epilepsy action

Practice guidance: epilepsy

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Royal Pharmaceutical Society of Great Britain

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This guidance on epilepsy for hospital pharmacists has been prepared in the Royal Pharmaceutical Society's Practice Division in conjunction with the charity Epilepsy Action

What is epilepsy?

Epilepsy is the most common serious neurological condition. It is estimated that 1 in 131 or 456,000 people in the UK have epilepsy, and on average each UK pharmacy has 40 patients with epilepsy.

If someone is diagnosed with epilepsy, it means they have a tendency to have recurrent seizures. A seizure occurs when there is a sudden burst of intense electrical activity in the brain causing a temporary disruption to normal neuronal activity. Symptoms depend on the part of the brain that is affected and can range from a brief forceful jerk to a complete loss of consciousness with convulsions. Seizures can be partial (affecting a limited area of the brain) or generalised (affecting most or all of the brain).

Many other conditions can cause symptoms that resemble epileptic seizures, but tests and a careful history should show which episodes are likely to be due to epilepsy. Patients in whom epilepsy is suspected will be referred to a specialist to confirm the diagnosis and initiate treatment.

Causes of epilepsy

Causes of epilepsy include birth injury, head injury, brain tumours, infection and stroke. In the majority of cases, however, no specific cause can be found.

Anti-epileptic drugs

At the moment there is no cure for epilepsy. However, with the right choice and dosage of anti-epileptic medication, about 70 per cent of people with epilepsy can have their seizures completely controlled.

Gradual withdrawal of anti-epileptic therapy is sometimes considered in patients who have been seizure-free for at least two years.

Anti-epileptic drugs (AEDs) prevent seizures by controlling the excitability of the brain. Wherever possible, monotherapy is preferred but, where seizures are proving difficult to control, combination therapy may be considered.

Common side effects of AEDs include drowsiness or dizziness. These are often transient. If side effects do not lessen, it is important that the patient is advised to talk to their GP or epilepsy specialist, who may suggest changing either the dosage or the drug. It is particularly important that patients who develop a rash seek medical advice as there have been cases of Stevens-Johnson syndrome in patients taking AEDs. Some research has shown that taking certain AEDs may cause bone problems such as osteoporosis and osteomalacia in the long term.

AEDs should be taken at the same time every day. Missing doses may trigger seizures in some people. As many people with epilepsy may have memory problems, either as part of their epilepsy or as a side effect of their AEDs, medication aids such as pill reminder boxes may be helpful.

Patients travelling abroad may need advice about timing of medication. It is important to try to keep to normal dose intervals when crossing time zones but also to avoid disruption to sleep patterns, because lack of sleep can trigger seizures.

Prescription charges

People with epilepsy who take AEDs are exempt from all prescription charges. They need to get an exemption certificate by asking their doctor for form FP92A (England), EC92A (Scotland) or FP92W (Wales). Patients who do not yet have an exemption certificate can claim a refund of their prescription charges within three months of paying. They need to ask the pharmacist for a receipt on form FP57 (England), EC57(Scotland), or WP57 (Wales) at the time they pay for the prescription.

Consistency of supply

It is important that, wherever possible, patients with epilepsy always receive the same brand of AED because switching versions could potentially affect seizure control. For a patient who has been seizure-free, having a breakthrough seizure could have a devastating effect, for example, in terms of driving and employment.

The National Institute for Health and Clinical Excellence (NICE) advises: "Changing the formulation or brand of AED is not recommended because different preparations may vary in bioavailability or have different pharmacokinetic profiles and, thus, increased potential for reduced effect or excessive side effects."[1]

epilepsy action

Epilepsy Action is the largest member-led epilepsy charity in the UK. It aims to improve the quality of life and promote the interests of people living with epilepsy. The charity offers a range of literature and DVDs covering all aspects of epilepsy, and its Epilepsy Helpline provides confidential advice and information.

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Epilepsy Action is a working name of British Epilepsy Association.
A company limited by guarantee (registered in England No. 797997)
Registered charity in England (No. 234343)

References

1. National Institute for Health and Clinical Excellence. *The epilepsies: diagnosis and management of the epilepsies in adults and children in primary and secondary care.* Clinical Guideline 20; 2004.

