

SURGERY FIRST CAT 2014

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1. The following are key ingredients history taking and physical examination of any surgery
- Understand the anatomy and the physiology of the body
 - Understand the pathology of the disease
 - Understand the natural history of the disease
 - Understand the full genetic make-up of the patient
 - Know the environment from which the patient operate
- * Which of the following is the single most important part in making a diagnosis in surgery
- History taking
 - Physical examination
 - Investigation of the patient
 - Consultation of seniors
 - None of the above
3. In taking history of the patient, it is important to do the following EXCEPT
- Listen to the patient and determine what their complaints are.
 - Let the history flow guided by appropriate questions
 - Keep to fact and precise detail while the patient tells his or her story
 - Shape, elaborate and direct the history into what you think the diagnosis is
 - Listen to patient but fine tune the "pattern" of the disease that comes from the history
4. The most important factor in taking effective history is
- Listening to the patient tell the whole story in his or her words to the end
 - Directing the history to the right disease
 - Right and specific questions that help delineate a pattern
 - Asking for permission to take history from the patient
 - Listening to what the senior will tell the patient
5. A 30 year old lady comes to outpatient for a check- up. In taking history, the following except?
- Listening
 - Clarification
 - Diagnosis
 - Fitness
 - Feel

using a multimodal sensory test regime or assessment.

e. Referred pain is always experienced on the same side of the body as the source.

7. Which of the following qualities of pain could be used to describe for colicky pain?

a. Stabbing

b. Knife-like

c. Throbbing

d. Tight

e. Bursting

* The following are true about physical examination EXCEPT

a. General examination always rarely reveals additional information

b. The focus of general examination must be centered on the system defined by history

c. Disciplined approach is key to finding all the key signs

d. Detailed and full recording of sites and findings are key to diagnosis

e. Effect on the surrounding of any signs must be important but can be omitted.

9. The following is a differential diagnosis in acute testicular pain

a. Undescended testis

b. Reducible inguinal hernia

c. Seminoma

d. Testicular torsion

e. Intersex disorder

10. The differential diagnosis of a painful thyroid lump could be the following disease except

a. Hematoma secondary to trauma

b. Thyroid abscess

c. Sub-acute thyroiditis

d. Thyroid nodule

e. Anaplastic cancer invading the surround tissues

11. The following are external characteristics of a lump that is important in clinching the

a. Size

b. Shape

c. Mobility

d. Tenderness

e. Fluctuation

12. The following are internal characteristics of a lump that is important in clinching the

13. A 25 year old man presents with high fever, severe abdominal pain, nausea and vomiting. He is scheduled for surgery for strangulated inguinal hernia. His abdomen has generalized tenderness. The most likely diagnosis is

- a. Acute intestinal obstruction
- b. Acute cholangitis
- c. Acute reflux oesophagitis
- d. Acute pancreatitis
- e. Acute bacterial peritonitis

14. A 45 year old lady presents with a 5cm mass on the right breast with skin changes presented as peau d'orange. The explanation for this sign is

- a. Tethering of the breast to the chest wall
- b. Shortening of Astley Cooper ligament
- c. Inflammation of the skin due to oncological processes
- d. Infective process over and above the cancer of the breast
- e. None of the above

15. A 30 year old man presents with an ulcer on the intergluteal space with an hair protruding from the center. The ulcer is discharging pus and has been present for 6 months. What is the most likely diagnosis?

- a. Fistula-in-ano
- b. Pilonidal sinus
- c. Anal cancer
- d. Fissure-in-ano
- e. Anorectal abscess

16. An 18-year-old man has a 12-hour history of vague, periumbilical abdominal pain, anorexia, and nonbilious vomiting. The pain has now localized to the right lower quadrant. On examination he is found to have tenderness over the McBurney point along with involuntary muscle rigidity. Which of the following best explains the localization of pain?

