



Forensic Medicine & Clinical Toxicology Department  
M.SC Exam of Forensic Medicine & clinical toxicology  
Clinical Toxicology Examination

Date :30-4-2022 120 marks

Time allowed :3 Hours

Number of page:6

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Answer all questions:

I-Case scenario: (60 mark)

A 17-year-old male presents to your emergency department after accidentally ingesting a large amount of methanol because he thought it was Gatorade®. He is not suicidal. He denies any co-ingestion, and the paramedics did not find any pills or substances in the house. The ingestion occurred approximately four hours prior to the call to Emergency department. He is currently complaining of blurred vision and nausea

. No previous suicide attempts or history of depression

Physical Examination:

T: 37.4 c HR: 120 bpm RR: 24 breaths per minute BP: 110/60 mm Hg

General: He is awake and alert.

Examination reveals dilated pupils with sluggish light reaction and poor accommodation

.Pulmonary examination: Clear to auscultation

.CV: Regular rate and rhythm without murmur, capillary refill slightly prolonged

.Neurologic: GCS = 14. Cranial nerves II-XII intact

- 1- What are the usual signs of acute toxicity ?
- 2- Which initial therapies should be instituted .?
- 3- What are the characteristic laboratory findings ?

**II- Give an account on:**

- 1-What are the toxicological hazards if Putin press nuclear butoon in Russia-Ukraine crisis ? (10 marks)
- 2-What are sources of toxic nanoparticles and mechanism of toxicity?(10 marks)

**III-MCQ questions:(2 marks each)**

**1-A 33 year old man with a long history of drug abuse complaining of sever somnolence ,ravenous appetite,headach,depression and lack of motivation.He asked the doctor to give him the drug he used to reduce the symptoms .Withdrawal from which of the following drugs may have caused these symptoms?**

- a-Heroin
- b-Phencyclidine
- c-Diazepam
- d-Amphetamine
- e-Ethanol

**2-A 47 old woman was admitted to the hospital for an elective operation. The day after surgery she became agitated, tremulous ,hallucinating, which of the following statement best explains the reason of the patient's behavior?**

- a-The benzodiazepine medication given before surgery
- b-A depressive episode triggered by the operation
- c-Ethanol withdrawal
- d-The opiod medication given before surgery
- e-Halothane anesthesia used during surgery

**3-The following are the examples of hormonal doping except:**

- a-Anabolic steroid
- b-Human Gonadotrophin Hormone.
- c-Frusemide
- d- Insuline

**4-hyperthermia is a common sign in which of the following?**

- a-Ectasy
- b- Cocaine
- c-Salicylate
- d- All of the above

**5-Concerning trivalent arsenical compounds, one of the following statements is Incorrect:**

- a-They bind with sulphydryl groups in enzymes.
- b-Garlic odour of breath and constipation are the common symptoms of acute toxicity.
- c-Mee' s lines and keratosis of palms are among the symptoms of chronic toxicity.
- d-Oral administration of succimer and penicillamine are used in the management of acute toxicity.

**6-pediatric dose of polyantivenom in snake bite is which of the following?:**

- a-The same as the adult dose
- b-Half of the adult dose
- c- Double of adult dose
- d-Depending on body weight

**7- Which of the following is true as regard CO toxicity?**

- a-CO has an affinity for HB , about 2000 times more than oxygen
- b-Hyperbaric oxygen is indicated as a treatment for all patients with COHB levels >20%
- c-The average concentration of CO in the atmosphere is about 0.1ppm
- d-The fetus is resistant to the effects of CO exposure

8-A 39 year old Carpenter has taken two bottles of liquor from the local shop. After about an hour, he developed confusion, vomiting and blurring of vision. He has been brought to the emergency department. He should be given

- A. Naloxone
- B. Diazepam
- C. Flumazenil
- D. Ethyl alcohol

9-Cerebral hemorrhage is a cause of death in acute toxicity by which of the following?:

- a-Cocaine
- b-Opiates
- c-Barbiturates
- d-Amphetamines
- e-a&d
- f-b&c

10-Ingestion of caustic agents has significant morbidity . Which of the following statements is correct?

- a. Injuries by strong acids cause liquefaction necrosis.
- b. Follow up endoscopy examination should be avoided between days 5– 15.
- c. Steroids are useful in treatment of grade 2a upper GI lesions.
- d. NG tube placement and aspiration of gastric contents is the chief means of decontamination in alkali ingestion.
- e. Increased risk for oesophageal malignancy is up to 50 times greater in patients with a history of caustic ingestion.

