

epilepsy scotland

Scotland's voice for epilepsy



Epilepsy in Later Life A Good Practice Guide

Guideline Development Group

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The need for a good practice guide

Falls, faints and funny turns are all common reasons for older people to present to primary care, A&E, acute medical teams, elderly medicine, neurology and cardiology services. Some of these people have epilepsy.

Epilepsy can be a difficult diagnosis to make with certainty. There are dangers of missing the diagnosis or of making the diagnosis incorrectly. Older people have a high prevalence of co-morbidities as well as functional and cognitive impairments – all of which require systematic recognition, evaluation and management. Once diagnosed, the treatment of epilepsy requires further specialist knowledge and experience.

People present with symptoms and problems such as ‘funny turns’ and not diseases. This guide takes a problem-based approach to care. It does not cover every aspect of care of older people with possible epilepsy. Nor does it cover every aspect of care of other problems that can cause diagnostic confusion (syncope, transient ischemic attack (TIA), simple falls, delirium or sleep disorders). However, the guideline does focus on key steps in the **differential diagnosis** of a patient with possible epilepsy; key features of the specific **treatment** of established epilepsy and a basic **strategy for care** for older people

presenting with symptoms that could be due to epilepsy.

The SIGN Guideline (70) Diagnosis and Management of Epilepsy in Adults acknowledges the shortage of evidence to guide management in older people. This good practice guide is derived from a review of the available literature, expert opinion and consultation with clinicians and patients. It should be read in conjunction with the SIGN guideline, which gives general guidance for epilepsy diagnosis and care.

Epilepsy in later life in Scotland

The incidence of epilepsy rises from 90/100,000 per year in those aged 65–69 years to 150/100,000 per year after the age of 80 years. Approximately 800 people in Scotland over the age of 65 experience a first seizure each year and more than half will go on to have further seizures requiring anti-epileptic drug (AED) treatment.

In Scotland the number of people aged over 75 years will increase by 75% between 2004 and 2030. Cerebrovascular disease and Alzheimer’s disease become more prevalent with increasing age and both are associated with an increased incidence of epilepsy.

Therefore more people with epilepsy will be older, more older people will have epilepsy and co-morbid conditions will more frequently complicate care in the future. Services must therefore adapt to meet these changing needs.

Many aspects of good clinical care of epilepsy apply equally to all age groups. However important differences do exist.

Differential diagnosis can be broad. Co-morbidity, cognitive impairment and polypharmacy can create diagnostic difficulty and complicate drug treatment. The functional impact of 'funny turns', whatever their cause, may be significant to the older person, undermining confidence and leading to social isolation.

Falls, faints and funny turns – could this be epilepsy?

The diagnosis of epilepsy is based on a history and clinical examination. Investigations are often unhelpful. The accuracy of a history decays rapidly with time. Therefore patients and witnesses should be seen, and a clear history documented, as soon as possible after the suspected seizure.

A patient's poor recollection of events could be due to the following:

- **Co-existent cognitive impairment**
If the history is unclear, there is evidence of amnesia or there is amnesia for the event or its prodrome, consider an Abbreviated Mental Test (AMT) or Mini Mental State Examination (MMSE). A diagnosis of dementia is just as important to the care of the patient as a diagnosis of epilepsy.

- **Loss of consciousness or disturbance of consciousness**
This is common in epilepsy but rarely a feature of TIA.
A witness history is crucial and must be sought. The telephone is a key diagnostic instrument. Get the witness history as soon as you can; the longer you wait, the more difficult the witness may find it to recall important detail.

Six key questions to ask the older patient with falls, faints and funny turns

1. What were you doing at the time?
Being in an upright position or having just stood are potential triggers for vasovagal syncope.
2. Did you get any warning?
Dizziness or visual prodromes are unusual in epileptic seizures.
3. Did you black out? For how long?
Definite loss of consciousness excludes simple falls or TIA.
4. What happened afterwards?
Headache, myalgia or bitten lateral tongue or cheek suggests epileptic seizure. If the patient's next memory is 'waking' in the ambulance or hospital, it is likely they were postictal.
5. Do you take any medications and have they recently changed?
6. Did anybody else see this happening?

