Internal medicine - quiz

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Question 1

Diabetic ketoacidosis (DKA) is characterized by:

1. serum glucose concentration often approximately 350 to 500 mg/dL (usually <800 mg/dL)
2. serum glucose concentration > 1000 mg/dL
3. urine ketones - positive
4. urine ketones – negative
5. serum ketones – high
6. serum ketones - low
7. effective serum osmolality (mOsm/kg) >320

Proper:

A. 2, 3, 5,
B. 2, 4, 6
C. 1, 3, 5, 7
D. 1,3, 5
E. 1, 4, 6, 7

Question 1

Proper answer: D

Question 2

Low-dose intravenous insulin should be administered to all patients with diabetic ketoacidosis:

A. true
B. only in patients who have a serum potassium ≥3.3 mEq/L
C. only in patients who have a serum potassium <3.3 mEq/L
D. insulin therapy should be delayed until potassium replacement will be finished
E. Insulin therapy should be started **before** the potassium replacement

Question 2

Proper answer: B

Question 3

Potassium replacement in DKA:

A. Potassium replacement is initiated immediately if the serum potassium is <5.3 mEq/L
B. The serum potassium concentration is usually low at presentation of DKA
C. The potassium replacement should be delayed until its concentration has decreased below 3.5 mEq/L
D. The potassium replacement is not needed in DKA
E. The potassium replacement is obligatory in every case of DKA (largely due to insulin deficiency and hyperosmolality, each of which cause potassium movement out of the cells)

Question 3

Proper answer: A

Question 4

Which intravenous insulin therapy in the beginning of DKA treatment should be chosed:

A. long-acting analogs
B. super rapid acting analogs
C. intermediate acting human insulin (NPH)
D. regular or rapid-acting insulin
E. both: regular and intermediate-acting human insulin

Question 4

Proper answer: D

Question 5

The indications for sodium bicarbonate in DKA include:

A. Patients with an arterial pH ≤6.9 in whom decreased cardiac contractility and vasodilatation can impair tissue perfusion
B. Patients with an arterial pH≤ pH7.1
C. Patients with an arterial pH<6.9 and potassium > 5.5 mEq/L
D. Patients with an arterial pH ≤6.9 and potassium level <3.0 mEq/L
E. Patients with and arterial pH<6.8 and potassium level > 6.5mEq/L

Question 5

Proper answer: A

Question 6

Paracetamol (acetaminophen) poisoning - indications for gastrointestinal decontamination with activated charcoal:

A. Patient should be sedated during gastrointestinal decontamination
B. Patiens should be sedated and intubated solely for giving charcoal
C. Charcoal is not reccomended in acetaminophen intoxication
D. It is recommended within one hour of acetaminophen ingestion
E. It is recommended within four hours in non-sedated patients

Question 6

Proper answer: E

Question 7

Indications for N-acetylcysteine therapy in acetaminophen intoxication include:

A. Serum acetaminophen concentration drawn at four hours or more following acute ingestion of an immediate-release preparation is above the "treatment" line of the treatment nomogram for acetaminophen poisoning
B. A suspected single ingestion of greater than 150 mg/kg (7.5 g total dose regardless of weight) in a patient for whom the serum acetaminophen concentration will not be available until more than eight hours from the time of the ingestion
C. Patient with an unknown time of ingestion and a serum acetaminophen concentration >10 mcg/mL (66 micromol/L).
D. Patient with a history of acetaminophen ingestion and **any** evidence of liver injury.
E. All the above are true

Question 7

Proper answer: E

Question 8

N-acetylocysteine dosage in acetaminophen poisoning – an example of the first dose:

A. administer an initial loading dose of 50 mg/kg over four hours (ie, infusion at 12.5 mg/kg per hour IV for four hours)
B. administer a dose of 100 mg/kg over 16 hours (ie, infusion at 6.25 mg/kg per hour IV for 16 hours)
C. administer an initial loading dose of 150 mg/kg IV over 15 to 60 minutes
D. administer a dose of 250mg/kg IV over 2 hours
E. administer a dose of 1500mg IV over 1 hour

Question 8

Proper answer: C

Question 9

Monitoring during treatment of acetaminophen poisining:

A. Acetaminophen serum concentration
B. ALT
C. INR
D. Serum creatinine
E. All the above

Question 9

Proper answer: E

Question 10

Anaphylaxis - the cornerstones of initial management are the following:

A. Removal of the inciting cause, if possible (eg, stop infusion of a suspect medication), call for help
B. Intramuscular injection of epinephrine
C. Placement of the patient in the supine position with the lower extremities elevated
D. Supplemental oxygen, volume resuscitation with IV fluids
E. All of the above

