- C
- NEGATIVE nitrogen balance



36- Which of the following statements about total body water composition is correct?

- a. Females and obese persons have an increased percentage of body water.
- b. Increased muscle mass is associated with decreased total body water.
- c. Newborn infants have the lowest proportion of total body water.
- d. Total body water increases steadily with age.
- e. Any person's percentage of body water is subject to wide physiologic variation.

37- Absorption of the majority of nutrients takes place in which part of the gastrointestinal tract?

- a. Stomach
- b. Duodenum
- c. Jejunum
- d. Ileum
- e. Colon

• E

• C

- Digestion of proteins yields dipeptides and single amino acids, which are actively absorbed.
  - Once digested, almost 50% of protein absorption occurs in the duodenum, and complete protein absorption is achieved by the mid jejunum.

38- Compared to enteral nutrition, parenteral nutrition (PN):

- a. Is less expensive
- b. Has less infectious complications
- c. Preserves immunologic function of gut
- d. Is not associated with metabolic bone dysfunction
- e. Is less likely to cause diarrhea

39- A 16-year-old boy presented to emergency room with a tender red and fluctuant swelling in the right forearm of 2 days duration. He reported a pencil-stick injury at the site of swelling one week ago. The most likely diagnosis is*

- a. Abscess
- b. Lymphangitis
- c. Cellulitis
- d. Clostridium tetani
- e. Gas gangrene

- E
- A

- 40- Which of the following statements regarding cellulitis is TRUE?
- a. This is non-suppurative spreading infection of the skin.
- b. It is rarely caused by wounds.
- c. It is commonly caused by staphylococci.
- d. Gram negative organisms do not cause cellulitis.
- e. Penicillin is an effective treatment

- 41- Which of the following statements is FALSE of gastrointestinal (GI) secretions?
- a. Pancreatic fluid is alkaline.
- b. The chloride content of gastric fluid is around 110 mmol/L.
- c. Gastric fluid has a high concentration of potassium.
- d. Bile has a pH of 7.2.
- e. Most losses can be replaced with normal saline with or without potassium

- E

Cellulitis is a suppurative infection.

It is treated by penicillin.

- E

Etiology [3][4]

- Beta-hemolytic streptococci: mostly group A Streptococcus (S. pyogenes)
- Less common pathogens for cellulitis
  - S. aureus
  - Pasteurella multocida (gram-negative, encapsulated coccobacillus): secondary to dog and cat bites

42- Which of the following statements regarding direct inguinal hernias is TRUE?

- a. They protrude medially to the inferior epigastric vessels
- b. They are common in women
- c. They commonly reach the scrotal sac in men
- d. They obstruct more commonly than indirect hernias
- e. They are more common than indirect inguinal hernias in men

43- In which of the following surgeries preoperative antibiotic administration is not indicated?**

- a. Inguinal hernioplasty
- b. Breast surgery for duct ectasia
- c. Thyroid surgery for multinodular goitre
- d. Laparoscopic cholecystectomy for symptomatic gall stones
- e. Coronary bypass surgery

- A
- C

- 44- The use of vasopressors is crucial in which of the following types of shock?
- a. Hypovolemic shock
- b. Neurogenic shock
- c. Cardiogenic shock
- d. Septic shock
- e. Hemorrhagic shock

- 45- One is true in regarding trauma of the spleen:
- a. This organ is rarely involved in blunt trauma.
- b. Splenic preservation should be the rule when there are associated significant injuries.
- c. Vaccine should be given 1-2 weeks after splenectomy.
- d. Overwhelming postsplenectomy sepsis (OPSS) is more than 10%.
- e. Non-operative management is limited to grades 1&2

- B

*using vasopressors applies to any distributive shock, so septic is a correct answer as well

- C

45- One is true in regarding trauma of the spleen:

a. This organ is rarely involved in blunt trauma. ✗ Most common

b. Splenic preservation should be the rule when there are associated significant injuries. ✗ عادي نقدر نستغني عنه وتمشي فيه

c. Vaccine should be given 1-2 weeks after splenectomy. ✓

d. Overwhelming postsplenectomy sepsis (OPSS) is more than 10%.

e. Non-operative management is limited to grades 1&2 Regardless of the grade

- 46-The most common cause of secondary bleeding that happens several days postoperatively is*
- a. Infection
- b. Bleeding disorder
- c. Slipped ligature
- d. Improper surgical technique
- e. Hypothermia

- 47- Which is false regarding antibiotic prophylaxis in surgery?**
- a. Decrease bacterial counts at surgical site
- b. Given for 72 hrs
- c. Started one hour prior to incision
- d. Chosen according to the expected pathogen
- e. Repeat dose is given in long surgeries

- A

Haemorrhage

Immediate:
Inadequate haemostasis , unrecognized damage to blood vessels

Early postoperative:
defective vascular anastomosis , clotting factor deficiency , intraoperative anticoagulants
surgical re-exploring is usually required

Secondary hemorrhage:
Related to infection which erodes blood vessel Several days postoperative
treatment of infection

- B

Operative Antibiotic Prophylaxis

- Decreases bacterial counts at surgical site
- Given within 60 minutes prior to starting surgery (knife to skin)
- Repeat dose for longer surgery (T 1/2)
- Do not continue beyond 24 hours
- Determinants – prevailing pathogens, antibiotic resistance, type of surgery
- Not a substitute for aseptic surgery or good technique

48- If appropriately utilized, supervised exercise programs for patients with peripheral vascular disease can help achieve which of the following?

- a. Gradual improvement in ankle brachial index.
- b. Improve collateral circulation.
- c. Increased walking distance.
- d. Clinical benefit in patients with claudication and rest pain but not in patients presenting with tissue loss.
- e. Reduces the need for long term antiplatelet therapy.

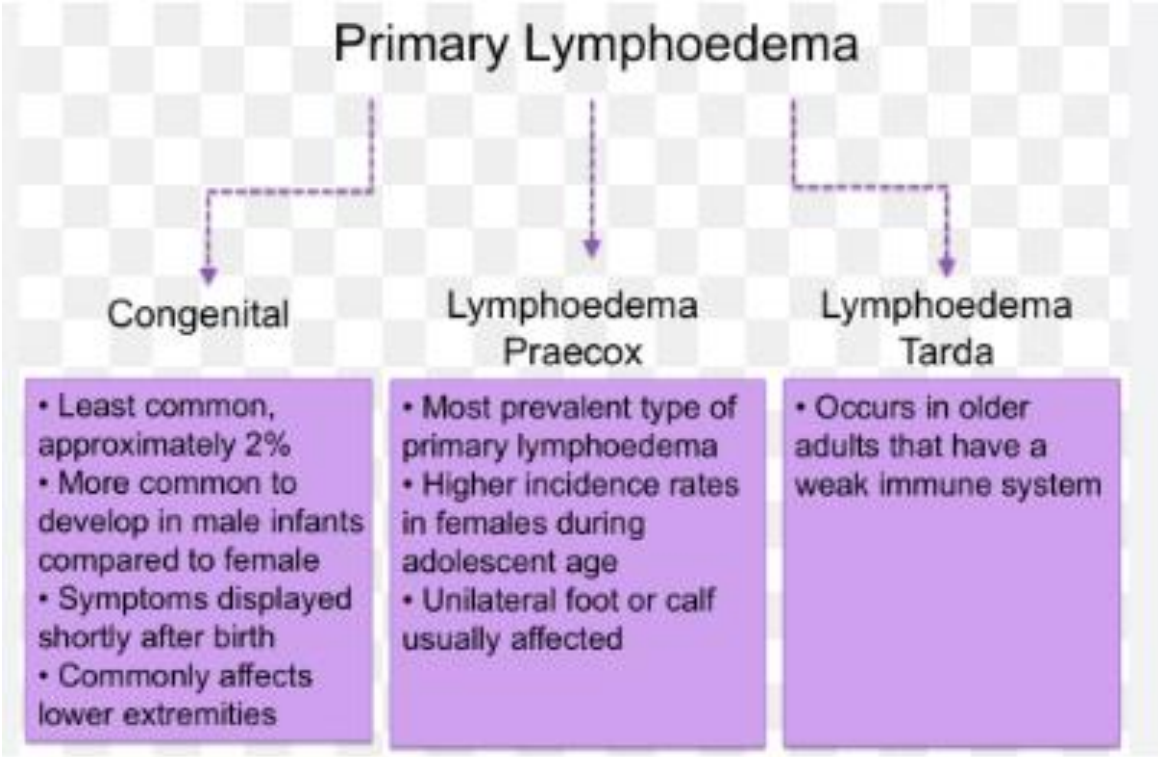
49- All of the following are true regarding lymphedema EXCEPT:

- a. Lymphedema praecox denotes primary lymphedema, while secondary lymphedema is also termed lymphedema tarda.
- b. Primary lymphedema has a marked female predominance.
- c. The most common world-wide cause of secondary lymphedema is filariasis.
- d. Lymphoscintigraphy is a reliable diagnostic tool for lymphedema.
- e. Methods of treatment include manual lymphatic drainage, compression devices, and surgery.

- C

Grading in peripheral vascular disease is based on walking distance.

- A



50- Which of the following Blood transfusion complication is most likely to result in the death of a patient?

- a. Circulatory overload
- b. Allergic reaction
- c. Febrile reaction
- d. ABO incompatibility
- e. Transfusion related Acute lung injury

51- A 25-year-old lady loses 15 % of her blood during surgery, the best immediate management is*

- a. Colloids
- b. Crystalloids
- c. Crystalloids and packed Red cells
- d. Fresh Frozen P and PRC
- e. Fresh Whole Blood

- D

- B


Crystalloids – recommended as the initial fluid of choice in resuscitating patients from hemorrhagic shock
» Svensen C, Ponzer S... Volume kinetics of Ringer solution after surgery for hip fracture. Canadian journal of anesthesia 1999 ; 46 : 133 - 141

- 52- Transfusion Related Acute Lung Injury (TRALI), one of the following is TRUE*
- a. Can be caused by blood products transfusion, like fresh frozen plasma
- b. Is associated with significantly elevated pulmonary artery capillary wedge pressure
- c. Is the commonest cause of morbidity associate with blood transfusion
- d. Should be treated with high dose steroids
- e. Typically presents 24 hours after transfusion

- 53- All of the following are associated with increased likelihood of wound infection after major elective surgery, EXCEPT:
- a. Age over 70 years.
- b. Chronic malnutrition.
- c. Hyperthermia during the operation.
- d. Long-term steroid use.
- e. Infection at a remote body site.

- A

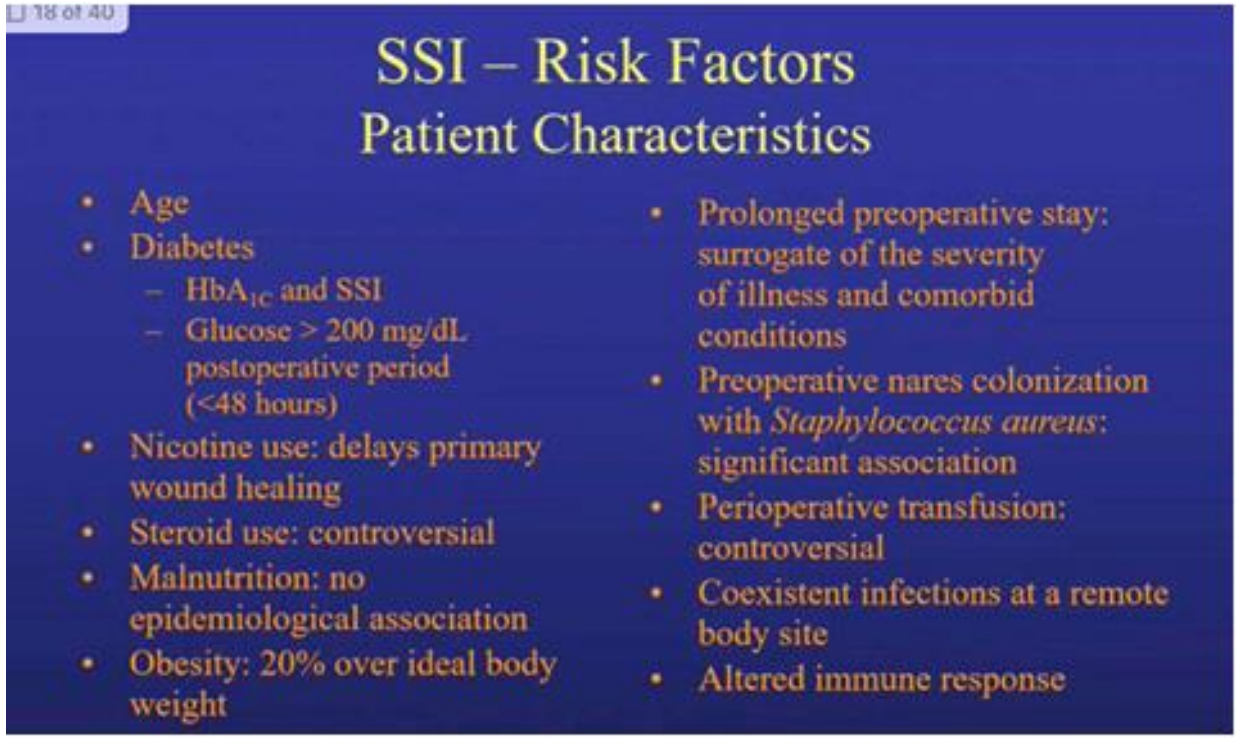
TRAL

I

Transfusion Related Acute Lung Injury

- Clinical syndrome similar to ARDS
- Occurs 1-6 hours after receiving plasma-containing blood products
- Caused by WBC antibodies present in donor blood that result in pulmonary leukostasis
- Treatment is supportive
- High mortality

- C



54- A major problem in nutritional support is identifying patients at risk. All of the following can identify the patient at risk, EXCEPT:

- a. Weight loss of greater than 15% over 2 to 4 months.
- b. Serum albumin.
- c. Malnutrition as identified by Physical examination.
- d. Serum transferrin.
- e. Hemoglobin Level.

