

Temporary replacements for oral epilepsy treatments

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One of the many potential challenges that may confront people with any chronic condition requiring regular medication is how to manage such medication during times of illness, especially if medication cannot be taken as usual. With epilepsy, there are additional complications that make such times particularly complicated: seizures may become more frequent during concurrent illness, other medications may interfere with antiepileptic drugs or may themselves cause seizures and seizures may directly impair recovery, for example, after some surgical procedures.

The article by Banks *et al*¹ in this issue seeks to address one key issue in this setting—what to do with regular antiepileptic drugs for people who either cannot take their usual medication in tablet form, or whose absorption is compromised for any reason. The scenario is not uncommon—with over 16 million admissions to UK hospitals in 2015/2016 (<http://www.nhsconfed.org/resources/key-statistics-on-the-nhs>, accessed 21 Nov 2016), we can expect many people with epilepsy to be admitted to hospital each year for reasons other than their epilepsy, and a significant proportion are likely to require some adaptation to their home medication regimen. However, as the authors point out, there is a lack of evidence on which to base any strategy.

These circumstances may occur by design or unexpectedly. When there is time to plan, clinicians can give due consideration to the particular changes that are likely to be needed. Specialist inpatient dental treatment is one such example. Proper advance consultation between the patient's neurologist and the clinicians involved in the admission, including anaesthetists if appropriate, can prevent undue distress. All concerned should be aware of the patient's regular

medication and the potential interactions of these with other planned medications, including anaesthetic agents. It may be possible to undertake a procedure as a day case and to schedule the procedure to avoid the need to omit any medication. Rescue medication should be available in case seizures do occur and require prompt control.

In other situations, advance planning will not be possible. The suggestions that Banks *et al* provide may then prove useful. They propose a series of options that might enable seizure control to remain undisrupted. They rightly point out that perhaps the most useful action is to contact the patient's usual neurologist—who will hopefully have a good knowledge of that patient's epilepsy and its particular vagaries, of drugs that have been tried before and are prescribed currently and of other individual circumstances to note. This will be especially important when the epilepsy has proven resistant to drug treatment or when the patient has a rare condition with which specialists in other fields may not be familiar. Moreover, liaison between the patient's regular neurologist and the admitting team, which may be based in another hospital, is especially important as a buffer between differing practices in different hospitals: for example, some formulations of some antiepileptic drugs may not be immediately available in every hospital. In the end, the guidelines of Banks *et al* can offer only options, and each patient will need an individual strategy, making close liaison between the treating clinicians essential.

Banks *et al* offer suggestions for alternative formulations for a patient's regular antiepileptic tablets or capsules. Local hospital formularies do vary, and actual stocks may not be available in a given hospital pharmacy. National variations



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must also be borne in mind—for example, in the UK, carbamazepine suppositories are licensed, with dose and duration stipulations. Dose conversions between different formulations need careful consideration and it is always worth considering obtaining advice from the hospital pharmacy: the most up-to-date information should always be consulted. Clinicians should take particular care to avoid dosing errors, including dose miscalculations, in complex settings with unfamiliar drugs and uncommonly used formulations, especially for phenytoin. Banks *et al*¹ highlight some potential pitfalls. One point to note is that the UK recommendation is for the intravenous replacement dose of valproate to be the same as the established oral dose (British National Formulary, accessed 21 Nov 2016).

Rapid changes in an antiepileptic drug regimen, in the context of an acute illness that may alter brain excitability and serum albumin concentrations, with co-prescription of other medications, may mandate measurement of serum drug concentrations, including those of the antiepileptic drugs. Taken in the context of the clinical picture, these results may help to determine the cause of unexpected clinical developments, such as altered conscious level or confusion, and may guide dose adjustments. As Banks *et al* point out, free drug concentrations may need to be requested.

After the need for alternatives has passed, the patient usually needs to return to oral medication. Returning

to the pre-existing regimen may be the simplest option and is generally possible, especially after shorter periods of altered treatment. Much longer periods may require one or more of the adaptations to be continued in addition to a regular home regimen (which may itself be changed or unchanged). It is important in all cases to ensure that both the general practitioner and the regular treating neurologist are aware not only of the admission but also of any changes made to treatment for the patient's epilepsy.

The article by Banks *et al* brings to attention another difficult area in the management of epilepsy, and yet another area lacking good evidence. Considering the complexity and importance of the problem, the Association of British Neurologists' Epilepsy Advisory Group will be issuing guidelines that may help clinicians in this UK setting. Prospective collection of more information across the UK may further inform such advice and might form part of an interesting and important clinical audit.

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REFERENCE

- 1 Bank AM, Lee JW, Krause P, *et al*. What to do when patients with epilepsy cannot take their usual oral medications. *Pract Neurol*. In Press.