Question 10

Proper answer: E

Question 11

Adjunctive therapy in analyphactic shock can include:

A. H1, H2 and H3 antihistamine
B. H1 antihistamine, H2 antihistamine, glucocorticoid and omeprazol
C. H1, H2 and H3 antihistamine and glucocorticoid
D. H1 antihistamine, H2 antihistamine and glucocorticoid
E. Only glucagon and omeprazol

Question 11

Proper answer: D

Question 12

Contraindications to epinephrine in anaphylaxis include:

A. hypoxic-ischemic encephalopathy
B. ventricular arrhythmia
C. angina, myocardial infarction
D. pulmonary edema
E. There are no absolute contraindications to epinephrine use in anaphylaxis

Question 12

Proper answer: E

Question 13

Critical informations in patient’s history with new ischemic stroke include:

A. only time of the onset
B. time of the onset and inclusion / exclusion criteria for alteplase / endovascular thrombectomy
C. only inclusion/exclusion criteria for urapidyl
D. inclusion/exclusion criteria for urapidyl and endovascular thrombectomy
E. time of the onset and inclusion / exclusion criteria for acetaminophen and aspirin

Question 13

Proper answer: B

Question 14

The most predictive examination findings for the diagnosis of acute stroke are:

A. seizures
B. syncope
C. dizziness, nausea, vomiting
D. facial paresis, arm drift/weakness, and abnormal speech
E. visual hallucinations and sensory loss

Question 14

Proper answer: D

Question 15

All patients with suspected stroke should have the following studies urgently as part of the acute stroke evaluation:

A. noncontrast brain CT / MRI and serum creatinine, glucose, chest X-ray
B. noncontrast brain CT or brain MRI, finger stick blood glucose, oxygen saturation
C. Noncontrast brain CT / MRI, finger stick blood glucose and EEG
D. Noncontrast brain CT / MRI, serum glucose, coagulations tests and lumbar puncture (in the case of seizures)
E. Noncontrast brain CT / MRI, coagulation test, serum glucose, toxicology screen in all patients

Question 15

Proper answer: B

Question 16

Glycemia is an important factor in the management of patients with ischemic stroke:

A. Should be normalized immediately to the values below 100mg%
B. Should be treated when <60mg% and >180mg%
C. Should be treated when <70mg% and >140mg%
D. Should be in the range 140-180mg%
E. None of the above is true

Question 16

Proper answer: B

Question 17

Temperature of the patients in stroke is an important issue ?

A. Fever is associated with unfavorable outcomes in human studies of stroke
B. The source of fever should be investigated and treated, and antipyretics should be used to lower temperature in febrile patients with acute stroke.
C. Induced hypothermia is not currently recommended for patients with ischemic stroke, outside of clinical trials.
D. None of the above (A-C) is true
E. All of the above (A-C) are true

Question 17

Proper answer: E

Question 18

Blood pressure goals in ischemic stroke: special considerations apply to blood pressure control in patients with acute ischemic stroke who are eligible for intravenous thrombolytic therapy. Before thrombolytic therapy is started, treatment is recommended so that:

A. systolic blood pressure is ≤205 mmHg and diastolic blood pressure is ≤115 mmHg
B. systolic BP <220mmHg and diastolic <129mmHg
C. systolic BP ≤185 mmHg and diastolic blood pressure is ≤110 mmHg
D. systolic BP ≤185 mmHg and diastolic blood pressure is ≤120 mmHg
E. systolic BP ≤195 mmHg and diastolic blood pressure is ≤110 mmHg

Question 18

Proper answer: C

Question 19

Alteplase in ischemic stroke – dosing:

A. The alteplase dose is calculated at 0.9 mg/kg of actual body weight, with a maximum dose of 90 mg. Twenty percent of the dose is given as an intravenous bolus over one minute and the remainder is infused over one hour.
B. The alteplase dose is calculated at 0.9 mg/kg of actual body weight, with a maximum dose of 75 mg. Ten percent of the dose is given as an intravenous bolus over one minute and the remainder is infused over one hour.
C. The alteplase dose is calculated at 0.9 mg/kg of actual body weight, with a maximum dose of 90 mg. Ten percent of the dose is given as an intravenous bolus over one minute and the remainder is infused over two hours.
D. The alteplase dose is calculated at 0.9 mg/kg of actual body weight, with a maximum dose of 90 mg. Ten percent of the dose is given as an intravenous bolus over one minute and the remainder is infused over three hours.
E. The alteplase dose is calculated at 0.9 mg/kg of actual body weight, with a maximum dose of 90 mg. Ten percent of the dose is given as an intravenous bolus over one minute and the remainder is infused over one hour.

