

Electrical incidents

Z. Rozkydal

Electrical incidents

1/ Low – voltage current 220 V

2/ High- voltage current 440- 1000 V in industry
above 1000 V in power lines

3/ Lightning

The extent of damage depends on

- voltage
- type of current
- path of current
- time

The higher voltage and intensity of current the more damage

3 % v of all injury by low voltage is fatal

30 % of all injury by high voltage is fatal

Signs

Cardiac arrest, stop of breathing

Arythmia, fibrillation of ventricles, asystolia

Muscle spasm

Paralysis of muscles for breathing

Unconsciousness

Haemolysis and myoglobinuria – kidney failure

Avulsion of tendons and vertebral fractures

Burns – in enters and in exits

Trombosis, ischemia, necrosis

Monoparesis, paraplegia

Low voltage current

Arythmia, asystolia

Tetania, difficult breathing

High voltage current

May jump up to 18 m from its source

The power must be cut off before
approaching to casualty

Fatal

Thermal damage

Muscular spasm

First aid

Do not touch the casualty still being in contact with the electricity source

Turn off the source of electricity

Move the source away - wooden stick

Stand on a insulating material

CPR

Defibrillation

Sterile dressing of burns

Transport to ITU

Lightening

Cardiopulmonal arrest

Thermal injury, burns

First aid

Clear everyone from the site of a lightening strike since it can strike again in the same place

CPR