Epilepsy in Adults

Disclaimer

This pathway is about managing established epilepsy in general practice, when initial investigations and type of epilepsy have been established. See also:

- First Seizure in Adults
- Epilepsy in Women and Pregnancy

Contents

Red Flags

- Seizure associated with fever, neurological deficit, recent trauma, or persistent severe headache
- Prolonged or recurrent seizure (> 1 in 24 hours) with incomplete recovery
- Persisting altered level of consciousness
- First seizure or suspected eclampsia in a pregnant woman

Background

About epilepsy in adults

A diagnosis of epilepsy is made once the patient has had two unprovoked epileptic seizures, > 24 hours apart. Most of the diagnoses are made based on the description of the clinical event. The gold standard diagnostic tool is EEG recording during the clinical event. Epileptic patients may have normal inter-ictal EEG.

Epilepsy types:

- *The description of epilepsy type refers to the area of the brain affected during the seizure.*
- *The single most important feature in assessment of epilepsy is a detailed history of the seizures, which will distinguish generalised from focal epilepsy.*
- *Generalised:*
  - *The whole of the brain is affected by seizure activity at the same time.*
  - *Treatment may be started after the first seizure if EEG confirms underlying seizure disorder.*
  - *Valproate is effective for most types of epilepsy, including generalised epilepsy. Other anticonvulsants, particularly phenytoin and carbamazepine may worsen idiopathic generalised epilepsy.*
- *Focal:*
  - *The seizure starts in one area of the brain. Focal seizures may become secondarily generalised.*
  - *All focal epilepsies require investigation to rule out underlying pathology, e.g. focal lesion.*
  - *Most anticonvulsants can be used in focal epilepsy.*

Assessment

1. Assess seizure control:
   - Check on seizure frequency, severity, and ***type.***

Common seizure types

Generalised:

- *Absence seizures – brief (< 10 seconds) loss of awareness or activity without warning, and without post-seizure confusion*
- *Generalised tonic-clonic seizures – loss of consciousness and collapse followed by stiffness and violent jerking, with post-seizure period of confusion*

Focal – symptoms experienced in focal epilepsy depend on the site of origin of the seizure:

- *Simple partial (aka focal with maintenance of awareness) – jerking movements of the face, arm, or leg (or combinations), with no loss of awareness. Duration is 1 to 2 minutes.*
- *Temporal – déjà vu, depersonalisation, fear, gustatory, olfactory or auditory hallucinations, fidgeting, swallowing and chewing.*
- *Frontal – motor symptoms, thrashing, kicking*
- *Parietal – sensory march*
- *Occipital – phosphenes, coloured shapes, loss of vision, colour changes:*
  - *Last 1 to 2 minutes*
  - *Take 10 to 15 minutes to recover*
- *May have a Todd's Paralysis, – focal signs of weakness post-ictally, usually resolve in < 24 hours.*

Complex partial (aka focal with impaired awareness):

- *Arrest of activity*
- *Motionless stare, sometimes with automatic fiddling movements of the hands*
- *Lip smacking or swallowing*
- *Variable confusion afterwards.*
- *Duration of 1 to 2 minutes, not including post-ictal state.*

- Check medication compliance and adverse effects.
- Advise that a seizure diary may be useful.
- Do not assume all clinical events are epileptic seizure attacks, as pseudoseizure can also occur in epileptic patients.

2. Check for the presence of ***lifestyle triggers.***

Lifestyle triggers

- *Sleep deprivation*
- *Excess alcohol consumption*
- *Illicit drug use*
- *Psychological stress*

Management

Practice Point - Consider necessity of drug monitoring

Drug monitoring has limited clinical use except with phenytoin. Serum drug level may be helpful if seizure is not well controlled, or if suspected poor compliance or toxicity.

The goal of treatment is complete control of seizures.

1. If any ***red flags,*** arrange immediate neurology referral or admission.
2. Ensure all patients with epilepsy have been assessed by a neurologist when initially diagnosed.
3. Start medication to control seizures:
   - Be aware that, for some patients, complete control of seizures may not be achievable due to adverse reactions or side-effects.

- Consider accepting a balance between adverse effects and control of seizures.

4. Consider whether drug monitoring is necessary:
   - It has limited clinical use except with phenytoin.
   - Serum drug level may be helpful if seizure is not well controlled, or if suspected poor compliance or toxicity.

5. If poor or incomplete seizure control (especially convulsive seizures) despite good compliance, continue to ***manage with medication*** and consider requesting urgent or routine neurology referral for consideration of advanced therapies.

