

### SAQ 3

A 35 year old man presents to your emergency department after a high voltage electrical injury. A picture of the patient's hand is overleaf

#### a. Describe & interpret the clinical image? (4 Marks)

1 Mark each up to 3 marks for:

- Several areas of full thickness burns with eschar
- Blistering to wrist - mixed depth or partial thickness
- Multiple areas of skin discolouration
- Potential for circumferential burn at wrist level
- Pallor to finger tips - thumb / index / middle - thrombosis
- Need assistant to extend fingers - ? pain ? nerve ? tendon injury

1 Mark for either of:

- Significant high voltage injury with extensive damage to superficial and likely deep structures of hand with very high likelihood of electrical injuries affecting other areas of the body proximal to the hand
- Requirement for Specialist Burns Unit to manage patient

Answer adapted from ACEM Fellowship Exam 2012.2 VAQ Question 4 examiner's report

#### b. List the potential complications following this injury (6 Marks)

Immediate - 1 mark each up to 2 marks

- Pain
- Arrhythmia
- Compartment syndrome
- Nerve injury
- Secondary injury e.g. fall

Delayed - 1 mark each up to 2 marks

- Rhabdo / hyper-K / acute kidney injury
- Multi-organ failure - if extensive other sites involved
- Tetanus
- Operative / GA risk
- Amputation

Late - 1 mark each up to 2 marks

- Scarring
- Contractures
- Repeat surgical intervention
- Complex regional pain syndrome
- Loss of function / disability
- Loss of income / work
- Post traumatic stress / psychological

Answer taken from EMSB course manual 16th edition

