Electrical Injury

High voltage > 1000v

2 broad catergories
Thermal Injury
Physiological Injury
Type of injury
Burns often deep muscle burns maybe little see treat more as crush injuries than normal thermal burns

Cardiac VF risk often cause immediate death,sinus tachy ST changes can be seen other arrhythmia's all normally resolve spontaneously

Nervous system
acute fits
coma
expressive dysphasia
motor deficits
delayed spinal cord injury described

Renal failure secondary rhabdomyolysis

Musculoskeletal tetani cause fractures

Eye cataracts

Type of current domestic 240 v 50 hz AC
High voltage > 1000v
time of contact
associated injuries thrown back/fall
LOC
Arrest CPR
Water/wet skin

Very different type of injury to other electrical injury despite high voltages involved

Clinical features
Immediate

Cardiac arrest normally asystole (not VF as in other electrical) presumed massive depolarisation
chest pain muscle aches
coma can be mute unable to move on waking should resolve within 24 hours
TM rupture

Delayed
keraunoparalysis limb blue flaccid asensate pulses impalpable usually resolves 1-6 hours no RX
feathery cutaneous burns
eyes cataracts/retinal detachement
myoglobinuria uncommon
vestibular dysfunction

Mx
ABC
ECG
treat burns normally superficial
opthalmics as needed
admit if abnormal mental status/limb involvement

Remove from source/turn off supply
ABC
ECG if normal at presentation very unlikely develop arrhythmia
high voltage need CK,FBC
check tetanus
low voltage normal ECG can be discharged

NB in pregnancy fetus very susceptible needs fetal assessment