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 behavioural 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

D **Neurostimulant treatment should not be withheld, when indicated, from children with epilepsy and ADHD.**

D **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

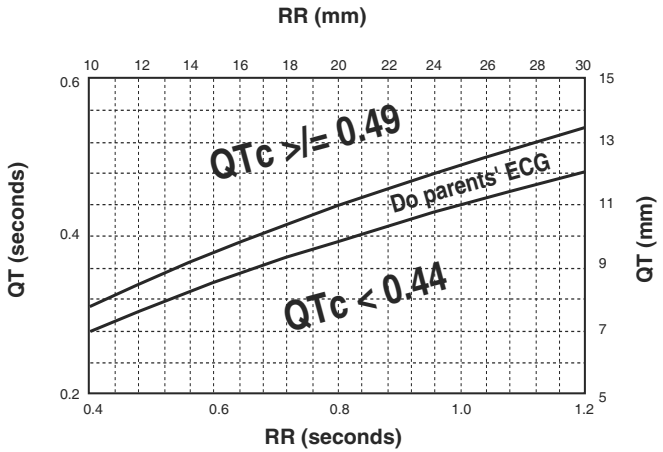
Bazett's formula:

$$QTc = \frac{QT}{\sqrt{RR}}$$

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.

MODELS OF CARE

☑
- Children with epilepsy should have access to specialist epilepsy services, including dedicated young people and transition clinics
- Each child should have an individual management plan agreed with the family and primary care team
- 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.

D **Each epilepsy team should include paediatric epilepsy nurse specialists.**

☑ 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, Gate Way Drive
Yeadon, Leeds LS19 7XY
Helpline: 0808 800 5555 • Fax: 0808 800 5555
Email: helpline@epilepsy.org.uk
Website: www.epilepy.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

This Quick Reference Guide provides a summary of the main recommendations in the SIGN guideline on the **Diagnosis and management of epilepsies in children and young people.**

Recommendations are graded A B C D to indicate the strength of the supporting evidence.

Good practice points ☑ are provided where the guideline development group wishes to highlight specific aspects of accepted clinical practice.

Details of the evidence supporting these recommendations can be found in the full guideline, available on the SIGN website: **www.sign.ac.uk**

SIGN
Scottish Intercollegiate Guidelines Network

NHS Quality Improvement Scotland

81 Diagnosis and management of epilepsies in children and young people

Quick Reference Guide

March 2005

DIAGNOSIS

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.

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

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

INVESTIGATIVE PROCEDURES

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.

C **All children with recurrent epileptic seizures should have an EEG. An early recording may avoid the need for repeated EEG investigations.**

D **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.**

D **Where the clinical diagnosis of epilepsy is uncertain and if events are sufficiently frequent, an ictal EEG should be used to make a diagnosis of an epileptic or non-epileptic seizure.**

☑
- An EEG is not indicated for children with recurrent or complex febrile seizures.
- Antiepileptic drug medication should not usually be started before an EEG recording since it may mask a syndromic diagnosis.

BRAIN IMAGING

D **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** *(eg childhood absence epilepsy, juvenile myoclonic epilepsy or juvenile absence epilepsy)*
- **benign childhood epilepsy with centrotemporal spikes** *(benign rolandic epilepsy).*

MANAGEMENT

INFORMATION AND PLANNING

D **Children with epilepsy should be encouraged to participate in normal activities with their peers. Supervision requirements should be individualised taking into account the type of activity and the seizure history.**

☑ A checklist should be used to help healthcare professionals deliver appropriate information to children, families and carers.

D **Families should be advised if the child has an increased risk of SUDEP. They can be reassured if the risk is considered to be low.**

INFORMATION FOR SCHOOLS

☑ Children should be enabled to participate in the full range of school activities.

☑ Children who have epilepsy should have a written care plan for their epilepsy, drawn up in agreement with the school and family.

☑ Epilepsy awareness training and written information should be offered to schools.

ANTIEPILEPTIC DRUG TREATMENT

WHEN TO START ANTIEPILEPTIC DRUG TREATMENT

B **Children with febrile seizures, even if recurrent, should not be treated prophylactically with antiepileptic drugs.**

A **Long term prophylactic antiepileptic drug treatment for children with head injuries is not indicated.**

A **Antiepileptic drug treatment should not be commenced routinely after a first, unprovoked tonic-clonic seizure.**

*Antiepileptic drugs which may **WORSEN** specific syndromes or seizures*

Antiepileptic drug	Epileptic syndrome/seizure type
carbamazepine, vigabatrin, tiagabine, phenytoin	childhood absence epilepsy, juvenile absence epilepsy, juvenile myoclonic epilepsy
vigabatrin	absences and absence status
clonazepam	generalised tonic status in Lennox-Gastaut Syndrome
lamotrigine	Dravet's syndrome juvenile myoclonic epilepsy

ANTIEPILEPTIC DRUG TREATMENT (Contd.)

WHICH DRUG TO GIVE?

C **The choice of first AED should be determined where possible by syndromic diagnosis and potential adverse effects.**

A **When appropriate monotherapy fails to reduce seizure frequency, combination therapy should be considered.**

☑ The choice of combination therapy should be guided by the epilepsy syndrome and the adverse effect profile of the AED.

☑ Where there is no response to an appropriate AED, the diagnosis and treatment of epilepsy should be reviewed.

☑ Referral to tertiary specialist care should be considered if a child fails to respond to two AEDs appropriate to the epilepsy in adequate dosages over a period of six months.

MANAGEMENT OF PROLONGED OR SERIAL SEIZURES AND CONVULSIVE STATUS EPILEPTICUS

B **Prolonged or serial seizures should be treated with either nasal or buccal midazolam or rectal diazepam.**

☑ All units admitting children should have a protocol for the management of convulsive status epilepticus.

ADVERSE EFFECTS

☑ Clear advice on the management of the potential adverse effects of AEDs should be discussed with children and parents or carers.

B **Routine AED level monitoring is not indicated in children.**

☑ Adolescent girls taking AEDs and their parents should be advised of the risks of fetal malformations and developmental delay.

WITHDRAWAL OF ANTIEPILEPTIC DRUGS

A **Withdrawal of AED treatment should be considered in children who have been seizure free for two or more years.**

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.