

Heat Stroke and heat exhaustion

Drug related hyperthermias

Serotonin Syndrome

Neuroleptic Malignant Syndrome

Malignant Hyperpyrexia

Spectrum of heat illness less severe than heat stroke.

Result intravascular depletion

Clinical Features

- i Headache
- ii nausea vomiting
- iii malaise
- iv dizziness
- v postural hypotension
- vi collapse often soon after exercise as venous return pump lost from muscles
- vii **temperature < 40^o (key difference from heat stroke)**
- viii **mental function normal**
- ix sweating
- x tachycardia

Investigations exclusion of heat stroke essentially

U&E

urine should be no myoglobin

CK normal or minimally raised

Treatment

Rest remove from heat

iv fluids if severe

Write about Heat Stoke here.

True medical emergency

- Risk factors
- Athletes
- Manual workers
- Army recruits
- alcohol withdrawal
- Drugs
- Anticholinergics
- stimulants
- salicylate
- phenothiazine

Clinical Features

Core temp > 41 but may have been cooled prior to ED

CNS Confusion delirium fitting coma cerebellar dysfunction

CVS tachy hypotensive arrhythmias

coagulopathy purpura melaena haematuria

muscle rigidity

Complications

CNS cerebral oedema

rhabdomyolysis

liver enzyme rise jaundice

renal failure

DIC

Treatment

cooling - naked tepid water with fans

ice packs axilla/groins

cool iv fluids care risk of pulmonary/cerebral oedema

NO ANTIpyretics paracetamol/asprin

consider IPPV

Mannitol

Heat Stroke

Confused delirious
Raised CK
urine myoglobin
temp > 41

Heat exhaustion

Alert
Normal minimally raised
no myoglobin
< 40

MH rare autosomal dominant condition
trigger agents sux/halothane
muscle rigidity masseter spasm
rising temperature >2c /hr
tachycardia hypercarbia
arrythmias acidosis

Treatment

Active cooling
stop trigger
dantrolene 1mg/kg bolus upto 10mg/kg
steroids
induce diuresis

Phenotype relatives
medialert bracelet

Risk factors patient and drug

Patient

Male

dehydration

organic brain disease

Drug

High initial dose neuroleptic

rapid increase dose

depot

Often latent period of few days

4 classic signs

Fever

Rigidity

altered mental state

autonomic instability

Treatment

Bromocriptine 2.5-10 mg tds

Dantrolene

Triad of CNS autonomic and motor dysfunction

Drugs causing

SSRI

Tricyclics

MOAI

Lithium

Pethidine

E

Clinical Features

- ◆ agitation
- ◆ confusion
- ◆ seizures
- ◆ Motor
- ◆ hyperreflexia
- ◆ tremors
- ◆ myoclonus
- ◆ diarrhoea
- ◆ fever if severe = hyperthermia rhabdo etc
- ◆ hypertension

Treatment

include paralysis if severe

consider chlopromazine

propranolol