RCPCH GUIDELINE APPRAISAL

Paediatric Accident and Emergency Research Group

Evidence-based Guidelines for Post Seizure Management

The original guideline is NOT the work of the Royal College of Paediatrics and Child Health. This document represents the College's appraisal of the authors' completed guidelines: only grade A & B recommendations have been appraised. Paediatricians should either update or develop their local guidelines using the ORIGINAL guideline.

KEY POINTS

- The scope includes children presenting to secondary care with seizures. The emergency management of seizures is excluded.
- There is no need for an EEG following a first simple afebrile seizure.
- A hospital patient representative and ten other parents reviewed the patient information leaflets.

Recommendations	Grade
• A child established on anticonvulsant medication who presents with a seizure without explanation should have an anti-convulsant level checked if they are on any of the following anti-convulsants:- Phenytoin, phenobarbitone, ethosuximide, carbamazepine, lamotrigine, sodium valproate. *Comment: the evidence supporting the recommendation does not refer to the specific anticonvulsants.*	B
• There is no need for an EEG following a first simple afebrile seizure. *Comment: this is defined in the guideline.*	B

Other evidence-based statements

• By the age of 16 years approximately 1% of the population will have suffered a seizure without a fever.	B
• Approximately 50% of children who have an afebrile seizure will have a recurrence.	B
• The population risk of febrile seizure is 2.7-3.3%	B
• The risk of recurrence of febrile seizure following a first seizure is 29-35%.	B
• A family history of seizures febrile or afebrile, initial multiple seizures and temperature less than 40 degrees are all associated with an increased risk of recurrent febrile seizures.	B
• Risk of epilepsy following a complex seizure is 4.1-6%	B

These recommendations have been derived from an original guideline document produced by the Paediatric Accident and Emergency Research Group based in Nottingham, London and Wakefield, and supported by Children Nationwide. The full guideline may be obtained at the following website: www.pier.shef.ac.uk. The College's appraisal should not be considered valid beyond December 2004, and new evidence at any time could invalidate these recommendations.

SUMMARY OF 'AGREE' FINDINGS

The methods used to identify the evidence

The Cochrane Library, Medline, EMBASE, CINAHL, and Best Evidence were searched using MesH headings and 'textwords', limited to 0-16 years of age. Further articles were obtained from colleagues and by hand searching the bibliography of articles. A hand search for the last 5 years of the most relevant journals was performed and the web site of Ulrichs Periodicals Directory was searched to identify any relevant journals not found on Medline The journals not listed on Medline were only searched if thought to be relevant to the subject area. The Internet was searched for existing guidelines and links to other evidence based sites.

Which professionals were involved

The guideline development team and Delphi panel included consultants in paediatrics, paediatric accident and emergency medicine, paediatric neurology, specialist registrars in paediatrics, and paediatric and paediatric A&E nurses.

Involvement of parents &/or children

A hospital patient representative and ten other parents reviewed the patient information leaflets. There was no consumer representative on the Delphi panel, but a parent was involved in reviewing the draft guideline.

Consensus method

The Delphi consensus method was used.

OTHER PUBLICATIONS ON RELATED TOPICS

None found.

LEVELS OF EVIDENCE/DERIVATION OF GRADE OF RECOMMENDATIONS

The levels of evidence used throughout are those derived from SIGN guideline 50 (see below). The guideline development team noted the inappropriateness of this grading system for diagnostic and prognostic studies.

Please note that those recommendations ORIGINALLY ascribed a Grade C or D have not been appraised by the College.

Grade A: Requires level 1++ evidence from high quality meta analyses, systematic reviews of RCTs, or RCTs with a very low risk of bias, and directly applicable to the target population, and demonstrating overall consistency of results.

Grade B: Requires level 2++ evidence from high quality systematic reviews of case-control or cohort studies or high quality case-control or cohort studies with a very low risk of confounding, bias, or change and a moderate probability that the relationship is causal, directly applicable to the target population, and demonstrating overall consistency of results; or

Extrapolated evidence from studies rated as 1++ or from well-conducted meta-analyses, systematic reviews of RCTs, or RCTs with a low risk of bias.

Grade C: Requires level 2+ evidence from well conducted case control or cohort studies with a low risk of confounding, bias, or chance and a moderate probability that the relationship is causal, directly applicable to the target population and demonstrating overall consistency of results; or

Extrapolated evidence from studies rated as 2++

Grade D: Evidence from non-analytic studies, eg case reports or case series, or from expert opinion; or
Extrapolated evidence from studies rated as 2+

Clinical audit:

Criteria for clinical audit are included in the original guideline

Overview

This publication presents evidence-based information for the management of children presenting to secondary care with seizures. Guidelines are 'systematically developed statements to assist decisions about appropriate care for specific clinical circumstances' based on systematic reviews of the research literature. Guidelines are not intended to restrict clinical freedom, but practitioners are expected to use the recommendations as a basis for their practice. Local resources and the circumstances and preferences of individual patients will need to be taken into account. Where possible, recommendations are based on, and explicitly linked to, the evidence that supports them. Areas lacking evidence are highlighted and may form a basis for future research.

The Role of the Royal College of Paediatrics and Child Health

In order to raise awareness about the existence of the original guideline and to ensure its relevance for children's health, the College (through its Quality of Practice Committee) appraised the original guideline against the 'AGREE' checklist laid out in its 'standards' document. Having established the quality of the guideline's methodology in this way, the College's Clinical Effectiveness Coordinator examined the recommendations presented in the guideline document in the context of the original research papers from which they were derived. The findings are presented here. Where discrepancies between these findings and the originals exist, both recommendations have been included. The shaded boxes indicate these areas of discrepancy. In addition, where papers have been identified that post-date the publication of the guideline or further support the validity of the recommendations, these have been included.

Acknowledgements: The members of the Quality of Practice Committee oversaw the process of the review: Dr Harry Baumer (Chairman), Dr Paul Buss, Mrs Linda Haines, Professor Neil McIntosh, Dr Maud Meates, Richmal Oates-Whitehead, Dr Karen Turnock, Dr Kate Verrier Jones.