

Clinical Approaches to Management

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AEDs – Partial Seizures with or without secondary generalisation

- **First Line Drugs:**

CBZ, Lamotrigine, Oxcarbamazepine, Sodium valproate and Topiramate.

- **Second-Line Drugs:**

Clobazam, Gabapentin, Levetiracetam, Pregalabin, Tiagabine and Zonisamide.

AEDs – Generalised Seizures

- **Tonic-clonic Seizures (grand mal)**
1st line: CBZ, Lamotrigine, Sodium valproate and Topiramate
2nd line: Clobazam, Levetiracetam and Oxcarbamazepine.
- **Absence Seizures (petit mal)**
1st line: Ethosuximide and Sodium valproate.
2nd line: Clobazam, Clonazepam and Topiramate.
- **Myoclonic Seizures**
1st line: Sodium valproate
2nd line: Clonazepam and Lamotrigine.
- **Atypical Absence, Atonic and Tonic Seizures**
1st line: Sodium valproate, Lamotrigine and Clonazepam
2nd line: Acetazolamide, Clobazam, Ethosuximide, Levetiracetam, Phenobarbital, Phenytoin and Topiramate.

AEDs Administration Procedures

- **Carbamazepine**
Formulary: tabs (bd/tds)
Non-Formulary: MR (bd only)
- **Phenytoin**
Suspension 90mg/5ml approximately phenytoin sodium
100mg tabs/caps
- **Sodium valproate**
Epilim EC tabs vs Epilim Chrono tabs
- **Status epilepticus**
Midazolam buccal NF
Keppra IV ITU

AEDs Adverse Drug Effects

Carbamazepine

- Blurring of vision, dizziness and unsteadiness
- Minimized by altering timing of medication; use of MR tabs
- Initiate therapy at a low dose and increase in small increments

AEDs Adverse Drug Effects Cont.

Gabapentin

- Avoid sudden withdrawal
- Nystagmus, diarrhoea, dry mouth, dizziness, ataxia
- Not commonly used

AEDs Adverse Drug Effects Cont.

Phenytoin

- Coarse facies, acne, hirsutism, gingival hyperplasia, blood and skin disorders
- **Toxicity:** nystagmus, dyplopia, slurred speech, ataxia, confusion and hyperglycaemia

AEDs Adverse Drug effects Cont.

Sodium valproate

- Liver toxicity, blood disorders, hepatic disorders, pancreatitis, increased appetite, weight gain, hyperammonaemia, transient hair loss (regrowth may be curly)

AEDs Interactions

- AEDs
- Alcohol
- Antidepressants
- Antifungals
- Antipsychotics; Lithium (Priadel®)
- Antivirals
- Calcium Channel Blockers
- Digoxin
- Diuretics
- Quinolones
- Warfarin

AEDs + Women

- Women of child-bearing age on AED folic acid 5mg daily
- Avoid AEDs that cause weight gain, hirsutism, gingival hyperplasia, hair loss
- Avoid AEDs contraindicated in pregnancy
- Interaction of AEDs with OC

AEDs + Pregnancy

- Avoid:
 - Carbamazepine
 - Lamotrigine
 - Levetiracetam
 - Phenytoin
 - Sodium valproate
 - Topiramate
- Continuation of AED treatment during pregnancy is crucial, hence the AED of choice for women of childbearing age is always done keeping in mind a pregnancy.

AEDs Avoidable Medication Errors

- Discharge counselling of epileptic patients is crucial to ensure seamless care.



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AEDs Avoidable Medication Errors Cont.

- Hospital stay
- Patients' own treatment is available
- Administration is only done by the nurse
- Stat doses are given
- IV administration of AEDs is done correctly (consult insert and/or Med. Info. 25952057)