- a. Inflammation of the visceral peritoneum produces localizing pain.
- b. Pain over the McBurney point is caused by distension of the appendiceal lumen.
- c. Unmyelinated fibers carry pain signals with the thoracic and lumbar spinal nerves.
- d. Movement of the inflamed parietal peritoneum induces rebound tenderness.
- e. The somatic pain fibers course through spinal nerve roots L3-5

17. Which of the following is not a trigger of visceral pain?

- a. Ischemia
- b. Traction
- c. Distension
- d. Heat
- e. Inflammation

18. A 55-year-old man comes to the emergency department with a 6-hour history of acute, diffuse abdominal pain. On examination, his heart rate is found to be 115 beats per minute, his blood pressure 95/60 mm Hg, his respiratory rate 22 breaths per minute, and his pulse oximetric reading 93% on a 4-L nasal cannula. He has diffuse abdominal rigidity. Plain radiographic studies demonstrate extraluminal free air. Regarding resuscitation of the patient in the emergency department before transfer to the operating room, which of the following statements is true?

- a. Intravenous administration of antibiotics is the first priority.
- b. The initial intravenous access of choice is a central venous catheter.
- c. Two to 3 L of crystalloid should be administered intravenously.
- d. Endotracheal intubation should be established immediately.
- e. CT scan of the abdomen should be ordered immediately

19. All of the following are true concerning the sympathetic nervous system except:
- a. Circulating epinephrine is produced mainly in the adrenal gland and secreted as a hormone.
 - b. Most circulating norepinephrine is derived from synaptic nerve clefts.
 - c. Activation of the sympathetic nervous system results in vasoconstriction, tachycardia, and tachypnea.
 - d. Norepinephrine acts primarily as a neurotransmitter.
 - e. Up to 5% of norepinephrine and 15% of dopamine are produced by the enteric nervous system.

20. When galactorrhea occurs in a high school student, which of the following could be a diagnostic finding?
- a. Gonadal atrophy.
 - b. Bitemporal hemianopia
 - c. Exophthalmos and lid tag.
 - d. Episodic hypertension.
 - e. "Buffalo hump"

- * The basal metabolic rate can implied in all the following statement EXCEPT
- a. the amount of energy needed to maintain all functions while at rest
 - b. can be measured while awakening, and in a fasting state for 12-18 hours
 - c. depends on age, sex and body size
 - d. it is 10% higher than the resting energy expenditure
 - e. it is proportional to lean body mass

- * A 60 year old man, who is on antidepressants, had sigmoid colectomy due to colonic tumours 2 days ago; urea and electrolyte test reveals sodium of 120mmol/l. The following are the possible causes of the above test EXCEPT
- a. Antidepressants
 - b. Increased intravenous fluid
 - c. Prolonged NGT suction

- d. Antidiuretics
- e. Diarrhoea

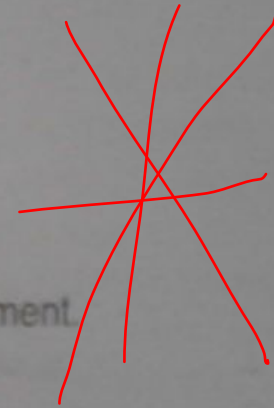
23. In the early assessment and resuscitation of a trauma patient:-

- a. Application of tourniquet to control obvious external blood loss from a limb is essential to minimize hypovolaemic shock.
- b. Airway patency ensures adequate ventilation.
- c. A urinary catheter should be inserted if the patient is unconscious.
- d. A normal lateral cervical spine X-ray excludes a cervical spine injury
- e. Nasotracheal intubation should be undertaken in apnoeic patient.



In compensated hypovolaemia due to haemorrhage

- a. There is no significant reduction of systemic blood pressure.
- b. The vital organs are inadequately perfused.
- c. There will be associated bradycardia.
- d. The patient may feel thirsty.
- e. 1000ml of blood may have been lost from the intra-vascular compartment.



25. The commonest of all post operative complications is

- a. Wound infection
- b. Atelectasis
- c. Wound hematoma
- d. Pulmonary embolism
- e. Urinary tract infection

26. Which of the following is the first event in hemorrhagic shock?

- a. Constriction of the spleen
- b. Constriction of the splanchnic bed
- c. Constriction of the peripheral arterioles
- d. Increased activity of the vasomotor center
- e. Increased excretion of adrenal corticosteroids



27. A 40 year old man presents with acute intestinal obstruction. Which of the following is the most useful in diagnosing generalized peritonitis?

