Managing epilepsy: what pharmacists need to know

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Epilepsy is a common neurological disorder. The annual incidence is estimated to be 50 per 100,000 people and the prevalence of active epilepsy in the UK is estimated to be 5–10 per 1,000 people. Most clinical pharmacists will look after a patient with epilepsy at some point in their careers.

Why update the guidance?
Newer and more expensive antiepileptic drugs (AEDs) are now being prescribed and, with an increase in treatment costs likely in the coming years, it is essential that AEDs with proven clinical and cost effectiveness are identified and prioritised for use in the NHS.

The National Institute for Health and Clinical Excellence’s 2004 guidance for the management of epilepsy was based on evidence that showed no difference in effectiveness between newer and older AEDs (see Box 1 for summary of AEDs), or between the newer drugs, as monotherapies, for seizure control.

However, since then, the “Standard and new antiepileptic drugs” (SANAD) trial, which evaluated the newer AEDs in patients with newly diagnosed epilepsy, suggested that sodium valproate should be the drug of choice for generalised and unclassifiable epilepsies, and lamotrigine for focal epilepsies. Therefore, it was considered necessary to review the most recent evidence regarding AEDs.

The updated clinical guideline from NICE provides more comprehensive recommendations for how to treat specific epilepsy syndromes and seizure types than the version published in 2004. Pharmacological treatment is selected on the basis of the presenting epilepsy syndrome. If the syndrome is not clear, the decision will be based on the presenting type of seizure.

Priorities for implementation
Most of the recommendations from 2004 on the diagnosis and management of epilepsy remain valid. The updated guideline specifies 10 key priorities for implementation, several of which are highly relevant to pharmacists:

- The AED treatment strategy should be individualised according to the seizure type, epilepsy syndrome, co-medications and comorbidities, lifestyle and preferences of the person, his or her family or carers.
- Women and girls with epilepsy and their partners (if appropriate) must be given accurate information and counselling around issues such as contraception, conception, pregnancy and breastfeeding.
- Only prescribe buccal midazolam or rectal diazepam for use in the community for patients who have had a previous episode of prolonged or serial convulsive seizures.
- Administer buccal midazolam as first-line treatment for people with prolonged or repeated seizures in the community (administer rectal diazepam if preferred or if buccal midazolam is not available); if intravenous access is already established and resuscitation facilities are available, administer intravenous lorazepam.

NICE notes that different preparations of some AEDs can vary in bioavailability or pharmacokinetic profile and that care needs to be taken to avoid reduced efficacy or excessive side effects. Therefore, for each patient, consistent supply of a particular manufacturer’s AED preparation is recommended, unless the prescriber, in consultation with the patient and his or her family or carers, considers that this is not a concern.

Drug-specific advice
Carbamazepine

The updated guidance specifically recommends the use of controlled-release carbamazepine preparations instead of immediate-release preparations. This is because controlled-release preparations are less likely to cause plasma concentration-dependent adverse reactions such as ataxia and diplopia.
Valproate When prescribing sodium valproate for women and girls of childbearing potential, discuss the possible risk of malformation and neurodevelopmental impairment in children exposed in utero, particularly with high doses of valproate or when using it as part of polytherapy.

Seizure-specific advice

Focal seizures NICE recommends that clinicians offer carbamazepine or lamotrigine as first-line treatment to patients with newly diagnosed focal seizures. If carbamazepine and lamotrigine are unsuitable or not tolerated, patients should be offered levetiracetam (see Box 2), oxcarbazepine or sodium valproate. If the first AED tried is ineffective, another of these five AEDs should be used as an alternative.

Adjunctive treatment should be considered if a second, well tolerated AED is ineffective; carbamazepine, clobazam, gabapentin, lamotrigine, levetiracetam, oxcarbazepine, sodium valproate or topiramate can be considered.

Generalised tonic-clonic seizures For the management of generalised tonic-clonic seizures, NICE advises prescribers to offer treatment with sodium valproate as first line to newly diagnosed patients. If sodium valproate is unsuitable lamotrigine is recommended (carbamazepine and oxcarbazepine are other options). Clobazam, lamotrigine, levetiracetam, sodium valproate or topiramate should be considered as adjunctive treatment if first-line treatments are ineffective or not tolerated.

Absence seizures Ethosuximide or sodium valproate are considered first-line treatments for absence seizures (if there is a high risk of generalised tonic-clonic seizures offer sodium valproate first, unless it is unsuitable). For patients in whom ethosuximide and sodium valproate are unsuitable, ineffective or not tolerated, lamotrigine should be used.

If two first-line AEDs are ineffective for patients with absence seizures, consider a combination of two of these three AEDs as adjunctive treatment: ethosuximide, lamotrigine or sodium valproate.

Box 2: Levetiracetam

NICE does not consider levetiracetam to be cost-effective for treating newly diagnosed focal seizures or for first-line treatment of certain childhood epilepsies based on the June 2011 NHS Drug Tariff for England and Wales — the estimated cost of a 1,500mg daily dose was £2.74. However, NICE has indicated that it would be cost-effective if the cost falls to at least half of that price.

References