Diagnosis and management of epilepsies in children and young people
Quick Reference Guide

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1. Children with epilepsy should have access to specialist epilepsy services, including dedicated young people and transition clinics.
2. Each child should have an individual management plan agreed with the family and primary care team.
3. Annual review is suggested as a minimum, even for children with well controlled epilepsy, to identify potential problems, ensure discussion on issues such as withdrawal of treatment, and minimise the possibility of becoming lost to follow up.

MODELS OF CARE

- Children and families should be advised of the range of services provided by the voluntary sector.

USEFUL CONTACT DETAILS

Enlighten – Action for Epilepsy
5 Coates Place
Edinburgh, EH3 7AA
Tel: 0131 226 5458 • Fax: 0131 220 2855
Email: info@enlighten.org.uk
Website: www.enlighten.org.uk

Epilepsy Action
New Anstey House, Gateway Drive
Yeadon, Leeds LS19 7XY
Helpline: 0808 800 5555 • Fax: 0808 800 5555
Email: helpline@epilepsy.org.uk
Website: www.epilepsy.org.uk

Epilepsy Connections
100 Wellington Street
Glasgow, G2 6DH
Tel: 0141 248 4125 • Fax: 0141 248 5887
Website: www.epilepsyconnections.org.uk

Epilepsy Scotland
48 Govan Road, Glasgow G51 1JL
Helpline: 0808 800 2200 • Fax: 0141 419 1709
Email: enquiries@epilepsyscotland.org.uk
Website: www.epilepsyscotland.org.uk

BEHAVIOUR AND LEARNING

- Although many children with epilepsy have intellectual functioning in the normal range, learning and behavioural problems are more prevalent in this group than in the general childhood population.
- All children with epilepsy should have their behaviour and academic progress reviewed on a regular basis by the epilepsy team. Children with academic or behavioural difficulties should have appropriate educational and/or psychological assessment and intervention.

EPILEPSY AND THE USE OF OTHER MEDICATIONS

- Neurostimulant treatment should not be withheld, when indicated, from children with epilepsy and ADHD.
- Epilepsy, or a history of seizures, are not contraindications to the use of melatonin for the treatment of sleep disorders in children and young people.
- Selective serotonin reuptake inhibitors and atypical neuroleptics such as risperidone should not be withheld, when indicated, in children and young people with epilepsy and associated behavioural and psychiatric disorders.

CALCULATION OF CORRECTED QT INTERVAL

Bazett’s formula:

\[
\text{QTc} = \frac{\text{QT}}{\sqrt{RR}}
\]

Normal value: <0.44 seconds
Indeterminate: 0.44 – 0.49 seconds
Abnormal: >0.49 seconds

OR

If ECG paper speed is at 25 mm/second use the nomogram below:

This nomogram indicates when the QTc is in one of three ranges. If the QTc is above the lower line (QTc >/= 0.44) a 12-lead ECG is suggested.
Differential Diagnosis

- There is wide differential diagnosis of paroxysmal episodes in childhood. Misdiagnosis of epilepsy appears to be a significant problem and may have major longer term implications. A service for children with epilepsy should have specialists with skills and interest in the management of epilepsy and other paroxysmal disorders.

Investigative Procedures

- An EEG should only be requested after careful clinical evaluation by someone with expertise in childhood epilepsy.

ECG and EEG

- All children presenting with convulsive seizures should have an ECG with a calculation of the QTc interval.
- Home video camera recordings should be used in order to capture recurrent events where the diagnosis is in doubt.
- For children with recurrent epileptic seizures and a normal standard EEG, a second EEG recording including sleep should be used to aid identification of a specific epilepsy syndrome.

Brain Imaging

- Most children with epilepsy should have an elective MRI brain scan. Children with the following epilepsy syndromes (which are following a typical course) do not need brain imaging:
  - idiopathic (primary) generalised epilepsies (e.g., childhood absence epilepsy, juvenile myoclonic epilepsy or juvenile absence epilepsy)
  - benign childhood epilepsy with centrotemporal spikes (benign rolandic epilepsy).

Diseases in Childhood

- The diagnosis of epilepsy should be made by a paediatric neurologist or paediatrician with expertise in childhood epilepsy.

Antiepileptic Drug Treatment

- When to start antiepileptic drug treatment

- Which drug to give

Adverse Effects

- Withdrawal of antiepileptic drugs

Management of Prolonged or Serial Seizures and Convulsive Status Epilepticus

- The prescription of any medication requires an assessment of risk and of benefit. In this guideline the efficacy and safety of AEDs have been reviewed using the best available evidence. Where recommendations are graded for individual AEDs, this is done irrespective of the licensing status of that medication.