- a. Abdominal rigidity
- b. Rebound tenderness
- c. Effect on the pain of 2 hours of gastrointestinal suction
- d. Abdominal x-rays films
- e. Elevated white blood cell count

28. In management of hypovolaemic shock one of the following is not indicated

- a. use of catecholamines
- b. Massive fluid infusion
- c. Central venous pressure monitoring
- d. Urinary catheter
- e. Pulmonary Wedge pressure monitoring

Questions 29-33

For each numbered item, select the appropriate lettered option. Each lettered option may be selected more than once, or not at all. Select the most appropriate option for each case.

Questions 29-33

For each numbered item, select the appropriate lettered option. Each lettered option may be selected once, more than once, or not at all. Select the most appropriate option for each case.

- a. Perforated ulcer
- b. Acute appendicitis
- c. Perforation following bowel obstruction
- d. Cholecystitis
- e. Diverticulitis

29. A 35-year-old woman experiences an acute onset of epigastric and right upper quadrant pain several hours after a large dinner. She has had similar episodes in the past that resolved after a few hours. This episode persists, and she has fever and non-bilious vomiting. What is the most likely source of the abdominal pain?

D

30. A 60-year-old man with chronic alcoholism awakens at 3:00 am with severe, sharp epigastric pain that 3 hours later becomes diffuse abdominal pain. What is the most likely source of the abdominal pain?

A

31. A 55-year-old man with a 2-day history of abdominal distention, vomiting, crampy abdominal pain, and obstipation is experiencing severe, diffuse abdominal pain. What is the most likely source of the abdominal pain?

C

32. A 22-year-old man awakens with periumbilical abdominal pain followed by non-bilious vomiting. What is the most likely source of the abdominal pain?

B

33. A 65-year-old man with a history of chronic constipation has a 3-day history of abdominal distention without a bowel movement. He has fever and abdominal rigidity. What is the most likely source of the abdominal pain?

~~A~~ e

34. Which statement about transmission of HIV in the health care setting is true?
- a. A freshly prepared solution of dilute chlorine bleach will not adequately decontaminate clothing
 - b. All needles should be capped immediately after use
 - c. Cuts and other open skin wounds are believed to act as portals of entry for HIV
 - d. Double gloving reduces the risk of intra-operative needle sticks
 - e. The risk of seroconversion following a needle stick with a contaminated needle is greater for HIV than hepatitis B

35. The response to shock includes which of the following metabolic effects?
- a. Increase in sodium and water excretion
 - b. Increase in renal perfusion
 - c. Decrease in cortisol levels
 - d. Hyperkalemia
 - e. Hypoglycemia

36. A 35 year man was being prepared for right inguinal hernia repair. Full blood count was ordered as part of the preparation. The following were reasons for the test
- a. To find out if there is any infection
 - b. To find out if there are any bleeding diathesis
 - c. To find out if he has jaundice
 - d. To find out if he has enough Haemoglobin
 - e. To find out if he can have adequate oxygen during anaesthesia

37. During preoperative preparation of John, a 32 year old man, he was informed that he was to have a

37. During preoperative preparation of John, a 32 year old man, he was informed that he will be nil per oral from midnight, the day before surgery. In the morning before surgery he had an intravenous line fixed. The following are reasons for being nil per oral before surgery

- a. To help see the tissue plain during surgery
- b. To avoid secretions during surgery
- c. To avoid possible aspirations
- d. To help with intravenous fluids
- e. To help the electrolytes settle

38. In regard to haemorrhagic shock

- a) Palpable carotid pulsation indicates normo-volemia
- b) Thirty per cent of circulating blood volume may be lost without changes in blood pressure
- c) Haemorrhage leads to a decreased conscious level at an early stage
- d) Normal capillary refill is >2 seconds
- e) Blood pressure is a good measure of tissue perfusion

39. Obstructive jaundice is not caused by

- a) Bile duct stones
- b) Viral hepatitis
- c) Tumours of the pancreas
- d) Duodenal tumours
- e) Enlarged lymph nodes at the porta hepatis

QUESTIONS 40-41

A 55 year old woman presents with anorexia, early satiety and significant weight loss. The symptoms have gradually worsened over the previous three months. She is otherwise fit and well but has been found to have iron deficiency anaemia. Answer questions 40 and 41 from this stem.