Question 19

Proper answer: E

Question 20

Acute pancreatitis management - fluid replacement:

A. hydration at a rate of 10 to 20 mL/kg per hour of isotonic crystalloid solution (eg, normal saline or lactated Ringer's solution) to all patients with acute pancreatitis
B. hydration at a rate of 5 to 10 mL/kg per hour of 5% glucose to all patients with acute pancreatitis
C. hydration at a rate of 5 to 10 mL/kg per hour of isotonic crystalloid solution (eg, normal saline or lactated Ringer's solution) to all patients with acute pancreatitis
D. hydration at a rate of 10 to 15 mL/kg per hour of isotonic crystalloid solution or 5% glucose to all patients with acute pancreatitis
E. hydration at a rate of 5 to 10 mL/kg per hour of 1:1 (0.9%NaCl : 5% glucose) to all patients with acute pancreatitis

Question 20

Proper answer: C

Question 21

Pain control in acute pancreatitis. Abdominal pain is often the predominant symptom in patients with acute pancreatitis and should be treated with analgesics. Uncontrolled pain can contribute to the hemodynamic instability. Which sentence is true:

A. Acetaminophen is the best choice drug in this condition
B. Morphine in continuous s.c. infusion is the drug of first choice
C. Intravenous fentanyl should be administered
D. Ibuprofen orally should be given every 4 hours
E. None of the above is true

Question 21

Proper answer: C

Question 22

Antibiotics in acute pancreatitis management – which sentences are true:

1. Up to 20 percent of patients with acute pancreatitis develop an extrapancreatic infection (eg, bloodstream infections, pneumonia, and urinary tract infections)
2. Extrapancreatic infections are associated with an increase in mortality.
3. When an infection is suspected, antibiotics should be started while the source of the infection is being determined.
4. If antibiotics were started and cultures are negative and no source of infection is identified, antibiotics should be discontinued.
5. Prophylactic antibiotics are not recommended in patients with acute pancreatitis, regardless of the type (interstitial or necrotizing) or disease severity (mild, moderately severe, or severe).

A. Only 1 and 2
B. 1, 2 and 3
C. 1, 2, 3 and 5
D. All
E. 1, 3, 4 and 5

Question 22

Proper answer: D

Question 23

Neutropenic fever in adult high-risk patients.
Timing of antibiotics should be initiated:

A. In all febrile neutropenic patients, empiric broad-spectrum antibacterial therapy should be initiated immediately after blood cultures have been obtained and before any other investigations have been completed i.e. within 30-60 minutes of presentation
B. In all febrile neutropenic patients, empiric broad-spectrum antibacterial therapy should be initiated immediately after results of blood cultures
C. In all febrile neutropenic patients, empiric broad-spectrum antibacterial therapy can be initiated before obtaining blood cultures
D. In all febrile neutropenic patients, empiric broad-spectrum antibacterial and antifungal therapy should be initiated immediately within 30 minutes of presentation
E. None of the above is true

Question 23

Proper answer: A

Question 23

Neutropenic fever in adult **high-risk patients** - initial regimen of antibiotics.
The choice of antibiotics is driven by multiple factors, including the degree of immunocompromise, prior antibiotic and infection history, local patterns of antibiotic resistance, and whether an agent is bactericidal or not. Which sentence is true:

A. Vancomycin in monotherapy as initial regimen
B. Ciprofloxacin or levofloxacin in monotherapy
C. Ciprofloxacin / levofloxacin with amoxicillin-clavulanic acid
D. Amoxicillin-clavulanic acid or cefuroksime in monotherapy
E. Initiation of monotherapy with an antipseudomonal beta-lactam agent, such as cefepime, meropenem, imipenem-cilastatin, piperacillin-tazobactam.

Question 24

Proper answer: E

Question 24

In addition to antibiotics, central venous catheter (CVC) removal is recommended when the cause is:

A. *S. aureus*
B. *P. aeruginosa*
C. *Candida* species
D. Rapidly growing nontuberculous mycobacteria
E. All the above

Question 24

Proper answer: E

Question 25

Diagnostic evaluation of patients with fever and neutropenia should always include:

A. Complete blood count with differential
B. Creatinine, liver function tests, electrolytes
C. Blood cultures (one peripheral and one from central venous catheter) and antimicrobial susceptibility testing
D. Cultures and stains of samples from suspected sites of infection
E. All the above

Question 25

Proper answer: E

Thank You

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