

Combination psychotropic medicine use in older adults and risk of hip fracture

SUMMARY

Older people might be embarrassed to talk about falling as they worry this may be judged as a loss of their ability to live independently. Ask older patients, at least yearly, if they ever feel unsteady on their feet or if they have fallen.

Consider whether medicines may be contributing to feelings of unsteadiness or falling. Drugs such as benzodiazepines and selective serotonin reuptake inhibitors, particularly if taken together, are associated with a risk of falling and hip fracture.

Review the patient's treatment regimen to see if there are drugs that are no longer required. Psychotropic drugs should usually be tapered gradually so that adverse effects can be minimised.

Involve a range of health professionals to identify and manage the risk of falls. Help patients stay physically active, independent and socially connected.

Introduction

In Australia, an estimated 30% of people aged over 65 years living in the community and 50% of residents of aged-care facilities fall at least once a year.^{1,2} The resultant harm is significant. In 2018, the estimated number of Australians aged 50 years and over who were hospitalised for a hip fracture was 28,000.³

An estimated 5% of those who sustain a hip fracture die in hospital, and more than 10% are discharged from hospital to an aged-care facility. More than 50% experience a persistent mobility-related disability one year after their injury.⁴

Falls typically result from multiple interacting factors. The more factors present, the more likely the person is to fall.¹ Medicines are a modifiable risk factor. Adverse effects such as drowsiness, dizziness, blurred vision, confusion or postural hypotension may all contribute to falls.^{5,6} The association between psychotropic drugs and the increased risk of hip fracture is well recognised.^{7,8} This is likely to be even greater when psychotropic drugs are used in combination.

Psychotropic drugs and hip fracture

Australians are among the highest users of antidepressants in the world, with approximately 10% of the adult population using them each day.⁹ Selective serotonin reuptake inhibitors (SSRIs) are commonly used to treat depression. They are often co-prescribed with other drugs, particularly in older people who frequently take multiple medicines

to manage multiple morbidities.^{5,10} A systematic review and meta-analysis found that depressive symptoms were consistently associated with falls in older people.¹¹

An Australian matched case-control study using data from the Australian Government Department of Veterans' Affairs (DVA) assessed the risk of hip fracture following starting and ongoing use of SSRIs, either alone, or in combination with other psychotropic drugs.¹² The study included 8828 veterans with hip fracture and 35,310 matched controls of the same age and gender, and examined their medicine use in the previous six months. The average age of the cohort was 88 years and 63% were women.¹²

The risk of hip fracture was increased for all five groups of drugs tested (antidepressants, opioids, antiepileptic drugs, benzodiazepines and antipsychotics). The highest risk, more than double, was when SSRIs or opioids were started (see Fig.) and it remained high with ongoing use.¹² International studies have found similar results with SSRIs and opioids.^{8,13} Co-administration exacerbated the risks even further.¹²

Starting benzodiazepines and SSRIs together

The highest risk of hip fracture is when a benzodiazepine and an SSRI are started together. There is a fivefold increased risk (odds ratio (OR) = 4.7, 95% confidence interval (CI) 1.7-13) equating to one extra hip fracture for every 17 patients aged 80 years and over who are treated for a year.¹² For