55-A 17-year-old patient involved in an automobile accident is paralyzed with multiple peripheral extremity injuries. Nutritional support is instituted with a nasogastric feeding catheter. Which of the following statement is TRUE concerning the patient's management?

- a. Feeding into the stomach results in stimulation of the biliary/pancreatic axis which is trophic for small bowel.
- b. Gastric secretions will dilute the feeding increasing the risk of diarrhea.
- c. The risk of aspiration is minimized by using the nasal route.
- d. The cost of the new feeding formulas is more expensive than total parenteral nutrition
- e. The risk of infection is higher than with Total Parenteral Nutrition

- E
- A

trophic=مغذي

- 56- One of the following is a cyanotic congenital heart disease in the newborn:
- a. Transposition of the Great vessels
- b. Aortic stenosis
- c. Atrial Septal Defect
- d. Ventricular Septal Defect
- e. Patent Ductus Arteriosus

- 57- Postoperative oliguria with a fractional excretion of Sodium of less than 1% is most consistent with*
- a. Pre renal acute renal failure.
- b. Intrinsic acute renal failure.
- c. Chronic renal insufficiency.
- d. Acute tubular necrosis.
- e. Obstructive uropathy.

- A

- A

- 58- A 60-year-old TPN-dependent male with short gut syndrome and diarrhea presents with non-healing leg wound. Which trace element he may need supplementation with?
- a. Manganese.
- b. Fluorine.
- c. Selenium.
- d. Copper.
- e. Zinc

- 59- All the following are benefits of vacuum assisted wound closure (VAC) EXCEPT:
- a. Keeps wound clean.
- b. Increases angiogenesis.
- c. Increases granulation tissue growth.
- d. Can be used in cases of exposed major blood vessels.
- e. Decreases edema.

• E

• D

MECHANISM OF ACTION

- Promotes *granulation tissue formation*.
- Stimulates *localized blood flow*.
- *Reduces bacterial* colonization
- Provides *moist wound healing* environment
- Reduces *localized edema*
- Enhances *epithelial migration*
- Applies negative pressure to ***uniformly draw wound closed*** (wound contraction)

Indications for VAC Therapy[a]

BOX 1

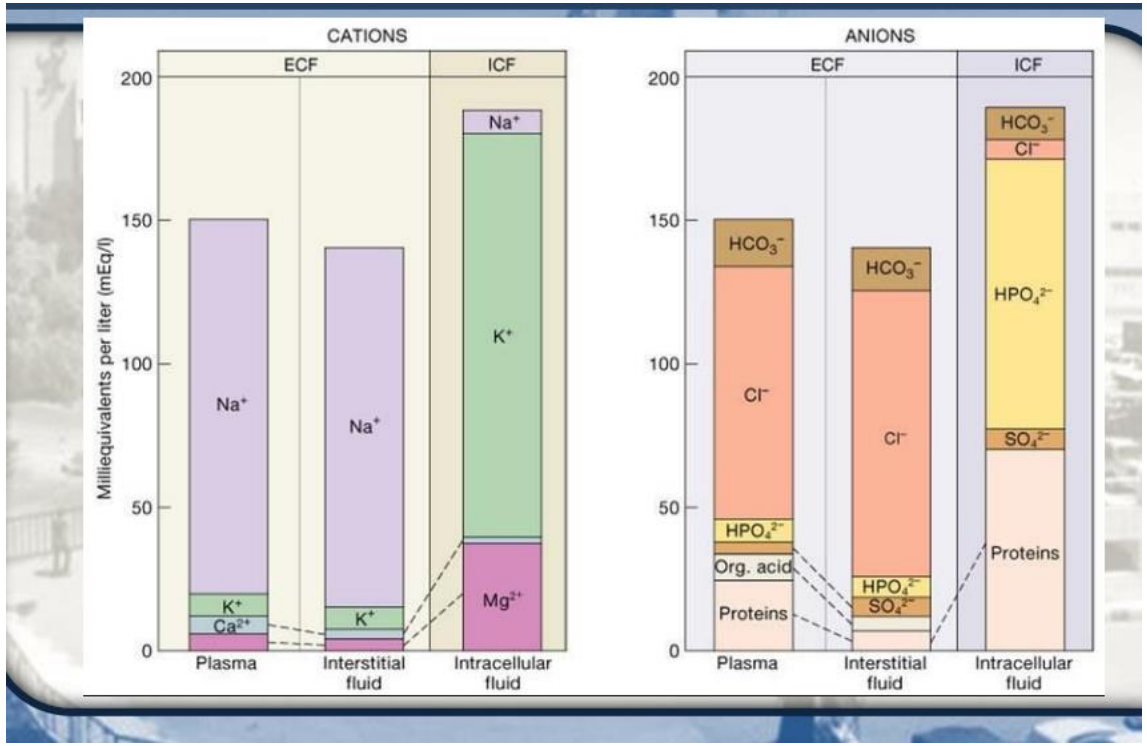
- Large, open, contaminated wounds
- Skin avulsions
- Degloving injuries
- Abdominal and thoracic wounds (e.g., laparotomy surgical sites, open thoracic wounds)
- Surgical dehiscence
- Chronic nonhealing wounds
- Prevention of postoperative seroma and edema
- Bolster for skin grafts
- Myofascial compartment syndrome

[a]Our experience with the use of VAC therapy for these indications will be detailed in a companion article in March 2010.

- 60- Regarding normal physiology of body fluids in adults, all of the following statements are true EXCEPT:
- a. Intra-vascular compartment contains approximately (1/12) of total body water
- b. Intra-vascular and interstitial compartments have different levels of sodium ions.
- c. The main intra-cellular cation is potassium.
- d. The main intra-vascular anion is chloride.
- e. Starling forces control diffusion between intra-vascular and interstitial compartments.

- 61- Body mass index is calculated*
- a. By a ratio of soft tissue mass to bone mass.
- b. By multiplying height (in meters) by weight (in kilograms).
- c. By dividing body weight (in kilograms) by a bone density factor.
- d. By dividing twice the body weight (in kilograms) by half the height in meters.
- e. By dividing body weight in kilograms by the square of body height in meters.

- B



- E

$$BMI = \frac{\text{weight (kg)}}{\text{height}^2\text{ (m)}}$$

62- A 65-year-old man undergoes a low anterior resection for rectal cancer. On the fifth day in hospital, his physical examination shows a temperature of 39°C (102°F), blood pressure of 150/90 mm Hg, pulse of 110 beats per minute and regular, and respiratory rate of 28 breaths per minute. A computed tomography (CT) scan of the abdomen reveals an abscess in the pelvis. Which of the following most accurately describes his present condition?**

- a. Systemic inflammatory response syndrome (SIRS)
- b. Sepsis (SIRS + documented infection = sepsis)
- c. Severe sepsis
- d. Septic shock
- e. Severe septic shock

63- A patient with grossly contaminated wound presents 12 hours after an accident, his wound should be managed by:

- a. Thorough cleaning and primary repair
- b. Thorough cleaning with debridement of all dead and devitalized tissue without primary closure
- c. Primary closure over a drain
- d. Covering the defect with split skin graft after cleaning
- e. Covering it with a full thickness skin graft

- B

- B

Terminology

- Systemic Inflammatory Response Syndrome (SIRS)
  - Temp > 38 or < 36
  - HR > 90
  - RR > 20 or PaCO2 < 32
  - WBC > 12 or < 4 or Bands > 10%

TWO out of four criteria
acute change from baseline

- Sepsis
  - The systemic inflammatory response to infection.
- Severe Sepsis
  - Organ dysfunction secondary to Sepsis.
  - e.g. hypoperfusion, hypotension, acute lung injury, encephalopathy, acute kidney injury, coagulopathy.
- Septic Shock
  - Hypotension secondary to Sepsis that is resistant to adequate fluid administration and associated with hypoperfusion.

- 64- The most common radiographic finding on X-ray after aspiration of a foreign body is:
- a. Pleural effusion
- b. hyperinflation
- c. Atelectasis
- d. Identification of the foreign body
- e. Pneumonia

- 65- All of the following is true about antibiotic prophylaxis in surgical patients except:
- a.The choice of antibiotic is based on type of surgery performed.
- b.Antibiotics should be given before the start of anaesthesia
- c.Postoperative doses can be given for 2-3 days
- d.Further doses of antibiotics are occasionally required during the same procedure
- e.Single or multiple types of antibiotics can be given

- B

Airway Foreign Bodies

AP and lateral films of the neck and chest (inspiratory and expiratory)

→ can reveal hyperinflation or "air trapping"
- up to 60% of children
- FB acts as a one-way valve

→ +/- mediastinal shift

- C

Operative Antibiotic Prophylaxis

- Decreases bacterial counts at surgical site
- Given within 60 minutes prior to starting surgery (knife to skin)
- Repeat dose for longer surgery (T 1/2)
- Do not continue beyond 24 hours
- Determinants – prevailing pathogens, antibiotic resistance, type of surgery
- Not a substitute for aseptic surgery or good technique

- 66- You are called to observe a patient in the ICU who came to the hospital two days ago and has started to have gram-negative septicaemia. In addition, he has significant heart disease with a history of MI two years ago. Right now, he has Hypotension, high blood volume, high central venous pressure and decreased central venous oxygen saturation which would point to a diagnosis of:
- a.cardiogenic shock
- b.over hydration
- c.hypovolemic shock
- d.adult respiratory distress syndrome
- e.septic shock

- 67- One of the following is correct about groin hernia:
- a.Femoral hernia is more common in males.
- b.The inguinal hernia appears medial and below to the pubic tubercle.
- c.Direct inguinal hernia is lateral to the inferior epigastric artery.
- d.Hernioplasty is the surgical treatment for inguinal hernia in adult men.
- e.The risk of strangulation is more common in inguinal compared to femoral hernia

- A
- D

- 68- Cellulitis, all the following are true, EXCEPT:
- a.Systemic signs are not present
- b.Blood culture is often negative
- c.It can be caused by clostridium perfringens.
- d.It is poorly localized.
- e.This is non-suppurative invasive infection of tissue.

- 69- Regarding necrotizing soft-tissue infections. All the following are true EXCEPT:
- a.Streptococcus pyogenes cause toxic shock syndrome.
- b.Treatment is mainly surgical.
- c.The onset is usually gradual, and they run a chronic course
- d.They are usually polymicrobial infections.
- e.Dish water pus is a characteristic feature.

• A

68- Cellulitis, all the following are true, EXCEPT:

a. Systemic signs are not present (locally)

b. Blood culture is often negative ✓ (usually)

c. It can be caused by clostridium perfringens. ✓

d. It is poorly localized. ✓

e. This is non-suppurative invasive infection of tissue. ✓ (not skin)

• C

Wound Infection

- Group A β-hemolytic streptococcal gangrene – following penetrating wounds
- Clostridial myonecrosis – postoperative abdominal wound
- Presentation: sudden onset of pain at the surgical site following abdominal surgery, crepitus → edema, tense skin, bullae = EMERGENCY
- Necrotizing fasciitis – associated with strep, Polymicrobial, associated with DM and PVD
- Management: aggressive early debridement, IV antibiotics

70- Regarding sepsis, one of the following is false:

- a.Sepsis is defined as life-threatening organ dysfunction caused by a dysregulated host response to infection.
- b.The baseline SOFA score can be assumed to be zero in patients not known to have pre-existing organ dysfunction.
- c.Organ dysfunction can be identified as an acute change in total SOFA(sequential organ failure assessment score) score ≥4 points consequent to the infection. (>= 2)
- d.Management with Broad spectrum Antibiotic should be done within one hour of diagnosis.
- e. SOFA score ≥2 reflects an overall mortality risk of approximately 10% in a general hospital

71- Regarding the direct inguinal hernia

- a.Use of surgical mesh is a must.
- b.The sac should be excised at surgery.
- c.Has a preformed sac formed by a persistent processus vaginalis.
- d.The neck of its sac lies medial to the inferior epigastric artery.
- e.It is mostly congenital

- C

Sequential [Sepsis-Related] Organ Failure Assessment (SOFA) Score

System	0	1	2	3	4
Respiration PaO2/FIO2, mmHg (kPa)	≥400 (53.3)	<400 (53.3)	<300 (40)	<200 (26.7) with respiratory support	<100 (13.3) with respiratory support
Coagulation Platelets, x10³/uL	≥150	<150	<100	<50	<20
Liver Bilirubin, mg/dL (umol/L)	<1.2 (20)	1.2 - 1.9 (20 - 32)	2.0 - 5.9 (33 - 101)	6.0 - 11.9 (102 - 204)	>12.0 (204)
Cardiovascular	MAP ≥70mmHg	MAP <70mmHg	Dopamine <5 or Dobutamine (any dose)	Dopamine 5.1 - 15 or Epinephrine ≤0.1 or Norepinephrine ≤0.1	Dopamine >15 or Epinephrine >0.1 or Norepinephrine >0.1
CNS GCS Score	15	13 - 14	10 -12	6 - 9	<6
Renal Creatinine, mg/dL (umol/L) Urine Output, mL/d	<1.2 (110)	1.2 - 1.9 (110 - 170)	2.0 - 3.4 (171 - 299)	3.5 - 4.9 (300 - 440) <500	>5.0 (440) <200

*Catecholamine Doses = ug/kg/min for at least 1hr

SOFA Score

The European Society of Intensive Care Medicine

Mortality	SOFA score
<10%	0-6
15-20%	7-9
40-50%	10-12
50-60%	13-14
>80%	15
>90%	15-24

Mortality	Score trend (First 48 hrs)
>50%	Increasing
27-35%	Unchanged
<27%	Decreasing

- D

72- A 20-year-old male patient underwent an uneventful appendectomy for acute appendicitis. All the following are true about his postoperative care except:

- a.Wound swelling and discharge could be a sign of wound infection
- b.Pathological examination of the appendix is mandatory
- c.The development of new onset diarrhoea could be due to pelvic abscess
- d.Routine use of post-operative metronidazole and cefuroxime for 3 days reduce postoperative hospital stay.
- e.Early mobilization can reduce the risk of deep vein thrombosis

73- A 52-year-old obese lady reports a painless grape sized mass in her groin area. She has no medical conditions apart from some varicose veins. There is a cough impulse, and the mass disappears on lying down. What is the most likely cause?