11-Regarding lead poisoning which one of the following statements is incorrect:

- a-Gasoline and storage batteries are among the sources of toxicity
- b-Patients exposed to tetraethyl lead exhibit irritability,ataxia and exaggerated muscular movements
- c-Ededate calcium disodium is used orally to eliminate lead from bone
- d-Wrist drop ,colic,and Fankoni syndrome are among the symptoms of plumbism

**12-In phase III of acute Iron toxicity which of the following is not included ?**

- a- Metabolic acidosis.
- b- Coagulopathy.
- c- GIT scarring.
- d-Hyoglycemia.

**13-All the following are features of opioid withdrawal except:**

- a-Diarrhea
- b-Lacrimation
- c-Rhinorrhea
- d-Miosis

**14- Which of the following is the consequence of vitamine and mineral deficiency leading to dementia and memory disorder in alcohol abuse?**

- a-Helmert syndrome
- b-Delerium tremens
- c-Korsakoff,s syndrome

**15-Which of the following characterizes cocaine dependence?**

- a-Tremors
- b-Mask face
- c-Dysdiadokinesis
- d-Tactile kallucination

**16-A 46 y old man comes to hospital with weakness and difficult gait. One month ago he was hospitalized for several days for treatment from intoxication occurred at work .Examination shows normal mental status and cranial nerves. Which of the following is the most likely diagnosis?**

- a-Cholinergic toxicity
- b-Cobalamine toxicity
- c-Intermediate syndrome
- d-Organophosphate toxicity

17-Gene doping is characterized by the following except

- a- Transfer for nucleic acid or nucleic acid sequences
- b- Increase muscle growth & blood production
- c- Easy testing methods capable of its detection

18-How should you locate the bitten wound in relation to the person's body?

- a. Elevate the bitten area above the heart.
- b. Keep the bitten area at the same level as the heart.
- c. Lower the bitten area below the level of the heart.

19-Which of the following is not a manifestation of venomous snake bites?

- a. Hallucination.
- b. Metallic taste.
- c. Inability to wrinkle the forehead.
- d. Disseminated intravascular coagulation.

20-If the drug dosage exceeds the elimination rate this would be due to which of the following?

- a-Cumulation of the drug
- b-Idiosyncrasy
- c-Hypersensitivity
- d-Non of the above

لجنة الامتحان :-

استاذ ورئيس قسم الطب الشرعي والسموم الإكلينيكية  
استاذ الطب الشرعي والسموم الإكلينيكية  
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Forensic Medicine & Clinical Toxicology Department  
M.SC Exam of Forensic Medicine & clinical toxicology  
Forensic Medicine (paper I I)

Date :27-4-2022 210 marks  
Number of page:1

Time allowed :3 Hours

Answer all questions:

I-Case scenario: (100 mark)

A 25 year old female was brought dead to the hospital following fatal thermal burn injuries. Body was brought for postmortem examination. History revealed that the deceased was recovered from the burnt house without knowing the cause of burn. The deceased was a moderately built adult female. Rigor mortis was found all over the body and post-mortem lividity was not appreciated because of extensive burn injuries. At autopsy head injury was evident in the left parietal region.

- 1- How to identify the age of the deceased?
- 2- what are the characteristic postmortem findings if the cause of death is burn?
- 3-What are the possible causes and mechanisms of death?
- 4- Does the scene investigations provide valuable information about cause of death?

II-Give short notes on the followings:

- 1-Obscure autopsy (20 marks).
- 2-Role of diatom test in diagnosis of drowning (20 marks).
- 3-limitations of brain fingerprinting (20 marks).
- 4-sudden infant death syndrome (30 marks )
- 5-medical confidentiality(20 marks)

أ.د/ خالد محمود سعد

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أ.د/ أنس محمد البسيوني أبو سمك

أنس محمد البسيوني أبو سمك

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أ.د/ نيفين احمد حسن

نيفين احمد حسن



Forensic Medicine & Clinical Toxicology Department  
M.SC Exam of Forensic Medicine & clinical toxicology  
Forensic Medicine (paper I)

Date :20-4-2022 210 marks

Time allowed :3 Hours

Number of page:5

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**Answer all questions:**

**I-Case scenario: (60 mark)**

A Six years female child was brought to ER.suffering from chest infection. During examination the pediatrician found multiple scars in her back and buttocks. He also found discoid bruises on her face and thighs. The pediatrician referred the case to Tanta University Medicolegal Consultation Center.