This could be epilepsy if your patient has recurrent episodes of:

- loss or disturbance of consciousness
- confusion, behavioural change or 'absence' without other explanation
- falls, after which the patient cannot recall or explain the event
- twitching, involuntary movement or sensory disturbance of a limb, limbs or face without a loss of consciousness. Positive symptoms are more likely to be due to epilepsy and negative symptoms (weakness) to cerebrovascular disease.

Six key questions to ask the witnesses

1. What was the person doing at the time?
2. Did you notice anything or did the person complain of anything before it happened?
For example, changes in skin colour, altered speech, sweating, nausea, vomiting or confusion?
3. Did they lose consciousness, become unresponsive, or seem unaware that you were there? For how long?
4. Were they still or did they twitch, jerk or move around?
5. What happened after the event? Were they confused, nauseated or aggressive? Was their speech altered? Were there any other more specific complaints from the patient?
6. Did anyone try to take the patient's pulse?

This is not epilepsy if:

- the episodes comprise dizziness only, or vertigo followed by a fall without loss of consciousness. Consider alternative explanations such as vestibular pathology, vertebrobasilar TIA or cardiac dysrhythmia.

Epileptic seizures are more likely if:

- the events occur in a variety of postures and not only during standing or just after standing
- the events always occur during sleep
- the duration of confusion or amnesia following the event is longer than one hour
- myalgia, headache or bitten lateral tongue or cheek are noted.

Epileptic seizures are less likely if:

- the event always occurs while standing or just after standing (could this be postural hypotension or other vasomotor problem?)
- the prodrome, if remembered, is dominated by visual symptoms or dizziness (could this be syncope?)
- a good witness history describes a 'fall down, lie still' event with loss of awareness (could this be vasovagal or cardiac syncope?).

Some important points to remember

- Pseudoseizures are relatively uncommon in older people, but suspect when attacks include tremors.
- Always consider syncope if the patient is taking diuretics, antidepressants, antihypertensive or antipsychotic drugs. This is particularly important if there is a temporal relationship between starting the drug and the events.
- If your patient has had multiple negative investigations for recurrent disabling events, reconsider the whole history – others may have overlooked an obvious clinical diagnosis.

Where do I refer?

Who needs to be referred or investigated?

The need for referral or investigation will depend on:

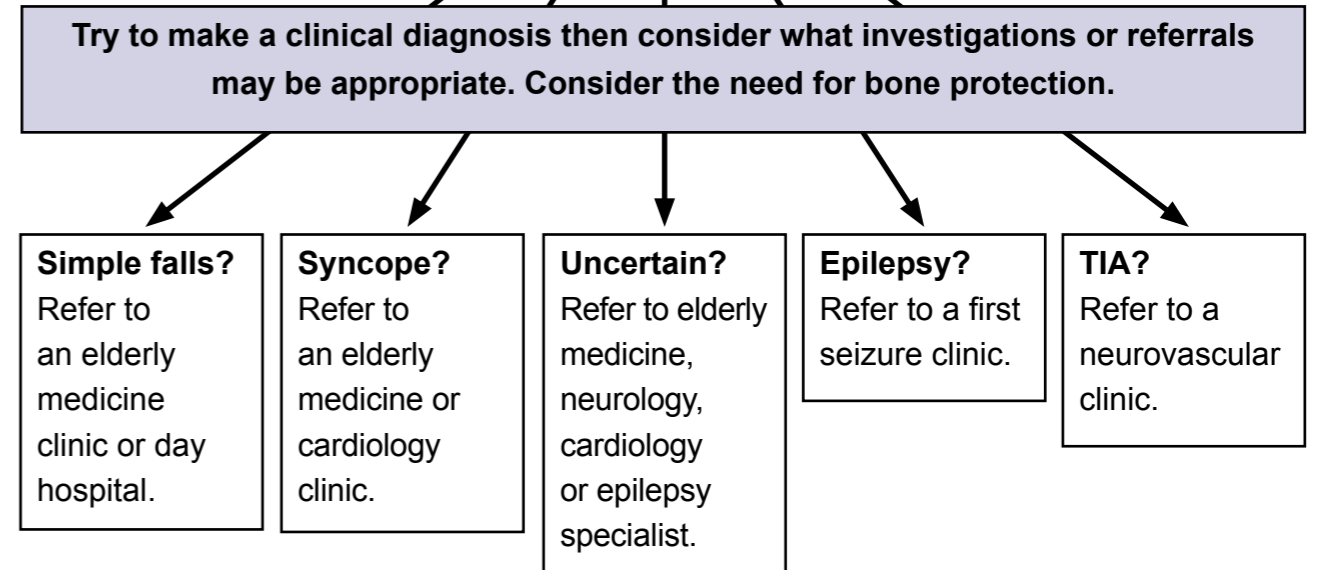
- patient preference
- frequency of events
- impact of events on patient QoL or function
- degree of suspicion of identifying remediable cause.