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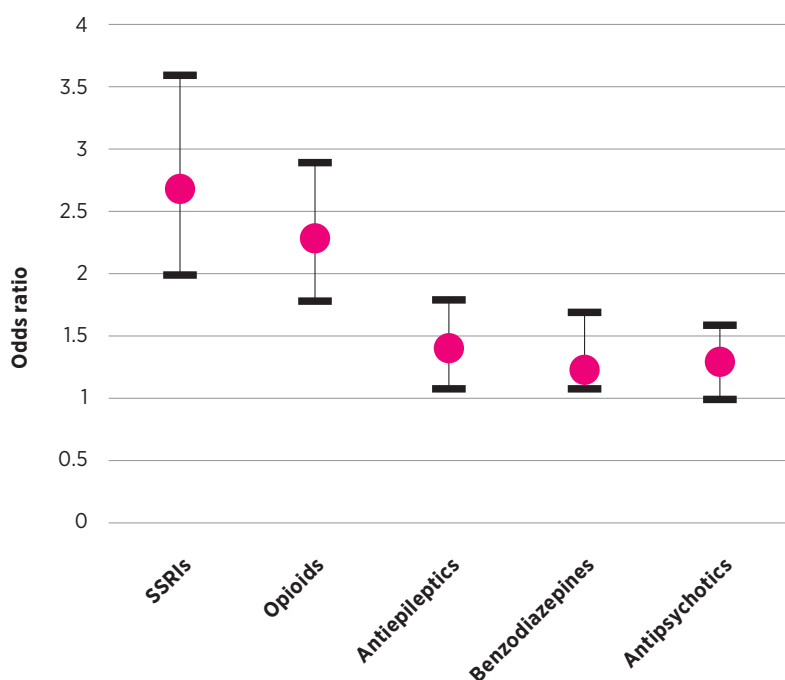
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Fig. Risk of hip fracture associated with starting psychoactive drugs¹²



Time interval = 180 days
 95% confidence interval
 SSRI selective serotonin reuptake inhibitor

every 32 people aged 80 years and over who add a benzodiazepine to current SSRI use there will be one extra hip fracture over the year.^{12*}

Prescribing a benzodiazepine with an antidepressant to treat anxiety and depression is thought to provide relief from acute symptoms and improve adherence to treatment by reducing the adverse effects of the antidepressant, especially during the first month of treatment.^{14,15} However, this combination is not safe in the elderly and a patient's risk of falling should be assessed before prescribing.

Adding opioids to SSRIs

Persistent or chronic pain among older Australians is common and is often associated with depression and anxiety.¹⁶ Adding an opioid for patients already using

* The number needed to harm was calculated from: the odds ratios from Leach et al. 2017¹², hip fracture incidence in the over-80-year-old population in 2016 from the Australian and New Zealand Hip Fracture Registry, Australian over-80-year-old population estimates from the Australian Bureau of Statistics for 2016, and the method of Bjerre and LeLorier 2000.

an SSRI increases the risk of hip fracture, with one extra hip fracture for every 29 patients aged 80 years and over who are treated for a year.¹² There is a need to assess the risk of falls when considering this combination. It may be possible to taper the SSRI in patients who are well, or use an alternative analgesic in older patients who are unsteady on their feet.

Adding antipsychotics to SSRIs

Starting antipsychotic drugs in patients aged 80 years and over who are already using SSRIs results in one extra hip fracture for every 49 patients treated for a year.¹² Antipsychotics and antidepressants are commonly prescribed for elderly people with dementia.¹⁷ However, there is a lack of evidence to show that antidepressants are beneficial in dementia.^{18,19} Antipsychotic use in elderly people is associated with adverse effects linked to falling including orthostatic hypotension, confusion and anticholinergic effects.^{18,19}

Strategies to reduce the risk of falls

There is a range of interventions that can reduce the risk of falls. A multidisciplinary approach may be helpful.

Review the regimen

Reviewing and modifying older people's medicines to align with their preferences, expectations, treatment goals and level of function is good practice.²⁰ Gradual withdrawal of psychotropic drugs can reduce falls.¹ When considering which drugs to taper or cease, prioritise them based on their risk and the patient's needs, as well as the ease of dose reduction or cessation, and the availability of safer alternatives. It may be necessary to consult with other prescribers and discuss the options and potential outcomes with the patient.²⁰ If deprescribing, stop one drug at a time and wean doses slowly over weeks or months while closely monitoring the patient for benefits or adverse effects.²⁰ Stopping too quickly can cause withdrawal syndromes.

Avoid starting an antidepressant for mild to moderate depression. Psychological management alone is appropriate first-line treatment.²¹ For older patients with full resolution of symptoms, consider tapering and ceasing SSRIs. (To find out how to taper and cease an antidepressant, go to: www.veteransmates.net.au/topic-49-therapeutic-brief or www.nps.org.au/australian-prescriber/articles/switching-and-stopping-antidepressants.)

