

Stopping antiepileptic drug treatment

J.W. SANDER

UCL Institute of Neurology, University College London, National Hospital for Neurology and Neurosurgery, Queen Square, London, and Epilepsy Society, Chalfont St Peter, Buckinghamshire

Up to 70% of people on antiepileptic drug (AED) treatment will eventually become seizure free. Because of the possible long-term side effects of the drugs, it is common clinical practice to consider drug withdrawal after an individual has been in remission (seizure free) for three or more years. It is not known whether this remission represents 'cure' of that person's epilepsy or whether 'control' has been achieved which is dependent on continued AED therapy.

The probability of relapse after stopping treatment has varied between 11–41% in different studies. The final decision to come off treatment should be taken by the individual and their families following advice from the physician. Since the safety of drug withdrawal cannot be guaranteed in any one case, this means asking people to judge the relative risks of continued drug taking against the risk of further seizures inherent in drug withdrawal. This decision becomes more difficult as people with epilepsy pass from their school years into full adult life. Children and adolescents seen by paediatricians are more likely to come off medication after a period of remission than those seen by an adult neurologist. If a decision to withdraw medication is made, discontinuation of treatment should be undertaken slowly, possibly over a period of months, to minimise the risks of relapse¹.

Medical factors

The risk of relapse for children in remission is about 20% overall, whereas in series which included adults relapse rates are approximately 40%^{1,2}. Of course, even with uninterrupted treatment there is also a risk of relapse. For instance, in one large study, people in long-term remission were randomised either to continue or withdraw treatment; the risk of relapse in the first two years after randomisation was 41% in those coming off treatment and 22% in those continuing on medication³. Most relapses occur within the first year of treatment reduction or withdrawal. It seems that the more severe and long lasting a person's active epilepsy before remission the greater the risk of relapse. Juvenile myoclonic epilepsy or the presence of a structural lesion underlying the epilepsy also enhances the risk of relapse.

Whether EEG is helpful is controversial. Certainly only those EEGs taken after a period of remission are likely to be of value. In children there seems little doubt that the presence of persisting EEG abnormalities has an adverse prognostic influence but whether this is true in adults remains uncertain.

People must set the risks of drug withdrawal against those of continued therapy and these are difficult to quantify. Social complications of failed drug withdrawal increase with adulthood and trials of drug withdrawal should ideally take place before school-leaving age. After this a number of factors may influence decision making.

Employment

The young person with a history of epilepsy is more likely to find difficulty gaining satisfactory employment. Continued remission of epilepsy greatly enhances the chance of employment and this usually acts as a pressure to continue therapy. On rare occasions, however, the contrary may be true. Some employers may make an offer of employment conditional on an individual being off medications.

Driving

At 17 a young person with a history of epilepsy can gain a provisional driving licence in the UK as long as he/she has either been free of seizures altogether for a period of one year, or has only suffered nocturnal seizures for a period of three years. The possession of a driving licence is a potent deterrent for the discontinuation of therapy, as any seizure occurring on drug withdrawal will inevitably lead to its loss and this may secondarily affect employment.

Leisure pursuits

A person with epilepsy often enjoys participation in activities that might be viewed as 'unsafe' if a seizure were to occur. These include swimming, cycling and horse riding, all of which can be undertaken satisfactorily with a few common-sense precautions and responsible supervision. Such pursuits may, however, be regarded as unacceptably risky during a period of AED discontinuation.

Contraception and pregnancy

Concern about the effect of AEDs on contraception and pregnancy is very real to young women with epilepsy (see Chapter 44). The fact that some AEDs (phenobarbitone, phenytoin, carbamazepine and topiramate) may reduce the efficacy of oral contraceptive agents and necessitate the use of higher-dose oestrogen preparations may be seen by many as an indication for considering AED withdrawal. A more potent argument, however, is the risk of teratogenicity associated with drug therapy. Most young women contemplating pregnancy who have been seizure free for approximately 2–3 years would see this as a reason for considering a trial of AED withdrawal before pregnancy.

References

1. CHADWICK, D. (1984) The discontinuation of antiepileptic therapy. In: *Recent Advances in Epilepsy*, vol.2 (Eds T.A. Pedley and B. Meldrum), pp.111-125. Churchill Livingstone, Edinburgh.
2. CHADWICK, D. and REYNOLDS, E.H. (1985) When do epileptic patients need treatment? Starting and stopping medication. *Br Med J* 290, 1885-1888.
3. MRC Antiepileptic Drug Withdrawal Group (1991) Randomised study of antiepileptic drug withdrawal in patients in remission. *Lancet* 337, 1175-1180.