- a. Saphena varix
- b. Arteriovenous malformation
- c. False aneurysm of the femoral artery
- d. Femoral hernia
- e. Inguinal hernia

• D

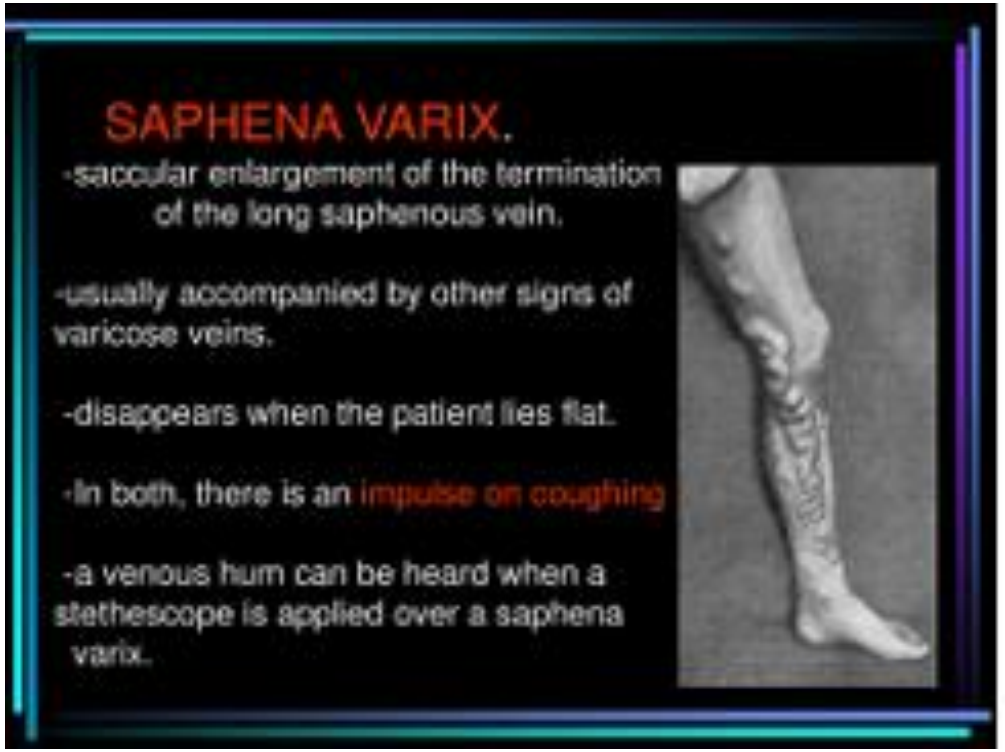
Prevention Strategies: Core

Postoperative Measures

- **Surgical Wound Dressing**
  - Protect primary closure incisions with sterile dressing for 24-48 hrs post-op
- **Control blood glucose level during the immediate post-operative period (cardiac)***
  - Measure blood glucose level at 6AM on POD#1 and #2 with procedure day = POD#0
  - Maintain post-op blood glucose level at <200mg/dL
- **Discontinue antibiotics within 24hrs after surgery end time (48hrs for cardiac)***

*Fry DE. Surgical Site Infections and the Surgical Care Improvement Project (SCIP): Evolution of National Quality Measures. Surg Infect 2008;9(6):579-84.

• A



74- What is the ideal time for prophylactic dose of antibiotic in patient who is planned for right hemicolectomy?

- a. Early morning of the day of surgery
- b. One day before surgery
- c. One hour after incision
- d. Four hours before incision
- e. Thirty minutes before incision

75- All of the following are advantages of FAST (focused assessment with sonography for trauma), compared to CT scan of the abdomen, in blunt abdominal trauma EXCEPT:

- a. Gives early diagnosis
- b. The diagnosis is usually specific of which organ is affected
- c. Does not need patient transport
- d. Can be repeated
- e. Performed rapidly

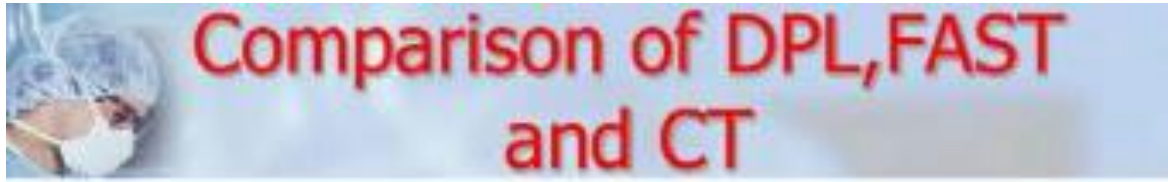
- E

Before and NOT after incision

Operative Antibiotic Prophylaxis

- Decreases bacterial counts at surgical site
- Given within 60 minutes prior to starting surgery (knife to skin)
- Repeat dose for longer surgery (T 1/2)
- Do not continue beyond 24 hours
- Determinants – prevailing pathogens, antibiotic resistance, type of surgery
- Not a substitute for aseptic surgery or good technique

- B



Comparison of DPL,FAST and CT

TABLE 5-2 ■ Comparison of DPL, FAST, and CT in Blunt Abdominal Trauma

	DPL	FAST	CT SCAN
Advantages	• Early diagnosis • Performed rapidly • 98% sensitive • Detects bowel injury	• Early diagnosis • Noninvasive • Performed rapidly • Repeatable	• Most specific for injury • Sensitive: 92%–98% accurate
Disadvantages	• Invasive • Low specificity • Misses injuries to diaphragm and retroperitoneum	• Operator-dependent • Bowel gas and subcutaneous air distortion • Misses diaphragm, bowel, and pancreatic injuries	• Cost and time • Misses diaphragm, bowel, and some pancreatic injuries • Transport required

- 76- One of the following patients require urgent investigation to malignancy
- a. A 58-year-old with anemia and low MCV
- b. A 45-year-old male with constipation of 2 weeks duration
- c. A 60-year-old Patient with anal pain and fresh rectal bleeding
- d. A 24-year-old female patient with right iliac fossa pain
- e. A 65-year-old female with full thickness rectal prolapse

- 77- The most common microorganism causing liver abscess is?
- a. Klebsiella
- b. Staphylococcus (according to the internet)
- c. proteus
- d. Pseudomonas
- e. E-coli

- A

- E

Presentation

Higher risk

Rectal bleeding with a change in bowel habit to looser stools or increased frequency of defecation persisting for 6 weeks (all ages)

Change in bowel habit as above without rectal bleeding and persisting for 6 weeks (> 60 years)

Persistent rectal bleeding without anal symptoms* (> 60 years)

Palpable right-sided abdominal mass (all ages)

Palpable rectal mass (not pelvic) (all ages)

- Unexplained iron deficiency anaemia (all ages)

Low risk

Patients with no iron deficiency anaemia, no palpable rectal or abdominal mass

Rectal bleeding with anal symptoms and no persistent change in bowel habit (all ages)

Rectal bleeding with an obvious external cause, e.g. anal fissure (all ages)

Change in bowel habit without rectal bleeding (< 60 years)

- Transient changes in bowel habit, particularly to harder or decreased frequency of defecation
- Abdominal pain as a single symptom without signs and symptoms

- 78- All the following is true about inguinal hernia repair EXCEPT
- a. Irreducible hernia is a risk factor for strangulation
- b. Chronic postoperative pain can be as high as 20 % of cases
- c. Is a clean operation
- d. Cannot be performed as a day case setting if it was done under local anesthesia
- e. Testicular atrophy is a known postoperative complication

- 79- Life threatening organ dysfunction caused by a dysregulated host response to infection is the definition of:
- a. Septicemia
- b. Sepsis
- c. Septic shock
- d. Refractory shock
- e. Severe sepsis

- D

- B

Terminology

- Systemic Inflammatory Response Syndrome (SIRS)
  - Temp > 38 or < 36
  - HR > 90
  - RR > 20 or PaCO2 < 32
  - WBC > 12 or < 4 or Bands > 10%

TWO out of four criteria
acute change from baseline

- Sepsis
  - The systemic inflammatory response to infection.
- Severe Sepsis
  - Organ dysfunction secondary to Sepsis.
  - e.g. hypoperfusion, hypotension, acute lung injury, encephalopathy, acute kidney injury, coagulopathy.
- Septic Shock
  - Hypotension secondary to Sepsis that is resistant to adequate fluid administration and associated with hypoperfusion.

- 80- All of the following are part of the primary survey in trauma patients except:
- a. Plain abdomen X-ray
- b. CXR
- c. FAST
- d. Pelvic X-ray
- e. Cervical spine

- 81- All true about necrotizing fasciitis except:
- a. Carries high mortality
- b. Occur in immunocompromised subjects
- c. Is a single microbial infection in 80% of cases
- d. Trauma can be a predisposing factor
- e. Require urgent treatment with antibiotics and debridement

- A
- C

ADJUNCTS TO PRIMARY SURVEY

Done to: MONITOR, RESUSCITATE OR IDENTIFY.

- ECG monitoring.
- Monitoring of vital signs: blood pressure, pulse pressure, heart rate, body temperature and respiratory rate
- Monitoring: arterial blood gases, pulse oximetry, and colorimetric CO_2 monitoring.
- Urinary and gastric cathters.
- X-Rays and diagnostic studies: AP chest and AP pelvis and lateral cervical spine.
- FAST or DPL.

- 82- Noradrenaline will be most useful in which form of shock?**
- a. Obstructive
- b. Is contraindicated in shock
- c. distributive
- d. Metabolic
- e. Cardiogenic

- 83- All of the followings are within the spermatic cord in the inguinal canal except:
- a. Testicular artery
- b. Genital branch of genitofemoral nerve
- c. Artery to the vas
- d. Lymphatics
- e. Inferior epigastric artery

- C

Distributive shock occurs due to the systemic vasodilation, so , we will give a drug to cause vasoconstriction.

- E

- 84- All are correct about Clostridium Difficile colitis except:
- a. Most likely affect elderly patients with co-morbidities
- b. The use of a cephalosporin-based antibiotic is a risk factor
- c. Surgery is the first line of management
- d. Oral but not intravenous vancomycin is of help in this situation
- e. Can be diagnosed by performing flexible sigmoidoscopy

- 85- One of the following is true about inguinal hernia
- a. More common in females
- b. Reducible hernia is a high-risk factor for strangulation
- c. Testicular atrophy is a known postoperative complication
- d. Can’t be performed as a day-case setting
- e. Is a clean-contaminated operation

- C

Clostridioides difficile

Produces toxins A and B, which damage enterocytes. Both toxins lead to watery diarrhea → pseudomembranous colitis A. Often 2° to antibiotic use, especially clindamycin, ampicillin, cephalosporins, fluoroquinolones; associated with PPIs.

Fulminant infection: toxic megacolon, ileus, shock.

Difficile causes diarrhea.

Diagnosed by PCR or antigen detection of one or both toxins in stool.

Treatment: oral vancomycin or fidaxomicin. For recurrent cases, consider repeating prior regimen or fecal microbiota transplant.

