The importance of brand continuity in epilepsy drugs

**AUTHOR** Mel Goodwin, BSc, DPSN, RN, is epilepsy specialist nurse at Northampton General Hospital.


Drugs are the mainstay of treatment for epilepsy, and are effective for most patients. However, minute differences between generic and branded drugs, and between different brands of the same drug, can affect epilepsy control. It is vital therefore that patients receive the same brand consistently to avoid loss of control.

Epilepsy is the most common serious neurological condition and is characterised by the recurrence of epileptic seizures (Sander and Shorvon, 1996). In the UK it is estimated that as many as 440,000 people may have epilepsy, with an average of 81 new diagnoses every day (Epilepsy Action, 2005).

Epileptic seizures are episodes of sudden disruption of brain function associated with abnormal high-firing rates in defined regions of the brain. There are over 40 different types of seizure and a person may experience more than one type (Wallace, 1996).

In clinical practice the goal of epilepsy treatment is to eradicate seizures with the fewest possible side-effects, and to minimise hidden or other long-term detrimental after-effects of both seizures and drugs (Glauser, 2002).

**Epilepsy management**

The mainstay of epilepsy treatment involves antiepilepsy drugs (AEDs), to which most people with epilepsy respond well, with 70 per cent becoming seizure-free (Chappell and Crawford, 2001).

If patients continue to have seizures it is important to review their treatment, as there are a number of possible reasons for its failure. These include incorrect diagnosis, inappropriate AED or failure to take the AED as prescribed. It is essential that patients are prescribed the most effective and tolerable AED so that they remain concordant with treatment.

Some side-effects of medication may be dose-related and predictable, and can be minimised by gradually increasing dosage to the minimum effective dose. Any major change to treatment, such as withdrawal or addition of AEDs should be carried out by a specialist.

**Continuity of medication**

Although practitioners are encouraged to prescribe the cheapest drugs available, this is not always appropriate in epilepsy management. For many patients it is imperative to receive the same brand of their particular drug, rather than simply the same generic preparation. Research suggests that minute differences between two versions of the same drug may cause problems if people with epilepsy are switched from one to another (Epilepsy Action, 2003). These problems may include side-effects or even seizures after a period of seizure freedom (Crawford et al, 1996).

A sudden increase or exacerbation of seizures or side-effects can have a dramatic effect on the lives of people with epilepsy. Day-to-day activities such as education, employment and social life can be affected and driving licences are automatically revoked for one year if a daytime seizure occurs (Epilepsy Action, 2003). Further implications can include loss of self-esteem, personal injury, and occasionally even death (Hanna et al, 2002).

**Survey**

Epilepsy Action, Europe’s largest member-led epilepsy organisation, undertook a survey of 1,851 people with epilepsy, which demonstrated the potential impact of lack of AED brand consistency on patients. The survey revealed that in the previous year one-third of respondents had been given a different version or brand of their regular AED (Epilepsy Action, 2003). Of these almost one-quarter stated that they experienced an increase in seizures as a result and one-third experienced more or different side-effects.

Twenty-four per cent of people given different versions of their AED reported receiving a variety of versions of their medication in one prescription. Of the respondents who received different versions of their regular AED, 23 per cent queried the prescription with their doctor and over half with their pharmacist. Of those who saw their doctor, half were then given their usual AED, compared with only 30 per cent of those who saw their pharmacist.

**Generic prescribing**

Prescribing generically or using parallel imports saves money. According to Winterton (2003) the Department of Health estimates that it saves the...
NHS in England approximately £60m per year in the community sector alone. However, these savings may be offset by potential ‘hidden costs’ of increased doctor visits, increased sick leave and welfare benefits, potential loss of employment and worse health for the patient. In the case of epilepsy, a range of organisations and experts advise that changing brand of AED may not be recommended practice.

Guidelines from the National Institute for Clinical Excellence on the diagnosis and management of epilepsy state that: ‘Changing brand of AED is not recommended due to variances in bioavailability/difference in pharmacokinetic profiles, which leads to increased potential for reduced effect or excessive side-effects’ (NICE, 2004).

The nurse’s role
In recent years nurses have become increasingly involved in the care of patients with chronic diseases including diabetes, asthma and epilepsy, often in an attempt to address the shortage of doctors. Drugs are the mainstay of treatment for many chronic conditions, and nurse-led care therefore involves a key role in drug management including titration, withdrawal, efficacy and side-effect monitoring (DoH, 2005). In addition, educating patients about their drug regimen, concordance issues and potential side-effect problems are often the nurse’s remit.

Nurses are therefore in a very strong position to be able to advise patients about the potential pitfalls of a change in brand of AED. Many patients are likely to contact their nurse for advice and guidance should this occur, so it is imperative that all nurses are aware of the potential effects of a change in AED brand.

The importance of continuity
Case 1
A 45-year-old man with mild learning disabilities lives with his elderly mother. He leads a full and active life and he and his mother support each other. He experiences regular minor seizures and is on a combination of two AEDs. He is meticulous about taking his medication and uses a medibox to ensure he does so correctly.

He was recently given a prescription of tablets that were different in shape and colour from his usual ones. His mother had been unwell and he did not want to worry her by asking about the difference, so instead he did not take the tablets. He then suffered a tonic-clonic seizure for the first time in 20 years, which had a devastating effect on his confidence. The problem was only identified when the community nurse checked his medibox.

Case 2
A 30-year-old care assistant had experienced both breakthrough seizures or poorly controlled epilepsy and following reassurance from her pharmacist, she took a different brand. She then suffered a tonic-clonic seizure for the first time in 20 years, which had a devastating effect on her employment as she was no longer allowed to look after the children unsupervised and was unable to take them out unaccompanied.

The future
If a patient’s epilepsy is well-controlled with a particular brand of AED, it is important for them to continue with the same version. The impact of breakthrough seizures or poorly controlled epilepsy is considerable and must not be underestimated.

It is important that nurses, especially those involved in epilepsy management, are aware of the problems that can arise from a change in brand of medication and where appropriate can ensure consistency.

**REFERENCES**


This article has been double-blind peer-reviewed.

For related articles on this subject and links to relevant websites see www.nursingtimes.net

**KEYWORDS** Long-term conditions ● Epilepsy ● Medication management

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**BOX 1. DRUGS USED TO MANAGE EPILEPSY (EPILEPSY ACTION, 2005)**

- Acetazolamide (Diamox)
- Carbamazepine (Tegretol)
- Clobazam (Frisium)
- Clonazepam (Rivotril)
- Ethosuximide (Emeside, Zarontin)
- Gabapentin (Neurontin)
- Lamotrigine (Lamictal)
- Levetiracetam (Keppra)
- Oxcarbazepine (Trileptal)
- Phenytoin (Epanutin)
- Piracetam (Nooptropil)
- Pregabalin (Lyrica)
- Primidone (Mysoline)
- Sodium valproate (Epilim)
- Tiagabine (Gabitril)
- Topiramate (Topamax)
- Vigabatrin (Sabril)