Older adult with frequent undiagnosed falls, funny turns or blackouts

Detailed history from patient and / or witness

Do investigations help?

- Investigations are most useful to confirm a diagnosis made from the clinical history, or when there is diagnostic doubt.
- Investigations are more likely to confirm other causes of symptoms rather than epilepsy.
- False positive investigation results are more common in older people.



Three points to remember

- It can be very difficult to make a clear clinical diagnosis.
- If one suspected condition is 'excluded' and events continue – reconsider the history and make a referral for alternative specialist opinion.
- Local availability determines the precise referral pathway – if specialists are not available, refer to a generalist (geriatrician or general physician).

Referral do's

- Get as clear a history as possible.
- Check lying and standing blood pressure.
- Suggest a relative and / or witness attends the clinic with the patient or is available by telephone.
- Review all medications.
- Refer for an ECG (12 lead).
- Perform an MMSE or AMT if the history is unclear.
- Advise the patient not to drive a car.

Referral don'ts

- Arrange an EEG.
- Try a treatment trial.

Acute provoked seizures

- Acute provoked seizures are seizures with an identifiable and immediate preceding cause.
- The commonest causes of acute provoked seizures in older people are acute stroke, infection, medications and alcohol.
- Metabolic disorders are also associated with acute provoked seizures. Hypoglycaemia, hyperglycaemia, uraemia hyponatraemia, and hypocalcaemia should all be sought and treated if found.
- Short-term ancillary AED treatment may be needed while the underlying precipitant is treated.

The treatment of epilepsy in later life

- Ideally, a physician who is familiar with epilepsy and who can discuss the advantages and disadvantages of AED treatment with the patient and carer should start treatment.
- There are few circumstances in which prevention of generalised seizures is not advisable. Age is never a barrier to treatment, but a patient's wishes, co-morbidities and general functional status may affect decision-making.
- Very few treatment studies have included older people and the evidence base is limited.
- As there are no major differences in efficacy among first-line antiepileptic drugs, tolerability and long-term safety must be the paramount consideration in older patients with newly diagnosed epilepsy.
- Pharmacodynamics and pharmacokinetics are altered in older people due to reduced protein binding, enzyme inducibility, renal elimination and hepatic metabolism of many common agents.
- Older patients are at greater risk of polypharmacy. More drugs often means more drug interactions, more adverse effects and reduced adherence to treatment.
- Physical or cognitive / psychological co-morbidities may be made worse by certain AEDs.
- Older people are more likely to experience adverse effects including idiosyncratic reactions to treatment.

An overview of specific drug options

Drug	Advantages	Disadvantages
Lamotrigine	Studied in older people Few interactions or adverse effects	Neurotoxicity in higher doses Slow up-titration Insomnia
Levetiracetam	Broad spectrum No interactions Rapid up-titration possible	Sedation, mood problems
Sodium Valproate	Broad spectrum Few interactions	Sedation Weight gain Tremor Parkinsonism
Gabapentin	Studied in older people No significant interactions	Clinical experience suggests efficacy lower than that suggested by clinical trials TDS or QDS dosing schedule
Oxcarbazepine	Generally well tolerated	Hyponatremia Neurotoxicity Avoid in combination with diuretics, hypotensive medications
Pregabalin	No interactions	Limited evidence of efficacy in the elderly
Carbamazepine	Studied in older people	Neurotoxicity Hyponatremia Enzyme induction Bone loss

Phenytoin, phenobarbitone and primidone should be avoided if possible because of side-effect profiles, sedative effects, non-linear kinetics (phenytoin) and interactions. Topiramate may cause cognitive slowing, requires slow titration and is best avoided.

Starting treatment

- Follow the **start low, go slow rule**. In general, use half the starting dose used for a young adult and titrate upward at fortnightly intervals.
- Always aim for seizure control with a **single drug**.