- C

Types of Surgery

Clean	Hernia repair breast biopsy	1.5%
Clean-Contaminated	Cholecystectomy Elective bowel resection	2-5%
Contaminated	Emergency bowel resection	5-30%
Dirty/infected	Perforation, abscess	5-30%

Complication -Late complications

- Recurrence
- Testicular atrophy if testicular artery is damaged
- Obstruction

Complications

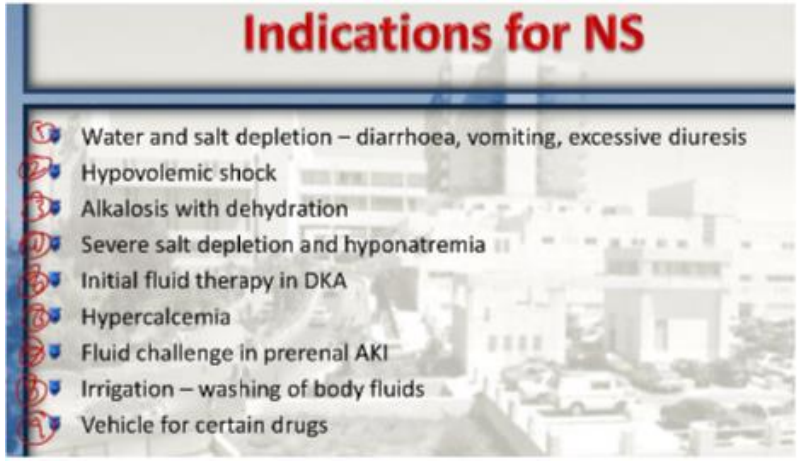
- Recurrence
- Chronic groin pain
- Nociceptive
- Neuropathic
- Cord and testicular
- Hematoma
- Ischemic orchitis
- Testicular atrophy
- Injury to vas deferens
- Hydrocele
- Testicular descent
- Bowel and bladder injury

- E (if it is herniotomy in peds or without using mesh : clean)

- 86- False about hypernatremia?
- a. cannot use NL saline if the patient has hypovolemia
- b. associated with inadequate water intake
- c. Should not be corrected greater than 0.5mmol/L/hr
- d. clinically manifest primarily by neurological effects
- e. if hypervolemia is present use furosemide

- 87- Wrong about Inguinal hernia?
- a. femoral is the most common hernia in females
- b. females are more likely to have femoral
- c. males are more likely to have inguinal
- d. Inguinal hernia is superior & medial to pubic tubercle
- e. Femoral hernia is inferior & lateral to pubic tubercle

- A



- A

Where is the most common place for a woman to get a hernia?

The umbilicus is the thinnest part of the abdominal wall. It's a very common site to develop a hernia, whether you're a man or a woman.

- 88- Who should receive blood transfusion?
- a. A patient with with Hb 8 with tachycardia and SOB
- b. A patient with with HB 10 and CAD
- c. A patient on hemodialysis and Hb 7
- d. A patient with 1 g\dL drop in Hb after bleeding

- 89- Which of the following is an indication for FFP?
- a. volume repletion
- b. reversal of bleeding due to clopidogrel
- c. A patient who received 1 PRBC
- d. A patient who is on warfarin with a high INR

- A

- Healthy individuals with minimal anticipated blood loss during surgery- 6-7 g/dl
- Cardiac or pulmonary disease- 10g/dl
- In case of elective surgery:
  - Correctable cause of anemia- delay surgery
  - Uncorrectable cause – blood trasfusion
- Blood transfusion are also required during emergency surgeries

Indication for RBC

a. Symptomatic anemia, bleeding patient.
b. Hb < 7 g/dl.
c. Hb < 10g/dl in acute MI, congestive heart failure, angina, transient ischemic attack, syncope.
d. Hb < 8 g/dl in thalassemia.

2. Platelet rich plasma-
a. When bleeding due to reduced platelet or inadequate platelet function.
b. PRP increases plate count by 4000-8000/mm3.
c. ABO matching required.

- D

3. Fresh frozen plasma
- ABO matching required Rh compatibility not required.
- Indication-

a. Factor 5 and 11 deficiency.
b. Dilutional coagulopathy.
c. Coagulopathy of liver diseases.
d. HELLP Syndrome
e. Reversal of warfarin anticoagulation

4. Cryoprecipitate
- Indications

a. Factor 8 deficiency.
b. Von willebrand disease.
c. Hyperfibrinogenemia with <100 mg/dl.
d. Factor 13 deficiency.

Anticoagulation reversal

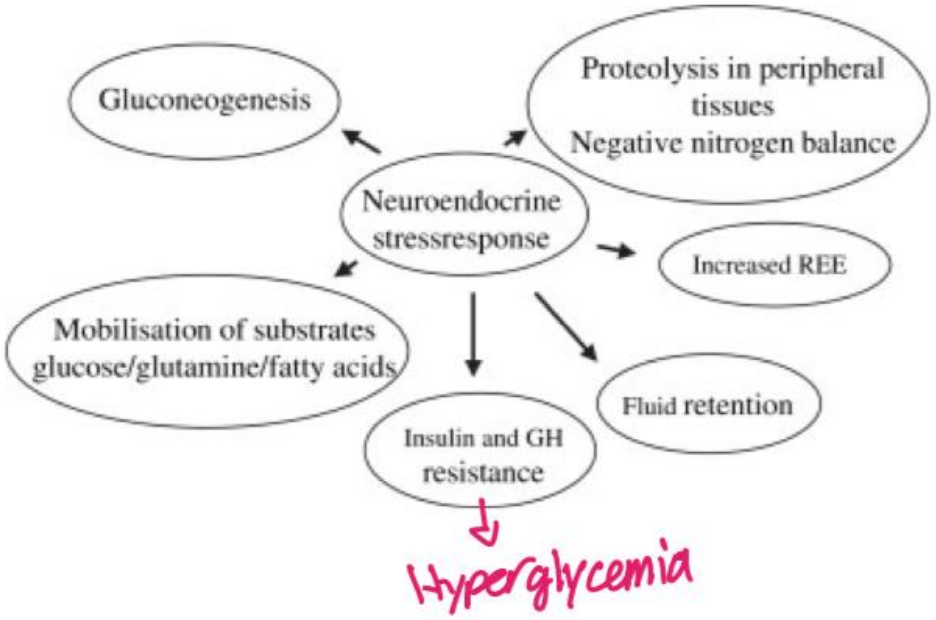
ANTICOAGULANT	REVERSAL AGENT	NOTES
Heparin	Protamine sulfate	⊕ charged peptide that binds ⊖ charged heparin
Warfarin	Vitamin K (slow) +/– FFP or PCC (rapid)	
Dabigatran	Idarucizumab	Monoclonal antibody Fab fragments
Direct factor Xa inhibitors	Andexanet alfa	Recombinant modified factor Xa (inactive)

- 90- not commonly seen with diarrhea?
- a. alkalosis
- b. hypercalcemia

- 91- All of the following can present in an acute trauma patient except:
- a. hypoglycemia
- b. lipolysis.
- c. hypercatabolism
- d. gluconeogenesis.

- A (Acidosis + hypovolemia)

- A



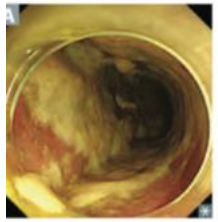
- 92- A patient presenting to the ER after an RTA. He is conscious and communicative. He was
- found to be hypotensive and is complaining of abdominal pain. What is the best next
- step?
- a. Jaw thrust
- b. chin lift
- c. intubation
- d. IV line
- E. emergent laparotomy

- 93- A patient was being treated for lower leg ulcer with a cephalosporin. He developed
- diarrhea and tested positive for C.diff with the stool toxin test. Best next step?
- a. Switch to oral vancomycin
- b. start metronidazole therapy

- D
- First 3 choices if the patient was non conscious

- A

Clostridioides difficile



Produces toxins A and B, which damage enterocytes. Both toxins lead to watery diarrhea → pseudomembranous colitis A. Often 2° to antibiotic use, especially clindamycin, ampicillin, cephalosporins, fluoroquinolones; associated with PPIs.

Fulminant infection: toxic megacolon, ileus, shock.

Difficile causes diarrhea.

Diagnosed by PCR or antigen detection of one or both toxins in stool.

Treatment: oral vancomycin or fidaxomicin. For recurrent cases, consider repeating prior regimen or fecal microbiota transplant.

Clostridioides difficile infection — Table

Antibiotic therapy for C. difficile infection in adults [1][2][3]

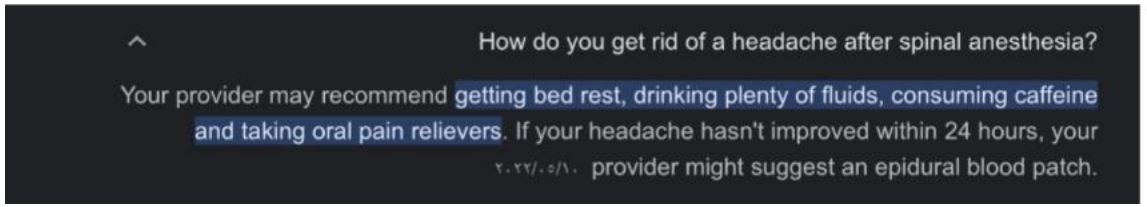
Category		Treatment options
Initial episode	Nonsevere CDI or severe CDI	• First-line ◦ Oral **fidaxomicin** DOSAGE [3] ◦ OR oral vancomycin DOSAGE • Second-line for **nonsevere** cases (if vancomycin and fidaxomicin are unavailable or inappropriate, e.g., in patients with allergies): oral metronidazole DOSAGE [2]
	Fulminant CDI	• First-line: high-dose oral vancomycin DOSAGE [2] • Consider adding IV metronidazole DOSAGE [2] • In patients with paralytic ileus, consider adding vancomycin enemas. DOSAGE
Recurrent CDI	First recurrence	• If the initial episode was treated with standard-dose vancomycin: ◦ Oral fidaxomicin DOSAGE [3] ◦ OR tapered and pulsed oral vancomycin DOSAGE • If the initial episode was treated with metronidazole: [2] ◦ Oral fidaxomicin DOSAGE ◦ OR standard-dose oral vancomycin DOSAGE
	Subsequent recurrences	• Any of the following: ◦ Oral fidaxomicin DOSAGE ◦ Standard-dose oral vancomycin DOSAGE followed by oral rifaximin DOSAGE ◦ Tapered and pulsed oral vancomycin DOSAGE

- 94- Which of the following is associated with the highest perioperative mortality?
- a. MI 4 months ago
- b. Aortic stenosis
- c. CHF with Hb 7 “not sure”
- d. Frequent PVCs
- e. Age more than 70

- 95- A patient had epidural anesthesia for a lower abdominal surgery, she has headache after
- the procedure, which of the following is not done to decrease the headache?
- a. bed rest
- b. analgesics
- c. decrease caffeine intake
- d. epidural blood patch
- e. oral hydration

- C

- C


How do you get rid of a headache after spinal anesthesia?
Your provider may recommend getting bed rest, drinking plenty of fluids, consuming caffeine and taking oral pain relievers. If your headache hasn't improved within 24 hours, your provider might suggest an epidural blood patch.
٢٠٢٢/٠٥/١٠

- 96- Which of the following is false about hypercalcemia:
- a. breast cancer metastasis is an unusual cause
- b. severely hypercalcemic patient will have signs of extracellular fluid volume deficit
- c. Volume repletion would result in increased urinary excretion of calcium
- d. Hypercalcemic patients will have signs and symptoms similar to hyperglycemia

- 97- Not given in cardiogenic shock: (both could be given according to the internet)
- a. nitroprusside
- b. norepinephrine

- A

USMLE-style Question

Key learnings: signs of hypercalcemia

- Painful bones 
- Renal stones 
- Abdominal groans 
- Sitting on the throne (polyuria, constipation) 
- & Psychiatric overtones. 

For causes of hypercalcemia, remember "Thinking Chimpanzees!"

Thinking: Thiazides, thyroid
Calcium supplementation
Hyperparathyroidism
Immobilization, inherited (FHH)
Milk-alkali synd., meds (thiazides, lithium)
Paraneoplastic PTHrP
Adrenal insufficiency
Neoplasm (multiple myeloma, breast, lung)
Zollinger-Ellison syndrome
Excessive vitamin D
Excessive vitamin A
Sarcoidosis & granulomatous diseases

- A

Management of cardiogenic shock [46][53][54]

Classification	Treatment

Dry and cold	• Fluid bolus only in cases of hypotension and/or PCWP < 15 mm Hg
	• Consider a fluid challenge (250–500 mL). [55][46]
	• If shock persists, start a vasopressor, ideally, norepinephrine.
	• Administer inotropic support if hypoperfusion persists despite fluids and vasopressors. [45]
	  ◦ **Dobutamine**
	  ◦ Milrinone
	  ◦ Dopamine

Wet and cold	• Administer inotropic therapy to maintain perfusion. • If shock persists, start a vasopressor (ideally, norepinephrine). • Once systolic BP is > 90 mm Hg, start diuretic therapy for AHF. • If symptoms persist, start treatment for refractory AHF.

