Royal College of Anaesthetists

FACTSHEET

MALIGNANT HYPERTHERMIA

Malignant hyperthermia (MH), also called malignant hyperpyrexia, is a rare condition that runs in some families. In people who are affected, some anaesthetic drugs and gases can cause a rapid and dangerous rise in body temperature.

HOW COMMON IS MH?

This condition is rare – studies show that it happens between 1 in 30,000 and 1 in 200,000 general anaesthetics.

SYMPTOMS

The MH reaction starts with an increased heart rate (your heart beats faster than usual) and carbon dioxide levels in the body rise. As the reaction continues the body temperature rises very quickly, muscle cells are damaged, and the heart rate can become irregular. MH can be fatal if not treated quickly.

TREATMENT OF A REACTION

From the earliest stages of their training, anaesthetists are taught how to recognise and treat MH. If an MH reaction is recognised early during surgery, treatment is usually successful. This involves stopping the anaesthetic drugs that caused the reaction, cooling the patient and giving an antidote called dantrolene. Dantrolene is kept in all hospitals where anaesthetics are given.

TESTING

MH is hereditary, which means that it can be passed from parents to children in their genes. It affects both males and females. A person with MH has a 50/50 chance of passing it on to their children. Anaesthetics do not necessarily trigger an MH reaction every time, so it is not possible to rule out the condition if someone has had one or two anaesthetics without problems.

Anyone who knows or suspects they have MH should let their family know, as others may also be affected. They in turn should be tested for the condition. Until they have been tested, any relatives should be treated as if they have the condition and their anaesthetist will need to avoid certain anaesthetic drugs and gases. However, if they do not have the condition, they can have all the standard anaesthetic drugs including gases.

A special test on a sample of muscle is the only reliable test for MH. In the UK this can only be done at St James's Hospital in Leeds. If you have a relative who already has the condition confirmed with a muscle test, you may be able to be diagnosed with just a blood test.

ANAESTHETIC MANAGEMENT

There is no cure for MH. If you are at risk of MH, you will need to have an anaesthetic without any of the drugs and gases that can trigger it. The anaesthetist will prepare the anaesthetic machine so that there are no traces of anaesthetic gases known to cause MH. The anaesthetist will only use those drugs known to be safe in patients with MH. It is extremely important that you tell your anaesthetist if you or anybody in your family has MH or has had a severe unexplained reaction to an anaesthetic. We advise that you keep an MH warning card in your wallet or purse and wear a warning disc or bracelet in case you are brought into hospital unconscious after an accident or with a serious illness.

For further information, please see the MH Registry website: ukmhr.ac.uk

Tell us what you think

We welcome suggestions to improve this leaflet.

If you have any comments that you would like to make, please email them to:

patientinformation@rcoa.ac.uk

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DISCLAIMER

We try very hard to keep the information in this leaflet accurate and up-to-date, but we cannot guarantee this. We don't expect this general information to cover all the questions you might have or to deal with everything that might be important to you. You should discuss your choices and any worries you have with your medical team, using this leaflet as a guide. This leaflet on its own should not be treated as advice. It cannot be used for any commercial or business purpose.

For full details, please see our website:
rcoa.ac.uk/patientinfo/resources#disclaimer

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