

ADRENAL INSUFFICIENCY

by: Professor Peter Hindmarsh

ADRENAL CRISIS - PATHWAY OF EVENTS

*Life Sustaining Cortisol
replacement therapy needed with
either:-
Hydrocortisone, Prednisolone or
Dexamethasone*

Defective production of

*Vital Aldosterone replacement
therapy with Fludrocortisone is
needed to maintain a proper
balance of body salts and fluid
i.e. electrolytes and blood volume*

GLUCOCORTICOIDS

MINERALCORTICOIDS

CORTISOL
IMPAIRED OR NO PRODUCTION

ALDOSTERONE
IMPAIRED OR NO PRODUCTION

LIVER
Function decreases

Nausea and vomiting
Diarrhoea and cramps

KIDNEY
Water and Sodium loss

Hypoglycaemia
Low blood glucose

Low body fluid volume

Hyponatremia
Low sodium level

Seizures, convulsions
Loss of consciousness

Low Blood Pressure

Hyperkalaemia
Increase in potassium

SHOCK

HEART
Irregular output

BRAIN COMA
ORGAN FAILURE

DEATH

CARDIAC ARREST

*Lifesaving Bolus of Solu-cortef urgently needed by
intramuscular injection or IV.*

UK standard recommendation

Hydrocortisone Emergency Bolus Dose

Dose (mgs) Age (years)

25 0 – 1

50 1 – 5

100 over 5

Glucose as intravenous infusion also needed

*Fludrocortisone is more of a problem
as patient may not be able to
swallow so it is better to concentrate
more on IV fluids and close
monitoring of electrolytes if this
unwell*