- 98- Antibiotic given for cholecystectomy prophylaxis:
- a. Cefuroxime
- b. Cefazolin
- c. Ceftriaxone
- d. Metronidazole

- 99- Drug of choice for hydatid cyst:
- a. Mebendazole
- b. Ketoconazole
- c. Albendazole

- B (for any surgery)

Table 1. Antibiotic Prophylaxis to Prevent Surgical Site Infections

Surgery	*Common pathogens*	*Recommended antimicrobials**
Cardiothoracic	*Staphylococcus aureus,* coagulase-negative staphylococci	Cefazolin, cefuroxime sodium (Zinacef), or vancomycin
Gastrointestinal	Enteric gram-negative bacteria, anaerobes, enterococci	Cefoxitin (Mefoxin), cefotetan (Cefotan), ampicillin/sulbactam (Unasyn), or cefazolin plus metronidazole
Gynecologic (vaginal, abdominal, or laparoscopic hysterectomy)	Enteric gram-negative bacteria, group B streptococci, enterococci, anaerobes	Cefoxitin, cefotetan, cefazolin, or ampicillin/sulbactam
Orthopedic	*S. aureus,* coagulase-negative staphylococci	Cefazolin, cefuroxime sodium, or vancomycin
Vascular	*S. aureus,* coagulase-negative staphylococci, enteric gram-negative bacilli	Cefazolin or vancomycin

- C

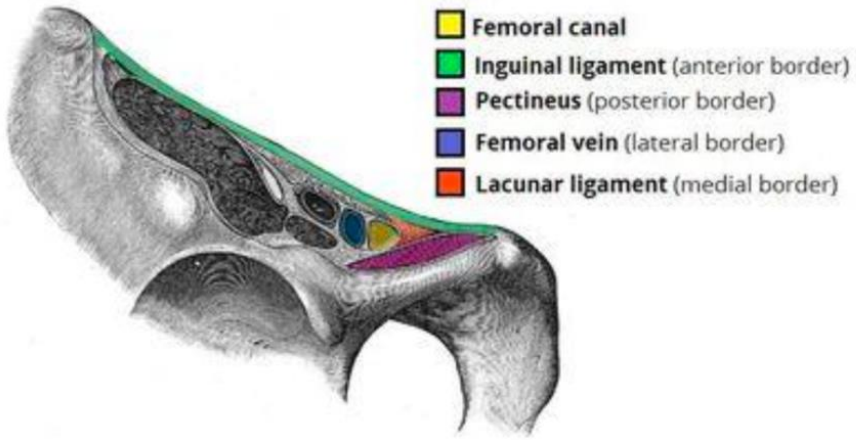
1. **Chemotherapy:**
   - Alone is not useful, so it should be combined with other modalities of treatment.
   - Albendazole (ABZ) and ABZ sulfoxide (the active metabolite) are the most effective adjuvant chemotherapy.

ABZ alone can cure 10-30% of cases, and causes degeneration of the cyst in up to 92% of the cases, so it should be combined with percutaneous drainage or surgery)

- 100- Wrong about femoral canal:
- a. Inguinal ligament is the superior border of femoral canal
- b. Pectinular line posterioly to femoral canal
- c. Contains lymph Nodes
- d. lacunar ligament is the lateral border

- 101- All of following considered distributive shock except:
- a. anaphylactic
- b. hemorrhagic
- c. septic

- D (medial)


Femoral canal
Inguinal ligament (anterior border)
Pectineus (posterior border)
Femoral vein (lateral border)
Lacunar ligament (medial border)

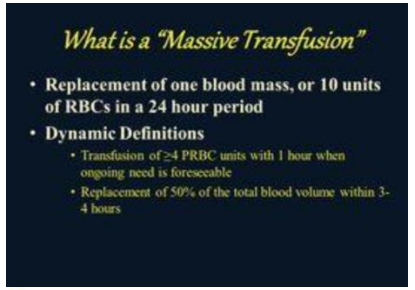
- B

- 102- Unlikely injured site to cause hypovolemic shock:
- a. Intracranial
- b. Spleen

- 103- Wrong about Massive blood transfusion:
- a. One blood volume in 24
- b. 10 units in 12 hrs
- c. 50% blood volume in 3 hrs
- d. 4 units in one hour
- e. Transfusion needing FFP to treat coagulopathy

- A

- E



Massive transfusion

Definition

- The replacement of a large volume of blood in response to massive hemorrhage
- There is no universal threshold for a massive transfusion; proposed values include: [54][55]
  - Complete replacement of a patient's blood volume (~ 10 units of RBCs) within 24 hours
  - Replacement of ≥ 50% of a patient's blood volume (~ 5 units of RBCs) within 3 hours
  - Blood loss replacement at a rate of > 150 mL/minute
  - Transfusion of ≥ 3 units of pRBCs within 1 hour

Fresh frozen plasma [24][33][17][31]

Recommendations in this section are consistent with the 2010 AABB guideline for plasma transfusion. [31]

- **Content**
  - Plasma, including all **coagulation factors** and plasma proteins
  - All cellular components are removed from the transfusion product.
  - Unit volume: ~200–300 mL [17][22]
- **Compatibility requirements**: See "ABO blood type system."
  - **ABO compatibility** must be considered. [1]
  - Rh(D) matching: not required [22]
- **Indications** [24][17]
  - Management of coagulopathy in patients with multiple clotting factor deficiencies (e.g., due to **liver cirrhosis**, **DIC)**
  - Prevention of dilutional coagulopathy in massive transfusion
  - Plasma exchange transfusion, e.g., in TTP [44]
  - Management of some coagulation factor deficiencies if no specific concentrate for treatment exists
  - Alternative therapy for:
    - Management of plasma protein deficiencies if recombinant products are unavailable
    - Immediate reversal of **warfarin** in patients with life-threatening bleeding or intracranial hemorrhage if 4-factor PCC is unavailable [24]
- **Effect**
  - Correction of both isolated and multiple coagulation factor deficiencies
  - Intravascular volume expansion roughly equivalent to unit volume

- 104- About hernias what is true:
- a. Strangulation mortality is above 10% (100%)
- b. Indirect hernia are 20% of inguinal hernia
- c. Females have femoral hernia more than inguinal hernia
- d. Are second to adhesions as a cause of intestinal obstruction

- 105- Sepsis with organ failure and persistent hypotension is the definition of:
- a. Septic shock
- b. SIRS
- c. Severe sepsis
- d. MODS

- D
- A

- 106- Not part of the SIRS criteria:
- a. Temperature < 36
- b. HR >90
- c. WBC > 12000 or < 4000
- d. RR>8 or PaCO2 >23mmHg
- e. Cell bands > 10%

- 107- Antibiotic prophylaxis for inguinal hernia repair with mesh:
- a. Vancomycin
- b. 1st generation cephalosporin (cefazolin)
- c. 2nd generation cephalosporin
- d. 3rd generation cephalosporin

- D

Terminology

- Systemic Inflammatory Response Syndrome (SIRS)
  - Temp > 38 or < 36
  - HR > 90
  - RR > 20 or PaCO2 < 32
  - WBC > 12 or < 4 or Bands > 10%

TWO out of four criteria
acute change from baseline

- Sepsis
  - The systemic inflammatory response to infection.
- Severe Sepsis
  - Organ dysfunction secondary to Sepsis.
  - e.g. hypoperfusion, hypotension, acute lung injury, encephalopathy, acute kidney injury, coagulopathy.
- Septic Shock
  - Hypotension secondary to Sepsis that is resistant to adequate fluid administration and associated with hypoperfusion.

- B

- 108- all are risk factors for C. difficile infection except:
- a. smoking
- b. PPI
- c. Prolonged broad-spectrum antibiotics use
- d. Severely ill patient

- 109- Rare hernia in females:
- a. direct inguinal hernia
- b. indirect inguinal hernia
- c. femoral hernia
- d. incisional hernia
- e. umbilical hernia

- A

Clostridioides difficile

Produces toxins A and B, which damage enterocytes. Both toxins lead to watery diarrhea → pseudomembranous colitis A. Often 2° to antibiotic use, especially clindamycin, ampicillin, cephalosporins, fluoroquinolones; associated with PPIs.
Fulminant infection: toxic megacolon, ileus, shock.

Difficile causes diarrhea.
Diagnosed by PCR or antigen detection of one or both toxins in stool.
Treatment: oral vancomycin or fidaxomicin. For recurrent cases, consider repeating prior regimen or fecal microbiota transplant.

- C

What is the least common type of hernia in female?

Femoral hernia.

A femoral hernia is a less-common type of groin hernia that occurs in the femoral canal, ٢٠٢٣/٠٢/٠٧ which runs underneath the inguinal canal. Fatty tissue may poke through.

But it is more common in F>M

- 110- All are absolute contraindications to insert NGT except:
- a. confirmed esophageal rupture
- b. suspected esophageal rupture
- c. esophageal stricture (Most likely)
- d. foreign body in esophagus

- 111- False about IV fluids :
- A. NaCL has 154 mEq Na & 154 mEq Cl
- B. RL is the most physiological
- C. hypotonic fluids can increase intracerebral pressure (or edema)
- D. colloids can cause volume overload
- E. G5W is enough to support nutrition for a fasting patient

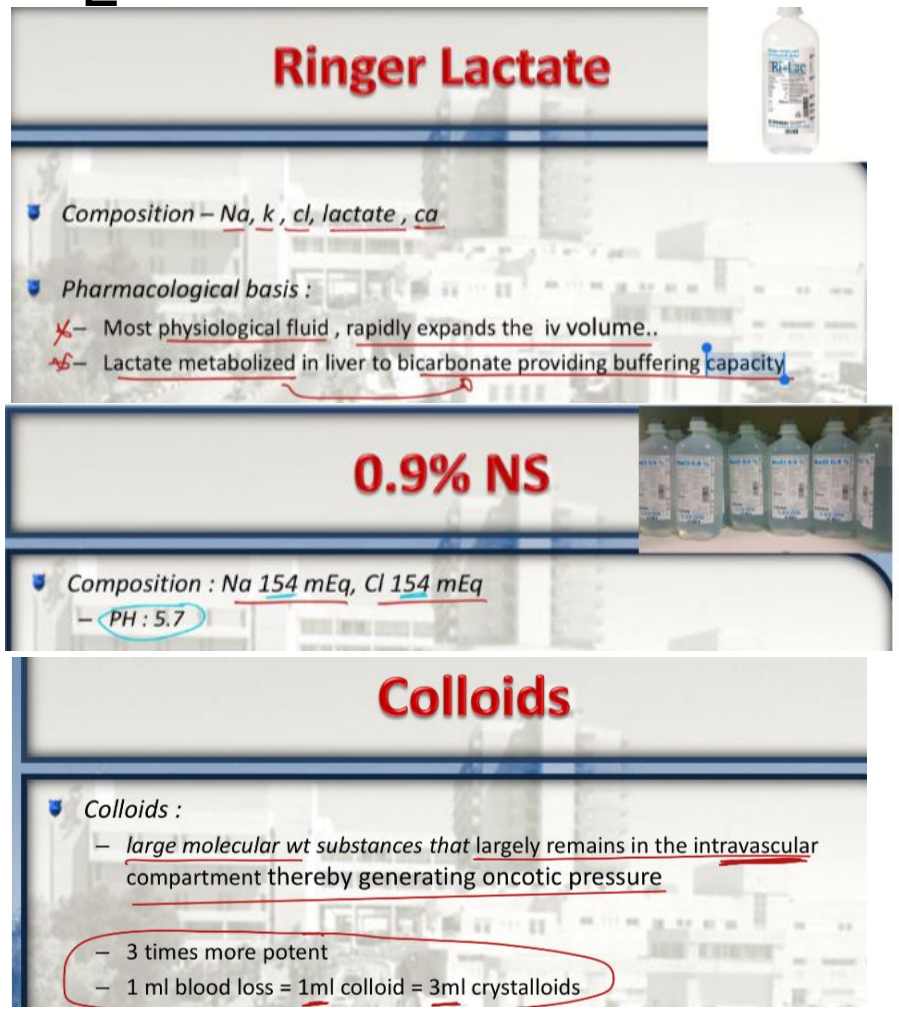
- C (not absolute)

CONTRAINDICATIONS

Nasogastric intubation is contraindicated in patients with;

- esophageal stricture because of the risk for esophageal perforation,
- esophageal varices because tube placement may trigger variceal bleeding which can be life-threatening
- basilar skull fracture or facial fracture due to the potential for intracranial misplacement
- a bleeding diathesis, minimal trauma to the pharynx, esophagus, or stomach from nasogastric tubes can also lead to severe bleeding and, thus, tubes are avoided whenever possible.

- E



- 112- All given for treatment of pseudo membranous colitis except:
- a. metronidazole
- b. vancomycin
- c. steroids
- d. stop offending antibiotic

- 113- All risk factors for c.difficle infections except:
- a. vegetarian
- b. long course of antibiotics

- C

- A

✅ **(C) Steroids → Not recommended for treatment**

- **Steroids** are **not indicated** for treating pseudomembranous colitis due to **C. diff** infection. In fact, they may worsen the infection and increase the risk of complications, such as **toxic megacolon**.

- 114- High velocity penetrating trauma, transverse abdomen at mid umbilicus, which is likely to be injured:
- a. small bowel
- b. liver
- c. kidney
- d. spleen

- 115- Source of infection after inguinal hernia repair is:
- a. Patient’s skin (NOT SURE)
- b. instruments
- c. surgeon

- A

- A

- 116- False about hypermagnesemia:
- A. associated with ECG changes consistent with hyperkalemia
- b. Deep tendon reflexes are exaggerated
- c. Levels are parallel with potassium levels

- 117- most important factor for wound healing:
- a. vit.D
- b. vit.C
- c. carbohydrate
- d. caloric intake
- e. balanced diet

- B (lost usually)
- E

Electrolyte disturbances

ELECTROLYTE	LOW SERUM CONCENTRATION	HIGH SERUM CONCENTRATION
Sodium	Nausea, malaise, stupor, coma, seizures	Irritability, stupor, coma
Potassium	U waves and flattened T waves on ECG, arrhythmias, muscle cramps, spasm, weakness	Wide QRS and peaked T waves on ECG, arrhythmias, muscle weakness
Calcium	Tetany, seizures, QT prolongation, twitching (eg, Chvostek sign), spasm (eg, Trousseau sign)	Stones (renal), bones (pain), groans (abdominal pain), thrones (↑ urinary frequency), psychiatric overtones (anxiety, altered mental status)
Magnesium	Tetany, torsades de pointes, hypokalemia, hypocalcemia (when $[Mg^{2+}] < 1.0$ mEq/L)	↓ DTRs, lethargy, bradycardia, hypotension, cardiac arrest, hypocalcemia
Phosphate	Bone loss, osteomalacia (adults), rickets (children)	Renal stones, metastatic calcifications, hypocalcemia

- 118- Source of protein in pts with trauma is:
- a. liver
- b. plasma protein
- c. skeletal muscle

- 119- About erysipelas, all are true except:
- a. caused by group A Strep
- b. Painful
- c. Red, flat, skin lesions
- d. Face is common site
- e. Treated with penicillin

- A

- C

(Erysipeles)

Definition: skin infection, Affects the **upper** dermis

Organism: B-hemolytic streptococci (A) or S.pyogens

Important characteristics:

- Red, tender, **demarcated** and painful plaque
- Occur in infant and young children

Treatment:

Penicillin (IV or Oral)

- 120- SSI, usually occurs when?