Changing treatment

- Choose another drug if the first fails due to:
 - rash or idiosyncratic reaction
 - poor tolerability of the drug at low or moderate dosage
 - no improvement in seizure control.
- If the patient’s symptoms are controlled on a ‘second line’ drug and they have no significant adverse effects – make no change.
- If a patient has no seizures over a one or two year period then consideration can be given to a trial of treatment withdrawal. This should only happen with full patient understanding and involvement. Treatment withdrawal is less likely to be successful in the presence of underlying structural brain disease such as stroke.

Drug levels

Older patients often experience efficacy below the standard therapeutic range and symptoms of toxicity with levels within the traditional therapeutic range. Routine monitoring of serum AED levels is therefore not recommended, but single values may be useful in the evaluation of treatment adherence or drug interaction.

Ancillary care

Epilepsy specialist nurses, occupational therapists, physiotherapists and pharmacists may all have a role in assessment, support and functional review of older people with epilepsy.

The management of epilepsy in later life: other aspects of patient care

The older patient with epilepsy often has problems other than epilepsy alone. It is therefore important to consider the following when assessing your patient.

- **Polypharmacy**
 - Take the opportunity to review and simplify medication, reducing potential for interactions and poor compliance.
- **Consequences of falls from seizure or any other cause**
 - Consider the need for bone protection (some AEDs accelerate bone loss), the patient's ability to rise unassisted, the need for alert systems and correctible environmental dangers. Balance and gait may be impaired by some AEDs.
- **Social isolation**
 - Loss of confidence with associated dependence on carers or family may follow 'turns' of any sort. Can confidence be improved? Is assessment and rehabilitation needed?
- **Stigma**
 - Epilepsy still carries a stigma for many older people; this may impede diagnosis or acceptance of treatment.
- **Cognitive impairment**
 - Epilepsy is associated with dementia and this may influence diagnosis, choice of medication or treatment adherence. Has the presence of dementia been considered? Does the dementia itself need to be investigated or treated?
- **Vascular risk**
 - Epilepsy is strongly associated with cerebrovascular disease in older people; have the treatable risk factors been addressed?
- **Monitoring the condition**
 - Assessing frequency of seizures may be more difficult due to social isolation or impaired recall.
- **Lowered seizure threshold**
 - Metabolic upset, drug treatment or intercurrent illness are more likely to provoke seizures in older people.
 - Alcohol may interact with AED treatment and lower the seizure threshold.
- **Driving**
 - Loss of a driving license may alter the care needs of a patient or patient's spouse.
- **Models of care**
 - Clinic attendance may be more difficult for the frail. Would a day hospital setting be better? Would specialist nurse input help?

Despite these issues, epilepsy in older people generally has a good prognosis – accurate diagnosis often leads to excellent seizure control.

Further Reading

1. SIGN Guideline (70) Diagnosis and Management of Epilepsy in Adults 2003.
2. Consensus Conference on better care for children and adults with epilepsy – Final statement. RCPE 2002.
3. Ramsay RE; Rowan AJ; Pryor FM. Special considerations in treating the elderly patient with epilepsy. *Neurology* 2004 Mar 9;62(5 Suppl 2):S24-9.
4. Stephen LJ; Brodie MJ. Epilepsy in elderly people. *Lancet* 2000; 355:1441.
5. Amatniek JC; Hauser WA; DelCastillo-Castaneda C et al. Incidence and predictors of seizures in patients with Alzheimer's disease. *Epilepsia* 2006; 47:867.
6. Brodie MJ; Overstall PW; Giorgi L. Multicentre, double-blind, randomised comparison between lamotrigine and carbamazepine in elderly patients with newly diagnosed epilepsy. The UK Lamotrigine Elderly Study Group. *Epilepsy Res* 1999; 37:81.
7. Saetre E; Perucca E; Isojarvi J; Gjerstad L. An international multicenter randomised double-blind controlled trial of lamotrigine and sustained-release carbamazepine in the treatment of newly diagnosed epilepsy in the elderly. *Epilepsia* 2007; 48:1292.
8. Rowan AJ; Ramsay RE; Collins JF et al. New onset geriatric epilepsy: a randomised study of gabapentin, lamotrigine, and carbamazepine. *Neurology* 2005; 64:1868.

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