Manage with medication

Consider:

- *slowly increasing the dose of current AED as tolerated until seizures stop or side-effects appear.*
- *changing to another first-line AED option:*
  - *Gradually increase a new AED before withdrawing the original medication.*
  - *Note that abrupt withdrawal may cause a seizure or status epilepticus.*

6. If adverse effects from the AED, consider whether dose reduction is appropriate and, if reducing or changing medication, request urgent or routine neurology referral.

7. Advise against, or to use with caution, ***drugs that lower the seizure threshold***. Selective serotonin reuptake inhibitors (SSRIs) and serotonin–norepinephrine reuptake inhibitors (SNRIs) used at therapeutic doses do not appear to provoke seizures.

Drugs that lower the seizure threshold

- *Antihistamines*
- *Tricyclic antidepressants*
- *Bupropion*
- *Tramadol*
- *Pethidine*
- *Clozapine*

8. Discuss ***driving regulations*** – in general, most patients with epilepsy who are adherent to medical advice are considered fit to drive with a conditional licence after being seizure-free for 12 months.

Driving regulations

- *In a person with established epilepsy, if there is any seizure activity, driving must cease until the person has been seizure free for a period of 12 months and is compliant with medication use and/or medical advice.*
- *Each seizure type has a unique recommendation and shorter periods may apply. See Austroads – Assessing Fitness to Drive: Seizures and Epilepsy for specific advice.*
- *A person with epilepsy is not eligible to hold a commercial driver's licence until they have been seizure free for 10 years, have an EEG demonstrating no epileptiform activity, and are compliant with medication and/or medical advice.*

- *If Austroads requires a specialist assessment for the patient to be declared fit to drive, seek neurology advice.*

9. Advise the patient that alcohol lowers seizure threshold. A small amount of alcohol (1 to 2 drinks per occasion, but no more than 3 to 6 drinks per week) is considered safe.

10. Consider risk of osteoporosis – AEDs are associated with a reduction in bone density and increased fracture risk.

11. If the patient is female and considering pregnancy, see Epilepsy in Women and Pregnancy.

12. Provide education and support:
    - Provide information on epilepsy and medications. See the Epilepsy Foundation – Managing Epilepsy.
    - Look at individual seizure triggers**.** For more information, see Better Health Channel – Epilepsy: Lifestyle Issues.

13. If the patient has been seizure-free for the previous 2 to 5 years, decide whether ***withdrawal from treatment*** is appropriate.

Withdrawal from treatment

- *Before undertaking withdrawal, seek neurology advice.*
- *Before considering withdrawal, advise the patient about:*
  - *implications for **driving.***

Driving

  - *Austroads and the National Transport Commission require an obligatory stand-down from driving:*
    - *during the withdrawal period, and*
    - *for 3 months after withdrawal is complete.*
  - *If a private licence holder has a seizure during or after withdrawal and medication is reinstated, they can return to driving after being seizure-free for 4 weeks.*
  - *A commercial licence holder is ineligible to hold their licence if medication is withdrawn.*

- *likelihood of a **relapse** after withdrawal – a relapse may have separate implications for work and hobbies.*

Relapses

  - *If juvenile myoclonic seizures, the relapse rate is > 90%, so life-long medication is usually needed.*
  - *If adult onset and seizure-free for 2 years, the relapse rate is about 40%.*
  - *If adult onset and seizure-free for > 5 years, the relapse rate is about 20 to 25%.*

- *Implications for employment, including type of work and risks with hazardous work.*
- *Implications for activities or hobbies which represent a risk, e.g. scuba diving.*

Referral

- If any red flags, arrange immediate neurology referral or admission.
- Request urgent or routine neurology referral if:
    - new diagnosis
    - frequent seizures, particularly convulsive seizures.
    - reducing or changing medication.
    - patient is planning for pregnancy or are pregnant.
    - considering advanced therapies.
    - managing epilepsy with ***concurrent conditions***

Concurrent conditions

- *Sleep disorders*
- *Alcohol use disorders*
- *Osteoporosis*
- *Pregnancy and pregnancy planning*
- *Mood disorders*
- *Medications the reduce the seizure threshold or interact with AEDs*

- Seek neurology advice:
    - before undertaking treatment withdrawal.
    - if needing specialist advice regarding driving recommendations.

Information

For health professionals

Further information

- Australian Family Physician – Epilepsy in Adults
- Epilepsy in General Practice – Homepage
- NICE Guidelines – The Epilepsies: Diagnosis and Management

For patients

- Better Health Channel:
    - Epilepsy
    - Epilepsy First Aid and Safety
    - Epilepsy – Lifestyle Issues
- Epilepsy Foundation – About Epilepsy

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