40. What is the most likely diagnosis for this lady?

- a) Small intestinal obstruction
- b) Sigmoid volvulus
- c) Gallstones
- d) Gastric cancer
- e) Peptic ulcer

41. The following signs are associated with disease above except

- a) Virchow's node
- b) Irish node
- c) Blummer's shelf
- d) Sister Mary Joseph node
- e) Trousseau's sign

42. Which of the following pairing statements regarding daily fluid balance is incorrect?

- a. Daily water intake, 2000 to 2500 mL
- b. Average stool loss, 1000 mL
- c. Average insensible loss, 600 mL
- d. Average urine volume, 800 to 1500 mL

Average increase in insensible loss in a febrile patient, 250 mL/day for each degree of fever

43. Which of the following statements concerning the sodium concentration of various fluids is incorrect?
- a. Pancreatic secretions, 140 mEq/L
 - b. Sweat, 40 mEq/L
 - c. Gastric secretions, 50 mEq/L
 - d. Saliva, 100 mEq/L
 - e. Ileostomy output, 125 mEq/L
44. With regard to distributional shifts during an operation, which of the following statements is true?
- a. The surface area of the peritoneum is not large enough to account for significant third-space loss.
 - b. Approximately 1 to 1.5 L/h of fluid is needed during an operation.
 - c. Blood is replaced as it is lost, without modification of the basal operative fluid replacement rate.
 - d. Sequestered ECF is predominantly hypotonic.
 - e. A major stimulus to ECF expansion is peripheral vasoconstriction.
45. With regard to intraoperative management of fluids, which of the following statements is true?
- a. In a healthy person, up to 500 mL of blood loss may be well tolerated without the need for blood replacement.
 - b. During an operation, functional ECF volume is directly related to the volume lost to suction.
 - c. Functional ECF losses should be replaced with plasma.
 - d. Administration of albumin plays an important role in the replacement of functional ECF volume loss.
 - e. Operative blood loss is usually overestimated by the surgeon.

46. With regard to postoperative fluid management, which of the following statements is not true?
- Insensible loss is approximately 600 mL/day.
 - Insensible loss may increase to 1500 mL/day.
 - About 800 to 1000 mL of fluid is needed to excrete the catabolic end products of metabolism.
 - Lost urine should be replaced milliliter for milliliter.
 - Lost gastrointestinal fluids should be replaced milliliter for milliliter.
47. With regard to abnormalities in serum sodium concentration, which of the following statements is not true?
- Changes in serum sodium concentration usually produce changes in the status of ECF volume.
 - The chloride ion is the main determinant of the osmolality of the ECF space.
 - Extracellular hyponatremia leads to depletion of intracellular water.
 - Dry, sticky mucous membranes are characteristic of hyponatremia.
 - Preservation of normal ECF has higher precedence than does maintenance of normal osmolality.
48. Which of the following does not contribute to the development of hypernatremia?
- Excessive sweating
 - Hyperlipidemia
 - Lactulose
 - Glycosuria
 - Inadequate maintenance fluids
49. Which one of the following clinical signs or symptoms is not associated with osmotic demyelination?

e. Inadequate maintenance fluids

49. Which one of the following clinical signs or symptoms is not associated with serum sodium concentration below 125 mEq/L?

- a. Headache
- b. Hallucinations
- c. Bradycardia
- d. Hypoventilation
- e. Hyperthermia

50. A 70-year-old man with sepsis has a pH of 7.18. Which of the following statements is true regarding his metabolic acidosis?

- a. Tissue hypoxia leads to increased oxidative metabolism.
- b. Acute compensation for metabolic acidosis is primarily renal.
- c. Metabolic acidosis results from the loss of bicarbonate or the gain of fixed acids.
- d. The most common cause of excess acid is prolonged nasogastric suction.
- e. Restoration of blood pressure with vasopressors corrects the metabolic acidosis associated with circulatory failure.