

A man is brought into the ED having been on a live electric train line. He has 30% burns to arms and trunk, which are circumferential, and burns to his neck and right side of the face and mouth. He looks about 70kg. His Breathing is noisy and his resp rate is 40/min with poor air entry. His pulse is 120/min and his BP is 90/50. His GCS is 10/15.

Outline 8 steps in his initial management (and investigations) (4)

Oxygen 15l/min

C spine immobilisation

Monitoring

Call anaesthetist(senior!!)

Intubate with RSI. Care with suxamethonium (raised K+)

IV analgesia with morphine + antiemetic

Dressings

IV fluid resuscitation (see below)

FBC, U&E, CK, ABG, Xmatch/G and S

Urine for myoglobin/haemoglobin

ECG

CXR

Catheterise

Contact plastics/burns unit

Tetanus prophylaxis

Calculate his fluid requirements. How much do you give in 24 hours , over what time period do you divide the fluid and what type of fluid do you give? (3)

$30 \times 70 \times 4\text{mls in 24 hours} = 8400\text{mls (can also have 2mls instead of 4 mls)} = 4200 \text{ if 2mls}$

$\text{Give half over first 8 hours} = 4200\text{mls} (= 2100 \text{ if 2mls})$

$525\text{mls/hour of normal saline or hartmans for first 8 hours (262.5mls/hr if using 2 mls)}$

He is intubated and the anaesthetist says she is finding it increasingly difficult to bag the patient.

What one thing can you do to improve his breathing? (1)

Escharotomy of chest

Give 4 complications of electrical injury?(2)

Arrhythmia e.g. AF and other ECG changes

Dislocation or fracture

Renal failure due to myoglobinuria

Compartment syndrome

Neurological effects e.g. coma, seizures, headaches, transient paralysis

Ophthalmic e.g. cataracts and glaucoma

Burns full thickness