- 121- Prophylactic antibiotic not indicated in:
- a. Hernioplasty
- b. Herniorrhaphy
- c. Duct ectasia
- d. Colectomy

- 4-5 days post op

- B

1. Herniorraphy:

- **Definition**: A surgical procedure that involves the **suturing** of the hernia defect to close the opening in the abdominal wall or other affected tissue.

2. Hernioplasty:

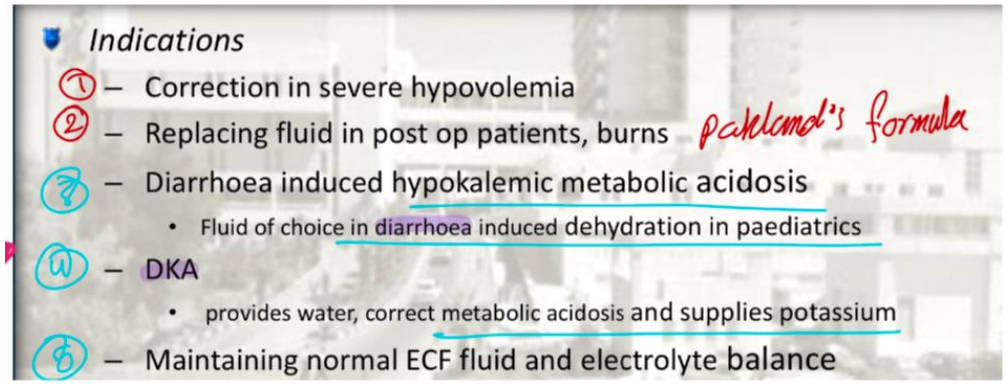
- **Definition**: A more modern term that refers to the **surgical repair** of a hernia, typically involving the **placement of a mesh** to reinforce the weakened tissue.

- 122- All are risk factors of wound infection except:
- a. DM
- b. Immunosuppression
- c. Vit C def
- d. Young age

- 123- A patient with multiple fractures and hypovolemic shock, what is the initial resuscitation?
- a. Blood
- b. FFP
- c. Hypertonic saline
- d. Ringer’s lactate

- D

- D

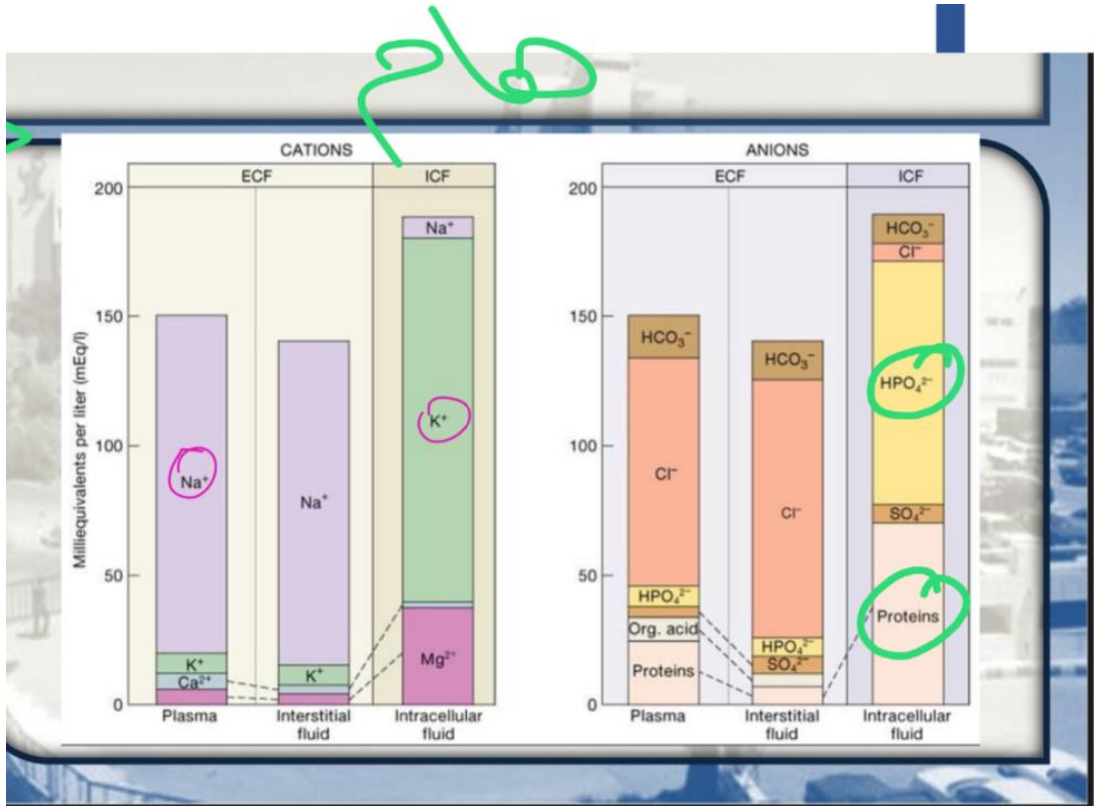

Indications
1 – Correction in severe hypovolemia
2 – Replacing fluid in post op patients, burns
Parkland's formula
3 – Diarrhoea induced hypokalemic metabolic acidosis
• Fluid of choice in diarrhoea induced dehydration in paediatrics
4 – DKA
• provides water, correct metabolic acidosis and supplies potassium
5 – Maintaining normal ECF fluid and electrolyte balance

- 124- Body response to major trauma/ shock includes one of the following:
- a. Increased Na and water secretion
- b. Increased renal perfusion
- c. Hyperkalemia
- d. Hypoglycemia
- e. Decreased cortisol production

- 125- Compared to ICF, the ECF has one of the following:
- a. Lower Cl-
- b. Higher K+
- c. Lower protein
- d. Lower pH
- e. Bigger in volume

- C

- C


CATIONS
ANIONS
ECF
ICF
Milliequivalents per liter (mEq/l)
200
150
100
50
0
Na+
K+
Ca2+
Mg2+
HCO3−
Cl−
HPO4 2−
SO4 2−
Org. acid
Proteins
Plasma
Interstitial fluid
Intracellular fluid

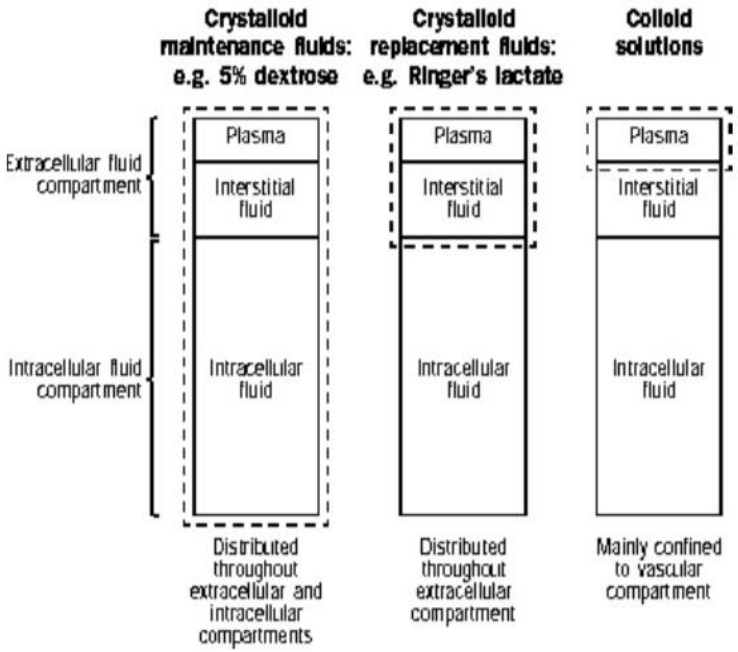
- 126- Which of the following is true about femoral hernia?
- a. More common in middle aged and older women
- b. Can be above and medial to the inguinal ligament

- 127- What is the volume of distribution of crystalloids?
- a. ECF
- b. ICF
- c. Transcellular fluid

- A

The femoral canal lies just below the inguinal ligament and lateral to the pubic tubercle. Consequently, a femoral hernia will pass below and lateral to the pubic tubercle, whereas an inguinal hernia will be seen above and medial to it. The key landmark for the femoral canal is the femoral vein.

- A



- 128- After a CVA, an elective surgery must be delayed for how long?
- a. 7 days
- b. 6 weeks (for MI)
- c. 3 months
- d. 6 months
- e. 1 year

- 129- A 24-year-old healthy male, undergoing hernia repair at 12mid-day, he started fasting at midnight
- (12 hours fasting), what is the maintenance fluid therapy?
- a. 1250 ml NS+ 500 ml D5W
- b. 1250 ML D5W+ 500 ml NS
- c. 1000 ml D5W+ 2500ml RL
- d. 1000 ml RL+ 2500 ml D5W

- D

- B

	Fluid deficit	Ongoing lossess	Maintenance fluids
Definition	% of dehydration	Vomiting, drains, urine output, NGT	Insensible losses via skin, breathing and in stool
Ideal fluid type	0.9% NaCl	0.9% NaCl with 20mmol KCl	0.9% NaCl with 5% glucose
Calculation	% dehydration X weight in kg X 10	Add all the fluids lost in drains, vomiting etc	4:2:1 formula

Severe dehydration is
- **10-15% of body weight in infants**
- **6-9% of body weight in adults**

- 130- 10 Kgs infant, 11 months old, temp 38 C, what is the maintenance fluid per day?
- a. 300 ml
- b. 500 ml
- c. 800 ml
- d. 1200 ml
- e. 1500 ml

- 131- At which day post-op will the protein start to be metabolized?
- a. 5
- b. 7 NOT SURE
- c. 10
- d. 13
- e. 15

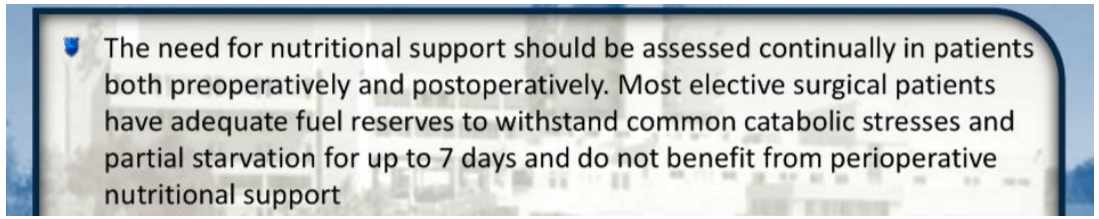
- D

The standard calculation for maintenance fluid in infants is typically based on the Holliday-Segar method. For the first 10 kg, the recommendation is approximately 100 mL/kg/day. For a 10-kg infant, that would be about 1000 mL per day.

In the setting of a fever, it's common practice to increase maintenance fluids by about 10% for each degree Celsius above normal (37°C). With a temperature of 38°C, that's roughly an extra 10%, making the estimated requirement approximately 1100 mL per day. Among the options given, the closest choice is:

✅ **(D) 1200 mL**

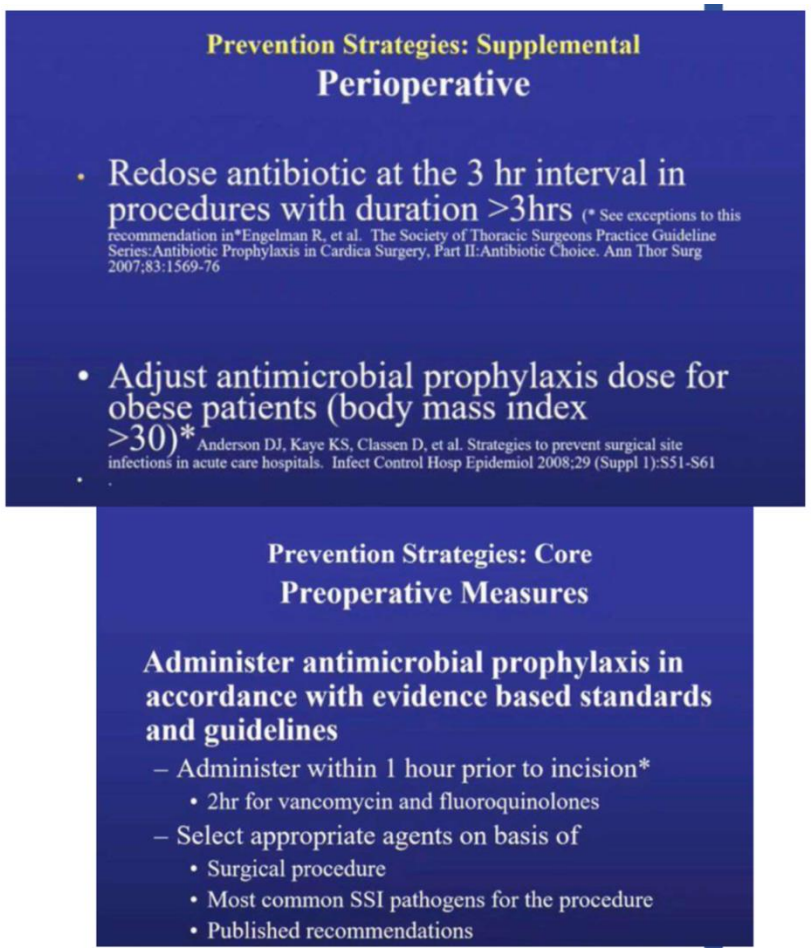
- B



- 132- All of the following statements regarding the use of systemic prophylactic antibiotics are true, EXCEPT:
- A. The goal is to attain high tissue level at time of incision.
- B. Should be as broad-spectrum as possible in most cases.
- C. Are usually given as a single dose.
- D. They are not effective if given 3 hours after making the incision.
- E. Are not effective in reducing postoperative respiratory infections

- 133- Concerning erysipelas, all of the following statements are true, EXCEPT:
- A. Is caused by staphylococcus.
- B. Is typically painless.
- C. Is effectively treated by penicillin.
- D. Hands are mainly involved.
- E. The lesion has ill-defined flat edge.

