

Seizure relapse following medication withdrawal in childhood epilepsy

National Institute for Health and Clinical Excellence guidance states that 'the risks and benefits of continuing or withdrawing anti epileptic drug (AED) therapy should be discussed with individuals, and their families and/or carers where appropriate, who have been seizure free for at least 2 years'.¹ We report the outcome of withdrawal of AED's in a group of children managed in a secondary care community based paediatric epilepsy service.

We studied 105 children from whom anti-epileptic medication had been withdrawn (56 males and 49 females). The age of first seizure ranged from 1 month to 16 years 9 months and the median age was 5 years 9 months.

Of the 105 children and young people, 34 (32.4%) had a recurrence of their seizures after medication was stopped. This is a similar finding to that of Shinnar *et al*² who suggested that 75% of children can come off their anti-epileptic medication without recurrence if they have been seizure free for 2 years on treatment.

When considering the time elapsed between medication withdrawal and seizure recurrence, 23.3% relapsed during weaning or within a month of medication discontinuation. Cumulative relapse rates were 53.3% of children within 6 months, 66.7% during the first year and 90% within 3 years. Our findings agree with those of Matricardi *et al*³ who found that 30% of those who will relapse will do so during weaning (up to 6 months), 75% will do so during the first year and 98% will do so within 3 years.

With respect to type of epilepsy, 30.2% of those with generalised, 35.7% of those with focal and 40% of those with unclassified epilepsies relapsed respectively when withdrawn from the anti-epileptic medication. This supports the findings of Dooley *et al*⁴ who described generalised epilepsy as having an increased likelihood of achieving remission compared to other forms of epilepsy. Of the 32 (39%) patients who were treated with anti-epileptic medication

for less than 2 years, 43.8% experienced a recurrence of seizures following drug withdrawal. In comparison, 46% of patients treated for longer than 2 years experienced seizure recurrence.

It is useful to have ball-park figures to give families some idea of the risks and possible time scales of recurrence of seizures when withdrawing AEDs. These figures come from bundling together outcomes from groups of children with different epilepsies—more specific and worthwhile advice would come from taking account of the cause and the epilepsy syndrome if possible.

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REFERENCES

- National Collaborating Centre for Primary Care.** The Diagnosis and Management of the Epilepsies in Adults and Children in Primary and Secondary Care. London, UK: Royal College of General Practitioners 2004:525.
- Shinnar S,** Vining EP, Mellits ED, *et al.* Discontinuing antiepileptic medication in children with epilepsy after two years without seizures. A prospective study. *N Engl J Med* 1985;**313**:976–80.
- Matricardi A,** Bertamino F, Rizzo D. Discontinuation of anti-epileptic therapy: a retrospective study of 86 children and adolescents. *Ital J Neurol Sci* 1995;**16**:613–22.
- Dooley J,** Gordon K, Camfield P, *et al.* Discontinuation of anticonvulsant therapy in children free of seizures for 1 year: a prospective study. *Neurology* 1996;**46**:969–74.

Table 1 Referral categories

Category	No	%
Gastroenterology	167	16.7
Dermatology	96	9.6
Allergy	91	9.1
UTI	84	8.4
Neurology	75	7.5
Cardiology	58	5.8
Lumps and bumps	52	5.2
Orthopaedics /rheumatology	51	5.1
Surgery	49	4.9
Respiratory	43	4.3
Endocrinology	38	3.8
Headaches	36	3.6
Enuresis	32	3.2
Behaviour/Psych	24	2.4
New born exam concern	20	2.0
Developmental	19	1.9
Failure to thrive	19	1.9
Fatigue	8	0.8
Obesity	2	0.2
ENT	1	0.1
Others	31	3.1