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BOOK TWO

QUESTION 10 (20 marks) – DOUBLE QUESTION

Many opportunities to provide preventative health interventions exist in the ED.

- i. Briefly define “primary prevention” and “secondary prevention” (2 marks)

Primary prevention:

Secondary prevention:

- ii. List the 4 components of the CAGE questionnaire (4 marks)

- iii. For each category below, list 3 indicators that a woman may be a victim of Domestic Violence (6 marks)

Physical Indicators

Behavioural indicators

- iv. In what circumstances should a report of Domestic Violence be made to Police irrespective of the victim's wishes (3 marks)

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- v. Other than alcohol and Domestic Violence screening, list 5 public health interventions currently carried out in Emergency Departments – provide an explanation or example for each (5 marks)

Public Health intervention type	Explanation/Example

QUESTION 11 (16 marks)

- i. In the pre-hospital setting, list 3 advantages and 3 disadvantages of ultrasound in confirming pneumothorax (6 marks)

- ii. Write brief notes on the pros and cons of needle decompression vs finger thoracostomy (6 marks)

- iii. List 4 clinical signs or symptoms of a tension pneumothorax (4 marks)

QUESTION 12 (13 marks)

An 18 year old female presents to ED after an ingestion of 200 x 62.5mcg digoxin tablets. She has no past medical history of note and weighs 65kg.

- i. What is the potential lethal dose of digoxin (1 mark)

- ii. List the clinical features of ACUTE digoxin toxicity (3 marks)

- iii. List 3 relevant investigations you would perform in this patient (3 marks)

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iv. List the indications for the use of digoxin immune Fab (Digibind) (5 marks)

v. What dose of digoxin immune Fab would be required for this patient (1 mark)

QUESTION 13 (11 marks)

A 56 year old man presents to the ED with priapism. He states he has had an erection without arousal for the past 7 hours.

- i. What complications can occur if this condition is untreated (2 marks)

- ii. Describe the role of cavernosal blood gas analysis in determining the cause of priapism (2 marks)

- iii. List 2 other investigations that might be indicated. Provide a brief justification for each (4 marks)

- iv. You are in a small hospital with no urological service. Outline your emergency department management of this condition (3 marks)

QUESTION 14 (14 marks)

A 12 year old male presents after being kicked in the mouth whilst playing rugby at school.

- i. Describe the injuries in the photo (3 marks)

A CLINICAL IMAGE IS SHOWN IN THE PROPS BOOKLET, PAGE 9

- ii. Outline your stepwise approach to systemic analgesia in this child (3 marks)

- iii. What are the goals of treatment for this dental injury (3 marks)

- iv. You decide to use IV ketamine for procedural sedation. What are the significant adverse effects of ketamine (3 marks)

- v. The parents are not keen on ketamine. Describe your choice of regional anesthesia for this child (2 marks)

QUESTION 15 (13 marks)

A 40 year old man is brought to your ED after being swept into rough water whilst rock fishing in the middle of winter. On examination you notice a contusion to the right forehead.

Vital signs GCS 5
 HR 48 bpm
 BP 105/70 mmHg
 RR 12 bpm
 SaO₂ 94% RA
 Temp 28 deg C

- i. List the key features on the ECG (2 marks)

A 12 LEAD ECG IS SHOWN IN THE PROPS BOOKLET, PAGE 10

- ii. List 5 important aspects to consider during the initial resuscitation (5 marks)

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- iii. Describe the methods you would employ to rewarm this patient noting specific triggers for any invasive measures (6 marks)

QUESTION 16 (16 marks)

An 18 month old immunised boy presents to ED with a 7 day history of a fever to > 39 degrees, poor oral intake and lethargy. On examination, he appears unwell with a blanching rash with some desquamation, a red tongue and bilateral conjunctivitis.

- i. List 4 possible diagnoses starting with the most likely (4 marks)

- ii. List the diagnostic criteria of the most likely diagnosis (5 marks)

iii. List 4 important investigations with a rationale for each (4 marks)

iv. List 3 possible drug therapies for the most likely condition (3 marks)

QUESTION 17 (13 marks)

A young man has fallen onto his left hand, which is swollen and generally tender. Neurovascular status is intact.

- i. Interpret the Xray (3 marks)

AN XRAY IS SHOWN IN THE PROPS BOOKLET, PAGE 11

- ii. Outline 4 priorities in management (4 marks)

- iii. List 3 long term sequelae (3 marks)

- iv. The orthopaedic registrar requests your RMO to complete the consent for ORIF. Outline your response (3 marks)

QUESTION 18 (16 marks)

A normally well 24 year old man is brought to your ED with increasing confusion and a seizure. A blood gas shows the following.

pH	7.31		
PCO ₂	51	mmHg	(35-45)
HCO ₃	22	mmol/L	(22-28)
Na	109	mmol/L	(135-145)
K	4.1	mmol/L	(3.5-4.2)
Cl	91	mmol/L	(95-110)
Glucose	10	mmol/L	(3.9-5.8)

- i. Detail the specific emergency treatment required and provide treatment aims/endpoints (3 marks)

- ii. List 3 risk factors for the development of Osmotic Demyelination Syndrome (ODS) and write brief explanatory notes (6 marks)

iii. Hypertonic saline is also used in the management of raised intracranial pressure in traumatic brain injury (TBI). What dose/regime would you use and what target endpoints would guide your therapy (4 marks)

iv. Briefly outline the advantages/disadvantages of hypertonic saline versus mannitol in TBI (3 marks)