- B

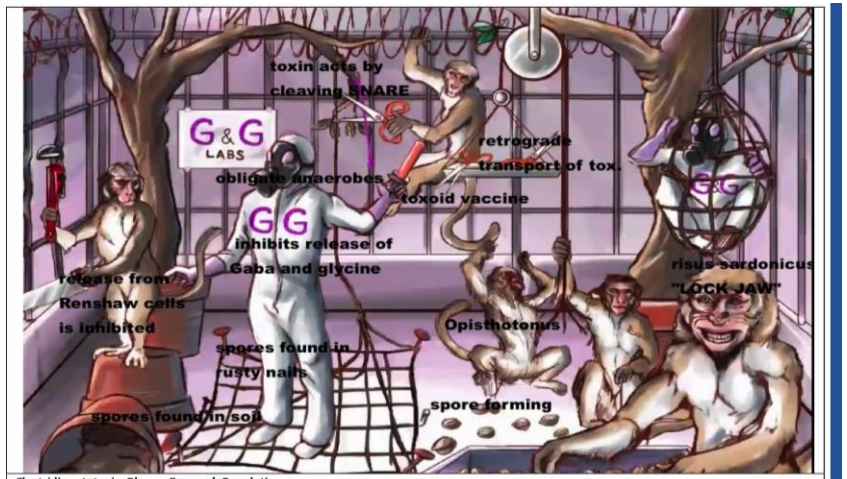

Prevention Strategies: Supplemental
Perioperative
Redose antibiotic at the 3 hr interval in procedures with duration >3hrs (* See exceptions to this recommendation in*Engelman R, et al. The Society of Thoracic Surgeons Practice Guideline Series:Antibiotic Prophylaxis in Cardica Surgery, Part II:Antibiotic Choice. Ann Thor Surg 2007;83:1569-76
Adjust antimicrobial prophylaxis dose for obese patients (body mass index >30)* Anderson DJ, Kaye KS, Classen D, et al. Strategies to prevent surgical site infections in acute care hospitals. Infect Control Hosp Epidemiol 2008;29 (Suppl 1):S51-S61
Prevention Strategies: Core
Preoperative Measures
Administer antimicrobial prophylaxis in accordance with evidence based standards and guidelines
– Administer within 1 hour prior to incision*
• 2hr for vancomycin and fluoroquinolones
– Select appropriate agents on basis of
• Surgical procedure
• Most common SSI pathogens for the procedure
• Published recommendations

- E

- 134- tetanus, all of the following statements are true, EXCEPT:
- A. The majority of cases are due to endogenous infection.
- B. It is caused by gram negative anaerobic bacilli.
- C. Tetanolysin is the most important neurotoxin responsible for the disease
- D. The disease is characterized by episodes of convulsions with short period of muscle relaxation in
- between.
- E. Penicillin and metronidazole are used to treat an established infection.

- 135- All of the following statements about surgical site infections (SSIs) are true, EXCEPT:
- A. Infection in the musculofascial tissues is known as deep SSI.
- B. The patient may have systemic signs in a minor SSI.
- C. Infection causing delay in hospital discharge is a major SSI.
- D. The differentiation between major and minor SSIs is extremely important.
- E. Surveillance for surgical site infection should be done for a year after implanted joint surgery.

- B



Clostridium tetani – Rhesus Research Revolution

1. Violet Hues – Clostridium Genus is Gram Positive
2. Researcher in the middle with gas mask– Obligate anaerobes
3. Walnuts – Spore forming
4. Rusty nails and barbed wire, pots of soil – Clostridium is found in the dirt and enters the body through a puncture wound
5. **The two classic symptoms**
   1. Rhesus monkeys that are grinning - Spastic paralysis leading to rigidity, rhesus (to grin) sardonicus (evil), also accompanies with lock jaw.
   2. Monkey in the exaggerated arching back position – reminds us of Opisthosomas
6. **Pathogenesis**
   1. Puncture wound occurs either by nail or barbed wire with tetany spores on it, spores are embedded in the flesh and the organism vegetates and stays at the wound site. It will release tetanus toxin that will cause all the symptoms
2. Monkey operating a pulley with scissors on jt - Tetanus toxin will travel **retrograde** through the motor axons to the spinal cord.
3. Monkey cutting the snare trap - Tetanus toxin will cleave snare and inhibit exocytosis of the neurotransmitter into the synapse (GABA and glycine) or Renshaw cells.
4. G&G labs – to represent 2 type of inhibitory neurons, GABA and Glycine. If these are inhibited it will result in uncontrolled firing of the motor neurons leading to spastic paralysis.
5. Monkey with wrench and saw - Renshaw cells will sense over activity of nearby motor neurons and when they sense this activity they will attempt to fire and inhibit the motor neuron. So the GABA and Glycine release from these cells is inhibited leading to spasm
7. Researcher with Vaccine in hand – Toxoid Vaccine, toxin conjugated to protein. Antibody response to the toxin.

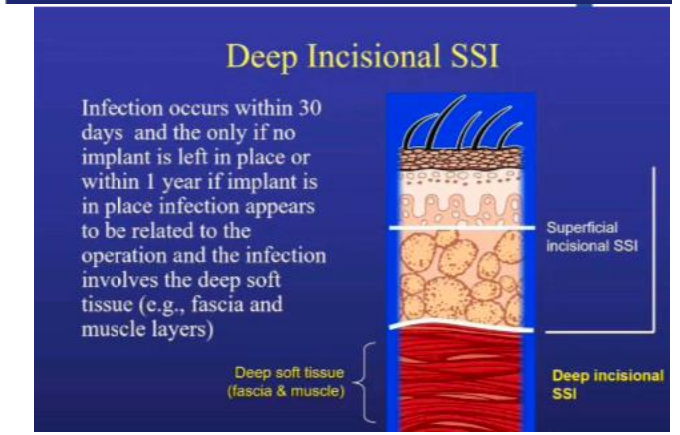
Treatment

In addition to initial supportive care, management should focus on controlling the infection, eliminating toxin production, and neutralizing circulating toxins.

- **Wound cleaning and debridement**
- **Antibiotic treatment**
  - Drug of choice: metronidazole

- **Tetanospasmin**: reaches the CNS through **retrograde axonal transport**
  - Toxin binds to receptors of peripheral nerves and is then transported to interneurons (Renshaw cells) in the CNS via vesicles [1][2]
  - Acts as protease that cleaves **synaptobrevin**, a SNARE protein → prevention of inhibitory neurotransmitters (i.e., GABA and glycine) release from **Renshaw cells** in the spinal cord → uninhibited activation of alpha motor neurons → muscle spasms, rigidity, and autonomic instability
- **Tetanolysin**: causes hemolysis and has cardiotoxic effects

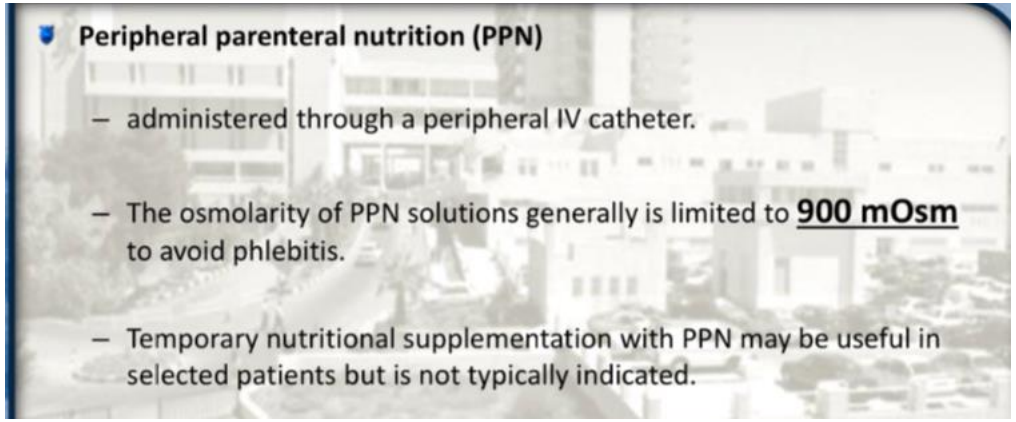
- B



- 136- Which of the following statement concerning intravenous nutritional support is TRUE?
- A. Concentrations of glucose no higher than 5% should be used to avoid peripheral vein sclerosis
- B. A major disadvantage of the peripheral technique is limited caloric delivery
- C. If total parenteral nutrition is required, access to the superior vena cava via the external jugular vein
- is the most suitable site
- D. Venous thrombosis is an uncommon complication for long-term central vein catheterization
- E. amino acid solutions should only be administered centrally

- 137- A 40 year old male patient involved in a road traffic accident, at the accident and emergency
- department his Glasgow coma scale was 15, but he had shortness of breath, hypotension with
- tachycardia. He had a patent airway with difficulty in breathing. The air entry was reduced and hyper
- resonant on the right side of the chest. The most appropriate next step is:
- A. Urgent chest x ray
- B. IV access and blood transfusion
- C. Intubation and ventilation
- D. Needle thoracostomy
- E. Diagnostic peritoneal lavage

- B



- D (pneumothorax)

- 138- All of the following is correct about Femoral hernia EXCEPT:
- A. More common in women
- B. The risk of strangulation is more as compared with inguinal hernia
- C. It present as a swelling below and medial to Pubic tubercle
- D. The sac may contain omentum
- E. Can be a cause of small bowel obstruction

- 139- A 35 year old male patient, admitted with abdominal pain, distension and excessive vomiting. He
- had previous history of appendectomy at the age of 18. The most likely cause for this illness is:
- A. Internal hernia
- B. Right colon cancer
- C. Volvulus
- D. Adhesions
- E. Acute mesenteric ischaemia

- C

The femoral canal lies just below the inguinal ligament and lateral to the pubic tubercle. Consequently, a femoral hernia will pass below and lateral to the pubic tubercle, whereas an inguinal hernia will be seen above and medial to it. The key landmark for the femoral canal is the femoral vein.

- D

- 140- Concerning postoperative atelectasis, all of the following statements are true EXCEPT:
- A. This is the most common cause of postoperative fever that starts on postoperative day four.
- B. The physical examination may demonstrate dullness to percussion over the involved area and
- diminished or absent breath sounds.
- C. The most common cause of postoperative atelectasis is bronchial obstruction by plugs of tenacious
- sputum.
- D. Postoperative atelectasis is best managed by standard chest physiotherapy, deep breathing,
- coughing, and suctioning of patients who are intubated.
- E. Judicious use of postoperative analgesia is an essential adjunct permitting patients to breathe deeply,
- cough forcefully and participate in chest physiotherapy

- 141- The most commonly involved organ in penetrating abdominal trauma is:
- A. Small bowel
- B. Colon
- C. Liver
- D. Spleen
- E. Kidney

- A (day 2)

Postoperative Fever

- What is the number #1 cause of fever POD #1?
- Atelectasis ✱ most common cause
- Management: IS (incentive spirometry), early ambulation
- Work-up > 48h:
- H&P
- Blood cultures ✓
- UA/urine culture ✓
- CXR ✓
- Sputum culture ✓
- ...then Treat the Fever ✓

Pulmonary complications

- Atelectasis – peripheral alveolar collapse due to shallow tidal breaths, MC cause of fever within 48h

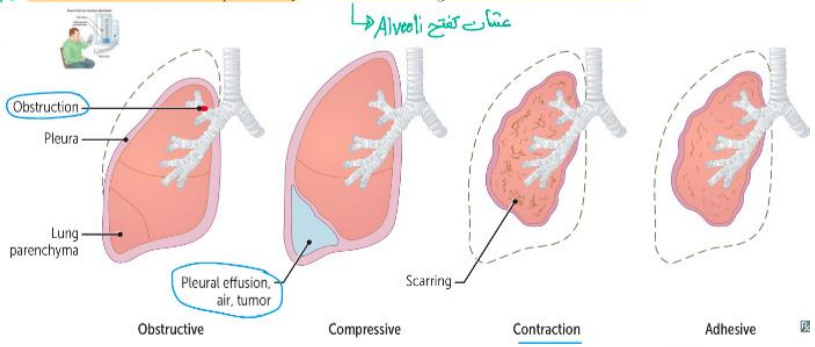
Atelectasis

Alveolar collapse (right upper lobe collapse against mediastinum in A). Multiple causes:

1. Obstructive—airway obstruction prevents new air from reaching distal airways, old air is resorbed (eg, foreign body, mucous plug, tumor)
2. Compressive—external compression on lung decreases lung volumes (eg, space-occupying lesion, pleural effusion)
3. Contraction (cicatrization)—scarring of lung parenchyma that distorts alveoli (eg, sarcoidosis)
4. Adhesive—due to lack of surfactant (eg, NRDS in premature infants)

Tx: Decreased via incentive spirometry or ↑ PEEP during mechanical ventilation.

