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TDM e farmaci anticomiziali vecchi e nuovi

Sesto Convegno di Studio
Lab Automation and
Medical Decision Making

Villalta-Gazzo Padovano (PD) 7 ottobre 2005


Lancet 1975; ii: 265-7

The danger arises of **treating the blood level** rather than the patient, so that the dose is adjusted not to the patient's clinical need, but in order to achieve the **“therapeutic level”**



JAMA 1995; 274: 1622-6


- **27% (24% to 30%)** of levels had an appropriate indication
- No significant difference in the appropriateness rate among the four drugs
- **Only 4 out of 624 (0.6%)** levels considered inappropriate were more than 20% higher than the upper limit of normal,
- **None** of the four patients had clinical signs of drug toxicity



MECHANISMS OF DISEASE
Epilepsy
N ENGL J MED 349:13 WWW.NEJM.ORG SEPTEMBER 25, 2003

Generalized: seizures begin simultaneously in **both hemispheres**, strong genetic component, neurologic function is normal in most.

Partial: seizures originate in one or more **localized foci**, can spread to involve the entire brain, may result from CNS insults



Josemir W. Sander *Epilepsia, Vol. 45, Suppl. 6, 2004*

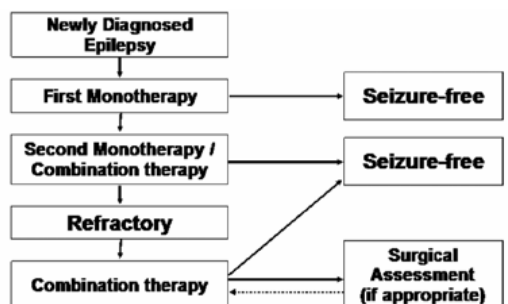

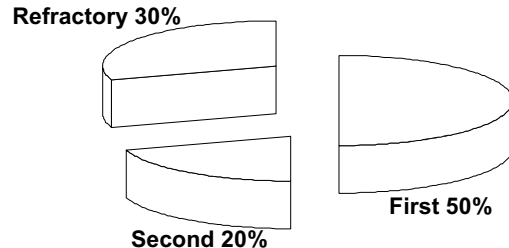


FIG. 1. Treatment pathway for newly diagnosed epilepsy [modified from Brodie and Kwan (7) and Kwan and Brodie (12)].




Advances in epilepsy

Andrew R. C. Kelso and Hannah R. Cock



British Medical Bulletin 2004; 72: 135-148



Scottish Intercollegiate Guidelines Network

70 Diagnosis and Management of Epilepsy in Adults
Quick Reference Guide

TREATMENT

AED blood levels

D

- Are not routinely indicated.
- Can be useful for:
 - adjustment of phenytoin dose
 - assessment of adherence and toxicity.

AED withdrawal

- Discuss after at least two years seizure freedom.
- Factors to be discussed include: chances of seizure recurrence (see tables in the Guideline), driving, employment, risks and fear of further seizures and concerns about...

C Give instructions to seek urgent medical attention for rash, bruising or somnolence with vomiting.

D Give advice to minimise risk of osteoporosis.

C No need to routinely monitor liver function tests and full blood count.

Psychological treatment of epilepsy

B Psychological treatments are not an alternative to pharmacological...

Technology Appraisal 76
March 2004

The newer antiepileptic drugs recommended...in people who have **not benefited** from treatment with the older antiepileptic drugs such as CBZ or VPA, or for whom the older antiepileptic drugs are **unsuitable** because:

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Technology Appraisal 76
March 2004

- there are **contraindications** to drugs
- they could **interact** with other drugs the person is taking (contraceptives)
- they are already known to be **poorly tolerated** by the individual
- the person is a woman of **childbearing** potential

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AAN Guideline Summary for CLINICIANS

EFFICACY AND TOLERABILITY OF THE NEW ANTIEPILEPTIC DRUGS, I: TREATMENT OF NEW ONSET EPILEPSY

AED	Monotherapy Partial/Mixed	Diagnosed Absence
Gabapentin	Yes**	No
Lamotrigine	Yes**	Yes**
Levetiracetam	No	No
Oxcarbazepine	Yes	No
Tiagabine	No	No
Topiramate	Yes**	No
Zonisamide	No	No

AMERICAN ACADEMY OF NEUROLOGY

Is There a Role for Therapeutic Drug Monitoring of New Anticonvulsants?

Emilio Perucca Clin Pharmacokinet 2000 Mar; 38 (3): 191-204

However, in the absence on sound information on the target concentration ranges of these drugs, the **routine** concentration monitoring of these drugs **cannot** be recommended.

Is There a Role for Therapeutic Drug Monitoring of New Anticonvulsants?

Emilio Perucca Clin Pharmacokinet 2000 Mar; 38 (3): 191-204

a case for applying TDM of these drugs in **individual patients** can still be made