MH SAQ practice Disaster and Environmental

SAQ 1

You are the consultant on duty in a tertiary ED during a Saturday evening shift.

You have received notification of a mass casualty incident. A grandstand at a local football ground

has collapsed. There might be as many as 400 injured people on the scene.

1. List 8 important steps you would take to prepare for managing this situation. (8 marks)

|  |
| --- |
|  |
|  |
|  |
|  |
|  |
|  |
|  |
|  |

2. List 6 problems that you may encounter during the first 24 hours. (6 marks)

|  |
| --- |
|  |
|  |
|  |
|  |
|  |
|  |

SAQ 2

A man staggers into your department and says that he and many other people have been on the Tube and were sprayed with a liquid. He then collapses.

1. Other than calling for help, give 4 actions you would take to manage the situation.

|  |
| --- |
|  |
|  |
|  |
|  |

2. Give four of the muscarinic effects of organophosphate poisoning

|  |
| --- |
|  |
|  |
|  |
|  |

3. Give three drugs to treat organophosphate poisoning.

|  |
| --- |
|  |
|  |
|  |

**SAQ 3**

You are working in an urban district hospital with no obstetric or neonatal service. A 28 week pregnant woman presents in premature labour. Examination reveals an absence of bleeding and a closed cervical os.

a) You decide she will need transfer to a tertiary centre 20 minutes down the road. Prior to this occurring, what will your initial management in the ED entail? (4 marks)

|  |
| --- |
|  |
|  |
|  |
|  |

b) List the parties with whom you will communicate regarding her transfer (3.5 marks)

|  |
| --- |
|  |
|  |
|  |
|  |
|  |
|  |
|  |

c) The decision is made to provide a medical escort for this patient. List ten essential pieces of equipment for a transfer bag (5 marks)

|  |
| --- |
|  |
|  |
|  |
|  |
|  |
|  |
|  |
|  |
|  |
|  |

d) Identify three problems associated with patient transfer and an action that may be taken to address them (3 marks)

|  |  |
| --- | --- |
| **Problem due to transfer** | **Action**  |
|  |  |
|  |  |
|  |  |

**SAQ 4**

You are working in a large regional emergency department. You receive a telephone call from a doctor at a small community hospital two hours away by road. This doctor is a general practitioner with limited emergency experience. He asks for advice regarding an 18 month old boy who presented with fever, pallor and stridor. Despite intramuscular and nebulised steroid the child has severe respiratory distress with stridor.

a) Give your initial instructions to the GP (5 marks)

|  |
| --- |
|  |
|  |
|  |
|  |
|  |

The child has a transient improvement in stridor with adrenaline, becoming less pale but remains irritable and anxious. The GP is concerned they may be fatiguing.

b) You need to decide between arranging road ambulance or helicopter transfer. Give two advantages of each (2 marks).

|  |  |
| --- | --- |
| **Road ambulance** | **Helicopter** |
|  |  |
|  |  |

c) Give two consequence of travel at altitude and how they may be addressed

(2 marks)

|  |
| --- |
|  |
|  |

d) Your retrieval registrar rings you prior to returning with the patient, after the patient has been resuscitated and stabilised. List five ways the patient should be prepared for transfer (5 marks).

|  |
| --- |
|  |
|  |
|  |
|  |
|  |

**SAQ 5**

You are the consultant in charge of the emergency department in a tertiary hospital. The ambulance service calls at 1000 hours on a weekday warning that they are at the scene of a major motor vehicle crash. They have 6 patients – 5 adults and a 12-month-old infant, all in a serious condition. They will be arriving at your department in 10 minutes.

a) Define mass casualty incident (1 mark)

|  |
| --- |
|  |
|  |

b) What are four goals you will try and achieve in your preparation time? (4 marks)

|  |
| --- |
|  |
|  |
|  |
|  |

c) Give four actions you will undertake to create space for the incoming patients (4 marks)

|  |
| --- |
|  |
|  |
|  |
|  |

d) You identify that you have only one other consultant on the floor, one junior emergency registrar and one intern due to sick leave. List three ways you will access more medical staff to adequately care for the incoming patients (3 marks).

|  |
| --- |
|  |
|  |
|  |

**SAQ 6**

You have been advised by Emergency Medical Services of a bus versus petrol tanker accident with mass casualties.

You are called upon to configure and deploy a medical team to the accident scene.

a) What injuries might you expect in this scenario? (2.5 marks)

|  |
| --- |
|  |
|  |
|  |
|  |
|  |

b) How will the treatment goals of your medical team differ to routine Emergency department goals? (1 mark)

|  |
| --- |
|  |
|  |

c) Describe the 'sieve and sort' triage process for disaster (1 mark)

|  |
| --- |
|  |
|  |

d) As your team is leaving, the hospital is activating its external disaster plan. Give eight important elements of such a plan (8 marks).

|  |
| --- |
|  |
|  |
|  |
|  |
|  |
|  |
|  |
|  |

**SAQ 7**

A 55 year old man collapses on emerging from the water after snorkelling on a Queensland beach. He is rapidly transported to the emergency department.

a) List six (6) differential diagnoses for his collapse

|  |
| --- |
|  |
|  |
|  |
|  |
|  |
|  |

b) Give four (4) clinical features on assessment that would indicate marine envenomation

|  |
| --- |
|  |
|  |
|  |
|  |

c) Name an organism for which marine antivenom exists AND give two (2) indications for its use

|  |
| --- |
|  |
|  |
|  |
|  |

SAQ 8

A 35 year old man presents after collapsing during a marathon on a hot day. His vitals are HR 143, BP 92/68, RR 24 bpm, O2sats 94% 15L NRB, temp 40.8, GCS 9 (E2 V3 M4)

1. What are the life threats he is presenting with and what do you think are causing them? (4 marks)

|  |
| --- |
|  |
|  |
|  |
|  |

*

2. What is the likely diagnosis? (1 mark)

|  |
| --- |
|  |

3. List 4 categories of differential diagnosis and give 2 examples of each. (8 marks)

|  |  |
| --- | --- |
| * **Diagnostic category**
 | * **Examples**
 |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

*

4. What is your initial resuscitative management? (4 marks)

*

|  |
| --- |
|  |
|  |
|  |
|  |

*

5. What are the potential complications of this condition? (8 marks)

|  |
| --- |
|  |
|  |
|  |
|  |
|  |
|  |
|  |
|  |

*

6. Describe options for cooling this patient in order of escalation. (8 marks)

|  |
| --- |
|  |
|  |
|  |
|  |
|  |
|  |
|  |
|  |

SAQ 9

A 35 year old man is brought to your emergency department after being struck by lightning. His vital signs are HR 120, BP 100/60, RR 18, Temp 35, GCS 9

1. What type of injuries can occur with lightning strike? (4 marks)

|  |
| --- |
|  |
|  |
|  |
|  |

*

2. List 3 causes of this patient’s reduced GCS? (3 marks)

|  |
| --- |
|  |
|  |
|  |

*

3. List 4 cardiac effects can lightning strike have? (4 marks)

|  |
| --- |
|  |
|  |
|  |
|  |

*

4. What vascular effects can occur with lightning strike and how are they treated? (2 marks)

|  |
| --- |
|  |
|  |

*

5. What ocular and auditory injuries can occur with lightning strike? (2 marks)

|  |
| --- |
|  |
|  |

6. List and describe 4 dermatological manifestations of lightning strike

|  |
| --- |
|  |
|  |
|  |
|  |

*