↳ Alveoli عشان تفتح



↳ ↓ Breath sound
↳ complete collapse of the lung will cause obstruction of the main bronchus

- A

Atelectasis is often precipitated by postoperative pain (poor cough) and poor lung compliance, retained airway secretions, posterior tongue prolapse, airway edema, or anesthetic effects, which can all interfere with spontaneous deep breathing and coughing.

- 142- How many kilocalories per gram are contained in the glucose used in parenteral formulas?
- A. 4.0
- B. 5.5
- C. 9.0
- D. 10.0
- E. 11.9

- 143- Re-feeding syndrome is characterized by which of the following electrolyte abnormalities?
- A. Hyponatremia, hypokalemia, hypercalcemia
- B. Hyperphosphatemia, hypokalemia, hypocalcemia
- C. Hypokalemia, hypomagnesemia, hypophosphatemia
- D. Hypocalcemia, hyponatremia, hypomagnesemia
- E. Hyperglycemia, hyperkalemia, hyperphophatemia

• A

CALORIE SOURCES

- **CARBOHYDRATES**

Enteral	Parenteral
4 kcal/gram	3.4 kcal/gram

- **FAT**

Enteral	Parenteral
9 kcal/gram	kcal/mL (product-specific)

- **PROTEIN**

Enteral	Parenteral
4 kcal/gram	4 kcal/gram

• C

Refeeding syndrome

– a potentially lethal complication in patients who are severely malnourished. Alterations in phosphate, potassium, magnesium, and thiamine can be seen which can lead to harmful effects on the cardiac, respiratory, hepatic, neuromuscular, and hematologic systems

» (Eur J Clin Nutr. 2008;62:687-694).

Refeeding syndrome—often occurs in significantly malnourished patients with sudden ↑ calorie intake → ↑ insulin → ↓ PO_4^{3-}, ↓ K^+, ↓ Mg^{2+} → cardiac complications, rhabdomyolysis, seizures. Treatment: nutritional rehabilitation, psychotherapy, olanzapine.

- 144- A child who was involved in a road traffic accident has a bleeding open femur fracture. What is the
- first step in fluid resuscitation in the emergency room?
- A. Bolus 10ml/kg of normal saline
- B. Bolus 20ml/kg of normal saline
- C. Bolus 20ml/kg of colloid
- D. Transfuse 20ml/kg of packed red blood cells
- E. Transfuse 20ml/kg of packed red blood cells, fresh frozen plasma, and platelets

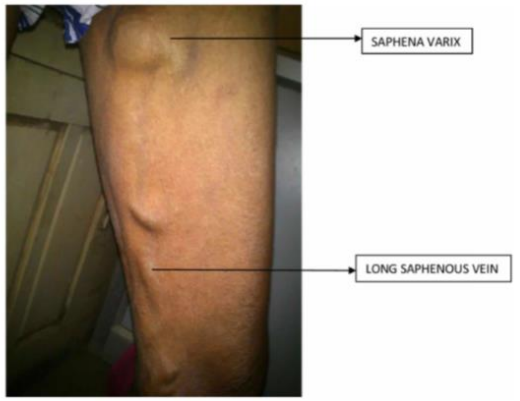
- 145- The least likely differential diagnosis of a groin lump in a supine patient is?
- A. Irreduicable inguinal hernia.
- B. Psoas abscess.
- C. Hodgkin lymphoma.
- D. Saphena varix.
- E. Femoral artery aneurysm

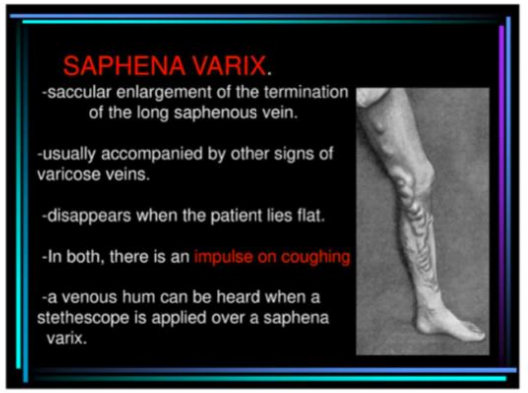
- B

- **Approach to fluid administration** [2][30]
  - Administer rapid fluid bolus (i.e., within 10–30 minutes)
    - Adults: **NS or LR 500–1000 mL IV bolus** [2]
    - Children: NS or LR 10–20 mL/kg IV bolus [9][31]

- D

- **Saphenous varix**: a dilated, saccular swelling of the great saphenous vein that lies just distal to the junction of the femoral vein and the great saphenous vein
- Psoas abscess





- 146- A loss of 30% of blood volume in a 70kg man results in:
- A. few initial symptoms
- B. slight decrease in hematocrit
- C. increased capillary hydrostatic pressure
- D. decrease in venomotor tone
- E. increased release of anti-diuretic hormone (ADH)

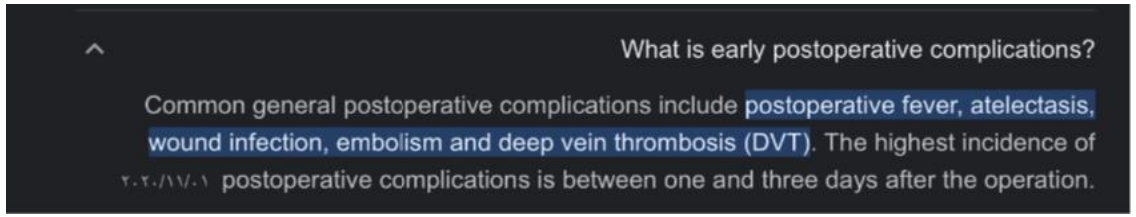
- 147- All of the following are signs of hypovolemic shock EXCEPT:
- A. Skin vasoconstriction
- B. Confusion
- C. Tachycardia
- D. Distended neck veins
- E. Tachypnea

- E
- D

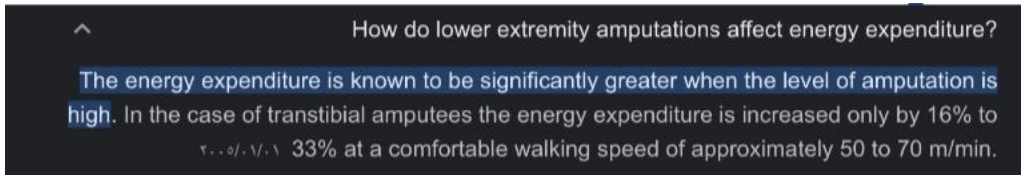
- 148- All of the following are considered early postoperative complications EXCEPT:
- A. Fever
- B. Urinary Tract Infection
- C. Wound Infection
- D. Deep Venous Thrombosis
- E. Incisional hernia

- 149- All of the following options are correct regarding major lower limb amputation EXCEPT:
- A. Energy expenditure to achieve mobility is lower following above knee amputation compared to
- below knee amputation
- B. Patient outcome is worse following emergency amputation than elective amputation
- C. Amputations performed by specialist surgeons have improved outcomes
- D. Compared to the general population, patients with diabetes are at higher risk of major amputations
- E. Deep vein thrombosis is a recognized risk following major amputation

• E


What is early postoperative complications?
Common general postoperative complications include postoperative fever, atelectasis, wound infection, embolism and deep vein thrombosis (DVT). The highest incidence of postoperative complications is between one and three days after the operation.
٢٠٢٠/١١/٠١

• A


How do lower extremity amputations affect energy expenditure?
The energy expenditure is known to be significantly greater when the level of amputation is high. In the case of transtibial amputees the energy expenditure is increased only by 16% to 33% at a comfortable walking speed of approximately 50 to 70 m/min.
٢٠٠٥/٠١/٠١

- 150- Complications of massive blood transfusion include all of the following EXCEPT**
- A. Hypothermia
- B. Thrombocytopenia
- C. Hyperkalaemia
- D. Hypercalcaemia
- E. Metabolic acidosis

- 151- The majority of the blood volume at rest is contained within the:
- A. Arterial system.
- B. Capillary bed.
- C. Portal circulation.
- D. Pulmonary circulation.
- E. Venous system.

- D

Blood transfusion risks include infection transmission (low), transfusion reactions, transfusion-associated circulatory overload (TACO; volume overload → pulmonary edema, hypertension), transfusion-related acute lung injury (TRALI; hypoxia and inflammation → noncardiogenic pulmonary edema, hypotension), iron overload (may lead to 2° hemochromatosis), hypocalcemia (citrate is a Ca^{2+} chelator), and hyperkalemia (RBCs may lyse in old blood units).

Transfusion-related acute lung injury (TRALI) and transfusion-associated circulatory overload (TACO) are the leading causes of transfusion-related morbidity and mortality

- E

- Not to do in sepsis?

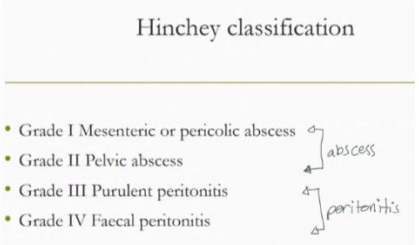
Infection source control during 1st hour, stabilize the patient first

- Wrong about fluids:

130mml/L of Cl in ringer lactate

(112)

- Regarding wounds which is true?



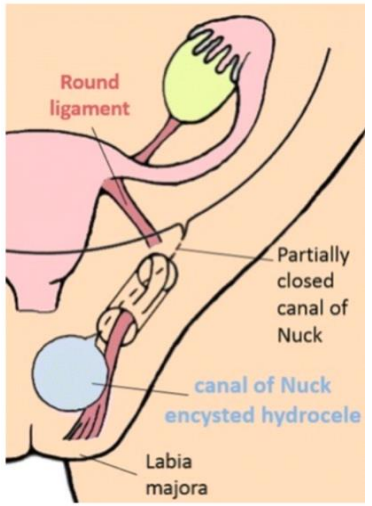
Diverticulitis stage 2 is considered a contaminated wound

- 1st in hemostasis >>> Vasoconstriction

- Vit. C.>>> Hydroxyaltion of procollagen

- True about abx: carabapenems have good coverage for gram +ve and anaerobes

- True about gas gangrene?? pain, crepitus and toxemia



- True>>> Canal of Nuck opens in labia majora

- True about hypovolemic shock? Increased SVR

- MCC in septic shock? staph/ pseudomonas/ Ecoli

• True about septic shock:

Persisting hypotension requiring vasopressors to maintain a MAP of 65

• Management of gastric outlet obstruction with hypochloremic hypokalemic metabolic alkalosis?

0.9 NS infusion with KCl

• Most common cause of death after blood transfusion?

TRALI

• Which of the following is true about body fluids?

It might be affected by wide range of physiological variation

• Which of the following is true about body fluids?

The concentration of sodium in the intravascular and the interstitial compartment is almost equal.

• Amino acid most important in improving immunity:

Glutamine

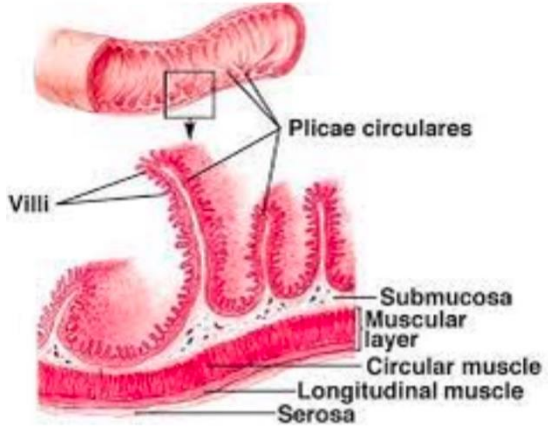
- Limit for K in peripheral line: 20 mEq

- Pt with crush injury, in respiratory distress, multiple rib fractures, life saving measure is:

Intubation and mechanical ventilation

- Plain AXR in SBO, what is the finding?

Valvulae conniventes (plica circularis)



- Not complication of TPN:

- Hypoglycemia (mentioned in past papers, but both HYPO/HYPER glycemia are possible complications of TPN)

019 general surgery past

- 1) Wrong about prophylactic antibiotics? Given 72 hours post op
- 2) Which surgery we give systemic antibiotics? Colon surgery
- 3) Wrong about fluids of the body? Intravascular 1/3
- 4) Most common hernia in females? Indirect inguinal
- 5) Wrong about femoral hernia? More common in males
- 6) Early complication post op splenectomy? Atelectasis
- 7) Not a major element of perioperative risk: Renal insufficiency
- 8) All are advantages of laparoscopic over laparotomy except:

a. Less post-op pain

b. Less peri-op bleeding

c. Less hospital stay

d. Better vision

e. Less cost (This is the answer)

- 9) Not a risk factor for HCC: Hepatitis A