Recognising and responding to adrenal emergencies

Information for patients and / or carers
In an emergency, anyone who is steroid-dependent, whether from Addison’s (primary adrenal insufficiency) or from secondary adrenal insufficiency, can experience symptoms of extreme weakness, a serious drop in blood pressure and mental confusion. This is called an adrenal crisis. This means the steroid dependent person needs extra steroid medication immediately and is likely to need an emergency injection of intramuscular hydrocortisone 100mg.

People with adrenal insufficiency who increase their medication according to sick day rules usually manage their illnesses smoothly, without going into adrenal crisis. But in cases of vomiting or shock, you / they can experience a sudden drop in blood pressure and if sufficient extra steroid medication is not taken early enough in the course of an infection or injury, adrenal crisis may occur. Adrenal crisis is a state of acute cortisol shortage with similar symptoms to the pre-diagnosis illness. Warning signs include:

• severe nausea
• headache
• dizziness
• extreme weakness
• chills or fever
• confusion

Anyone who is steroid dependent needs to take extra steroid medication whenever they are sick or injured and before any kind of surgery. The general rules (sick day rules) for extra steroid cover are:

• for a fever of more than 37.5°C or for infection/sepsis requiring antibiotics, double the normal dose of hydrocortisone tablets.

• for severe nausea (often with headache), an extra 20mg hydrocortisone tablet should be taken by mouth and rehydration/electrolyte fluids sipped.

• on vomiting, the emergency injection of intramuscular hydrocortisone 100mg should be taken / given immediately following instructions provided in the emergency injection kit. Then a doctor or 999 should be contacted, saying ‘steroid-dependent’, ‘adrenal crisis’ or ‘Addison’s emergency’

• for serious injury to avoid shock an extra 20mg hydrocortisone tablet should be taken by mouth immediately

• ensure the anaesthetist and surgical team, dentist or endoscopist are aware of the need for extra medication and that they have checked the
Addison Disease Self Help Group (ADSHG) surgical guidelines for the correct level of steroid cover (see www.addisons.org.uk)

**When to give an emergency injection**

The symptoms of needing intramuscular hydrocortisone 100mg include:

- vomiting
- profound muscle weakness
- dizziness
- low blood pressure
- extreme sleepiness
- possibly headache, chills or fever
- possibly shock or coma

Potentially life-threatening circulatory complications ranging from low blood pressure to shock may occur if there are delays in treating adrenal crisis. In extreme cases, if treatment is not obtained, this can lead to death.

As a general rule, the steroid dependent person should give themselves an emergency injection of intramuscular hydrocortisone 100mg as soon as vomiting occurs. This will act to stabilise their
condition so that further medication and treatment can be sought.

The injection buys time in the event of severe illness or injury. It can be given by a friend or family member if the person is too ill to inject themselves. Giving too much steroid during injury or illness will do no harm. Under-replacement in these circumstances is potentially life-threatening.

An emergency injection of intramuscular hydrocortisone 100mg (following instructions given in the emergency injection kit) should be administered, followed by immediate medical attention. Once the injection has been given, it is advisable to call 999 or GP. Depending on the severity of illness, some individuals may deteriorate rapidly even after early self injection with intramuscular hydrocortisone 100mg. Hospital treatment may be required for 24-72 hours. Postural dizziness is a key indicator that intravenous fluids are necessary, usually requiring hospital admission.

Ambulance crews and GPs are advised that the acutely unwell patient should be stabilised by a saline infusion and a 100mg hydrocortisone injection before transportation to hospital.
Further advice for the steroid dependent person:

• It is advisable to have your own injection kit and sufficient extra medication to cover periods of illness with you at home

• Make sure you and your partner or a regular companion know how to give an emergency injection of intramuscular hydrocortisone 100mg

• If you have any doubts as to the severity of your illness phone your doctor and ask for advice
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Last reviewed: January 2017
Leaflet reference: MIS17-002-GD
PIL code: PIL17-0171