2. MHRA and CHM. *St John's wort: interactions with antiepileptics.* Drug Safety Update 2007;1:7.

SUDEP

Sudden Unexpected Death in Epilepsy (SUDEP) is estimated to kill about 500 people a year in the UK. The exact cause is not known but risk factors include poor seizure control, generalised seizures occurring during sleep and non-compliance with AEDs. People with learning disabilities and young adult males may also be at a higher risk.

To reduce the risk of SUDEP, patients should be advised to make sure that they never run out of their AEDs and never make changes to or stop their AEDs without advice from their GP or epilepsy specialist. If a patient's seizures remain uncontrolled, they should discuss their treatment options with an epilepsy specialist.

Emergency medication

Patients at risk of convulsive status epilepticus – a tonic-clonic seizure that lasts for 30 minutes or longer, or a series of tonic-clonic seizures without full consciousness being regained in between – may be prescribed medication to be given in an emergency. Rectal diazepam is often prescribed but this can raise issues surrounding privacy, dignity and the law. Some epilepsy specialists will prescribe buccal midazolam as an alternative emergency medication for status epilepticus, although this drug is not licensed in the UK for epilepsy.

Alcohol and recreational drugs

Patients taking AEDs are likely to have increased sensitivity to the effects of alcohol. Alcohol can increase risk of seizures; it can also exaggerate some side effects of AEDs, for example dizziness, drowsiness or headaches. However, patients should not deliberately miss an AED because they want to drink alcohol. They are far more likely to have a seizure by missing their medication than by having an occasional drink.

Taking recreational drugs, for example heroin and cocaine, can make people with epilepsy more likely to have seizures. Some drugs can cause seizures, whether a person has epilepsy or not. Heavy drug taking also often leads to other problems, such as not getting enough sleep or not eating properly. These in themselves are common triggers of seizures.

Interactions

Many AEDs interact with other drugs and also with each other. One AED can raise or lower the level of another when they are taken at the same time.

As well as interactions between drugs, some medications lower the seizure threshold and increase the risk of seizures, for example, most antidepressants, the sedating group of antihistamines, and some anti-malaria treatments.

Some herbal remedies can make seizures more likely. Also, some herbal products can interact with AEDs. The Department of Health recently warned that any AED may interact with St John's Wort and that patients should be advised not to use this herbal product.[2]

Contraception

Enzyme-inducing AEDs – carbamazepine, oxcarbazepine, phenobarbital, phenytoin, primidone and topirimate – can interact with oral contraceptives, reducing the contraceptive efficacy. Some research has indicated that even though lamotrigine is not enzyme inducing, it may also interact, reducing efficacy of both the contraceptive pill and lamotrigine.

NICE recommends that if a woman is taking enzyme-inducing AEDs and chooses to take the combined oral contraceptive, she should take a minimum initial dose of 50 micrograms of oestrogen. If she has breakthrough bleeding, the dose of oestrogen should be increased to 75 or 100 micrograms each day and "tricycling" (taking three packs without a break) should be considered.

The progestogen-only oral contraceptive and progestogen implants are not recommended for women who take enzyme-inducing AEDs. The Persona method is also not recommended for women with epilepsy, as the hormone levels in urine may be affected by both epilepsy itself and by AEDs.

For emergency hormonal contraception, current guidance is that women taking enzyme-inducing AEDs should take a single dose of levonorgestrel 3mg. This is an unlicensed dose and the woman should be referred to her doctor for prescribing.

There is little information available about hormone replacement therapy and AEDs. However it is thought that HRT might interact with and reduce the effect of lamotrigine.

Pregnancy and preconception counselling

Women with epilepsy who are planning a family are advised to seek preconception counselling with their epilepsy specialist. This is an opportunity to discuss how the woman's epilepsy and AEDs might affect the unborn child. AEDs can increase the risk of having a baby with a major malformation. The risk is higher for women taking higher dosages or more than one AED, and higher with certain AEDs. Therapy may be adjusted if a woman is planning a pregnancy.

To reduce the risk of neural tube defects, women taking AEDs are usually prescribed folic acid 5mg daily from before conception until the end of the first trimester. There is also some evidence that folic acid might interact with certain AEDs (phenytoin, primidone and phenobarbital) reducing their efficacy. Women taking AEDs need individual counselling by their doctor before starting folic acid.

It is important that women who become pregnant unexpectedly continue to take their AEDs, and see their epilepsy specialist as soon as they find out that they are pregnant.