**How can you deal with the case from the medico-legal point of view?**

**II-Give short notes on the followings:**

- 1-Autopsy room hazards (20 marks).
- 2-Mechanisms of death in violent asphyxias (10 marks).
- 3-Suspended animation(10 marks).
- 4- Difference between traumatic and thermal fractures of skull(10 marks).
- 5-While doing an autopsy for a body you found food material in his airways: How can you verify if this food is a cause of death (Choking) Or a result of death (Agonal Vomiting)? (10 marks).
- 6-Differences between accidental & homicidal strangulation by the umbilical cord? (20 marks).

**III-Give reasons for the followings:**

- 1-The hold on effect of electrocution (10 marks).
- 2-Limb injuries may end up to cause acute tubular necrosis(10 marks).
- 3- Blood samples must be collected in a case of rape? (10 marks).

**IV-MCQ questions: (40 marks)**



**1-1-Lichtenberg figures are seen in which of the following?**

- a. Heat stroke
- b. Radiation injury
- c. Lightning
- d. Electrocution

**2- Which of the following is the best site for toxicological blood samples at autopsy?**

- a-Heart.
- b-Carotid artery.
- c-Femoral vein.
- d-Abdominal aorta

**3-Visualization of gunpowder residue on blood stained clothes can be facilitated by?**

- a. Ultraviolet rays
- b. Infrared rays
- c. Magnifying lens
- d. Paraffin test

**4- Which of the following fractures of skull is considered a patterned fracture?**

- a. Depressed comminuted
- b. Diastatic
- c. Localized depressed
- d. Spider web

**5- Retraction balls' after trauma are seen in:**

- a. Brain
- b. Spleen
- c. Liver
- d. Lung

**6- Which of the following is a characteristic of traumatic meningitis?**

- a-A skull fracture must be present
- b-Meningococci are the causal organism
- c-Pus is mainly nasal
- d-Pus is localized to site of injury

**7- When Post mortem lividity is unlikely to develop ?**

- a. Drowning in well.
- b. Drowning in fast flowing river
- c. Post mortem submersion
- d. Drowning in chlorinated swimming pool

8- A man shot his wife by non-choked sporting gun over her abdomen. During examination of the wound, the doctor found rat hole wound with nibbled margin surrounded by blackening & tattooing. What is the distance of firing in this case?

- a-Tight contact
- b-Less than 15 cm
- c- About 70-80 cm
- d-More than one meter

9- What are the elements of informed consent?

- a- Capacity, transparency, voluntariness.
- b-Capacity, transparency, autonomy.
- c-Transparency, voluntariness, justice

10-Which one of the following is the most reliable method of identification of an individual ? :

- a. Dactylography
- b. Scars
- c. Anthropometry
- d. Hand writing

11-The fingerprint pattern may be impaired permanently in which of the following:

- a) Eczema
- b) Scalds
- c) Scabies
- d) Leprosy

12-Six hours after severe head injury, the patient was not respiring spontaneously, unresponsive even to painful stimuli. What is your provisional diagnosis?

- a-Cortical death
- b-Molecular death
- c-Somatic death
- d-Brain stem death

13- Which of the following could be a candidate for brain death diagnosis?

- a-The patient is in coma due to hypoglycemia and is breathing spontaneously
- b-The patient is in coma due to brain laceration and is breathing spontaneously
- c-The patient is in coma due to subarachnoid hemorrhage and is connected to a ventilator
- d-The patient is in coma due to benzodiazepine toxicity and is connected to a ventilator

14- Beveling characterizes firearm injuries except in which of the following bones ?

- a- Pelvis
- b-scapula
- c-skull
- d-humerus

15- The doctor in emergency room should do which of the following to diagnose fire arm wound?

- a-x ray to identify location and type of projectile
- b-push probe through loose tissue
- c-swab from the inlet

16- Which of the following is Not found in fresh water drowning?

- a- Hyperkalemia.
- b- Hypervolemia.
- c- Vericular fibrillation.
- d- Hypernatraemia

17-An 11 years raped girl was examined in ER.Which one of the followings is wrong if done by the examining physician?

- a-She must be given necessary treatment.
- b-She must be examined in presence of a nurse.
- c-Consent must be taken from her.
- d-Forensic samples must be collected.

18-Comminuted fracture of skull vault results from which of the following?.

- a- High force and wide striking surface area.
- b-Low force with wide striking surface area.
- c- Sharp instrument with high momentum.
- d- Moderate momentum with small striking surface area.



19-Position of a dead body was changed within 4 hours after death which of the following could be found?

- a- Hypostasis is present in the first position only.
- b- Hypostasis is present in the second position only.
- c- Hypostasis is present in the 2 positions.
- d- Hypostasis disappears

20-Spalding sign occurs in which of the following?

- a- Maceration
- b- Mummification
- c- Saponification
- d- Putrifaction

لجنة الامتحان :

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