For older patients taking an opioid for chronic pain, consider a multidisciplinary approach to help them understand why pain can persist even after an injury has healed and how active self-management strategies can help them overcome their

pain.²² Review the use of opioids and, where possible, slowly taper and cease or substitute with a non-opioid analgesic as the patient's ability to regain control and self-manage increases. (To find out how to taper and cease an opioid, go to: www.veteransmates.net.au/topic-48-therapeutic-brief.)

In dementia, behavioural and psychological symptoms often fluctuate over time, and occur episodically, most commonly as a result of unmet physical or psychological needs combined with impairment of brain function, and lowered stress thresholds due to the disease process.²³ If an antipsychotic is prescribed for behavioural and psychological symptoms of dementia, limit the dose and duration and also consider the timing of the dose. When possible use non-pharmacological interventions.²³ (To find out how to taper and cease an antipsychotic, go to: www.veteransmates.net.au/topic-44-therapeutic-brief.)

Avoid starting benzodiazepines in older patients. If a benzodiazepine is absolutely necessary, use for a short time only, at a low dose and monitor the patient closely.²⁴ (For information on how to manage benzodiazepine dependence, and how to taper and cease, go to: www.nps.org.au/news/managing-benzodiazepine-dependence-in-primary-care.)

Discuss risk factors

Encourage patients to work with a range of health professionals to help them stay active and socially connected. Patients at high risk of falling include those who are visually impaired, have cognitive impairment, advanced diabetes or a neurological disease.^{1,25} Research suggests that multifactorial interventions that include individual assessment, group or home-based exercise programs, and home safety interventions are effective in helping to reduce falls.¹

Explain to patients that some medicines can cause adverse effects that might increase their risk of falling. Encourage them to report any dizziness, drowsiness, confusion, or blurred vision. Ask them if they are willing to discuss possible changes to their treatment.

At least once a year and after changes to the treatment regimen, ask older patients if they ever feel unsteady on their feet or if they have fallen. Previous falls increase the risk of subsequent falls.²⁵ Reassure patients that many things can be done to help prevent falls and to help them stay steady on their feet. A quick and simple falls-risk screen can identify patients who might be at risk of falling.²⁵ This can be added to the template for a GP Management Plan and for health assessments in patients aged over 75 years.

Being involved in group or home-based exercise classes that focus on improving balance and building strength can reduce the risk of falls. It can also help to prevent injuries resulting from a fall.¹

In Australia, one in four men and two in five women aged 50 years and over sustain a minimal trauma fracture, most commonly because of osteoporosis or osteopenia.²⁶ Identify patients, without a history of a previous fracture, who are at high risk of poor bone health and refer them for a bone mineral density scan. There is a Medicare subsidy for bone mineral densitometry for people over 70 years who have not had a bone mineral density scan before and for younger people with specific risk factors for osteoporosis.²⁷

Allied health interventions

Interventions by an occupational therapist to improve home safety can be effective particularly if the patient is at high risk of falling. (To find an occupational therapist, go to: www.otaus.com.au/find-an-occupational-therapist.)

An assessment of foot pain by a podiatrist and advice about appropriate footwear, ankle and foot exercises, customised insoles and falls prevention strategies can help to reduce the risk of falling.^{1,25} DVA funds podiatry services for eligible DVA patients. (To find a podiatrist, go to: www.podiatry.org.au/find-a-podiatrist.)

Encourage patients to have their eyesight checked every two years or more often if needed.²³ Remind patients that eye drops or eye ointment can cause blurred vision which can increase their risk of falling.

Conclusion

Psychotropic drugs increase the risk of falls. SSRIs, used alone or concurrently with benzodiazepines, opioids or antipsychotic drugs, significantly increase the risk of hip fracture and in many elderly patients they may pose an unacceptable risk. The degree to which the risk is increased following concurrent use of these drugs might not be well recognised. Asking patients about whether they have previously fallen and reviewing their medicines can help to reduce their risk. ◀

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SELF-TEST QUESTIONS

True or false?

1. Opioids increase the risk of hip fractures.
2. During the first few weeks of therapy with a selective serotonin reuptake inhibitor a benzodiazepine can reduce the risk of falls.

Answers on page 113

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