Benzodiazepine Use among Older Adults: A Problem for Family Medicine?

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Long-term benzodiazepine use in older adults with sleep disorders is potentially hazardous, but it is also becoming easier to manage as approaches to withdrawal become feasible in primary care, without adverse consequences. This article reviews the evidence and describes practical approaches to reducing consumption of benzodiazepine hypnotics.

Key words: benzodiazepines, insomnia, older adults, primary care, hypnotics

Introduction

Although benzodiazepines (BZDs) are not currently recommended for long-term use (>4 weeks) and the prescribing of BZD anxiolytics has declined significantly, hypnotics are still given to older adults in repeat prescriptions. Long-term use of BZD hypnotics is significantly higher among older adults than younger people throughout North America, Australia, and Europe.1,2 It has been estimated that up to 15% of individuals over 65 years old regularly take sleeping pills and, in the U.K., older adults receive 80% of all the prescriptions written for BZD hypnotics. This extensive use of BZDs has been seen as a major public health problem; for example, a review of drug use by older adults concluded, “After tobacco and alcohol, BZD consumption is associated with the greatest risk of abuse and dependence in the elderly.”3

Some of the blame for the widespread use of BZD hypnotics has been directed at physicians who may be unskilled in the management of sleep complaints and incautious prescribers of potentially hazardous medication. While there may be some truth in these criticisms, we should be careful not to underestimate the difficulties of managing sleep disorders or to overstate the hazards of BZD use. Likewise, we need to understand the real health gains that may follow withdrawal of long-term BZD use among older people and the resources needed to achieve them.

Reducing Benzodiazepine Use

A reduction in BZD prescription was a specific target of the United Kingdom’s Health of the Nation programme,4 and prescriptions for BZD tranquilizers in England were halved between 1984 and 1994 (from 12.2 million to 5 million). However, there was a relatively slow decline in prescriptions of BZD hypnotics (10 million in 1984, 9.2 million in 1994, and 7.5 million in 1999). This pattern of decreasing use of BZD anxiolytics and little change in use of BZD hypnotics has also been noted in the U.S. and other countries.5 One survey in the U.K. showed that the use of BZD hypnotics by adults >65 years increased by 13% between 1985 and 1989, a time when BZD use in the general population declined.6 A large-scale audit of BZD prescribing and withdrawal in British family practices found that patients over 65 years are significantly less likely to stop BZD use than younger patients.7

While it became clear in the 1990s that any effort to further reduce the use of BZDs should focus on the main users (i.e., older adults), the best ways to achieve this were less obvious. The prescribing of BZD hypnotics to older individuals was then, in part, historically determined, with a cohort of older people who understood their insomnia as treatable with BZDs but without which they could not sleep properly. It also seemed likely that sleep disturbance symptoms of anxiety or depressive disorders were still being treated with short-term remedies, so a new cohort of long-term BZD users was being recruited. Treatment of sleep disturbance seemed to be problematic, particularly for family physicians, and older long-term users of BZDs appeared to be particularly difficult to manage.

Risks of Benzodiazepine Use in Later Life

There is no doubt that BZD use can be hazardous. Older adults are more susceptible to the effects of BZDs because age-related changes in pharmacokinetic processes (particularly distribution, metabolism, and clearance) can greatly prolong the effects of these drugs.8 There is evidence of an increased risk of falls and fractures among older people who take BZDs,9,10 and BZD consumption has been estimated to approximately double the risk of motor vehicle accidents.11 Studies of older adults suggest that this increased risk is related to the dose of BZD taken and is compounded when alcohol has also been consumed.12 Older people with multiple comorbidities often take a combination of medicines, including other centrally acting ones, which can interact and create adverse effects.

The cognitive effects of BZDs are of particular concern for older adults whose everyday function may be especially vulnerable to memory failures, and this reinforcement of frailty appears to be the dominant risk of BZD use in later life. Age-related cognitive decline may be exacerbated by additional drug-induced impairment with substantial repercussions for older people’s daily functioning, including confusional states and pseudodementia.13 Indeed, it has been estimated that about 10% of older adults referred to memory clinics display cognitive impairments that are drug related, often due to BZDs.14
Benefits of Benzodiazepine Use to Older People

Benzodiazepines are ineffective as long-term treatments for insomnia because, taken over prolonged periods, they do not remain effective in actively promoting sleep. In addition, withdrawal symptoms and rebound insomnia are sometimes experienced with long-term use.15 Interestingly, older people who continued taking BZDs when given the opportunity to withdraw had elevated anxiety ratings compared with withdrawers.16 This gives us important clues about the relative resistance among older adults and their doctors to withdraw from long-term BZD use, or to avoid its initiation.

Insomnia may be a feature of anxiety or depression, both of which are difficult to treat and sometimes hard to distinguish from one another. Factors associated with anxiety disorders in older people include subthreshold anxiety symptoms such as insomnia, depressed mood, two or more chronic illnesses, a poor sense of mastery, poor self-rated health, and low education level.17 This is a formidable package of characteristics, and it is hardly surprising that, as yet, there is little evidence to guide targeted prevention strategies. Likewise, responding to anxiety symptoms in older adults can be difficult in family practice, for such symptoms are also part of normal experience—the result is that clinicians walk “a fine line between pathologising a healthy response and failing to recognise neurotic dysfunction.”18

Depression is the other problem that may be difficult to recognize and to treat in older adults seen in family practice. Although depressive conditions are common and are associated with considerable functional and medical morbidity in older primary care patients, often patients’ clinically significant depressive symptoms are not captured by criteria-based syndromic diagnostic categories.19 Depression in later life also has a poor prognosis, with a chronic relapsing course,20 a characteristic that family physicians may understand more clearly than do their specialist colleagues. Greater medical burden, poor subjective health status, and poorer subjective social support confer a higher risk for a poor outcome.21 A third of depressed older people have had at least one diagnosis of a lifetime anxiety disorder, and this combination of anxiety and depression is also associated with poorer social function and a high level of somatic symptoms.22

The co-occurrence of anxiety and depression represents a more severe and chronic psychopathology, which is associated with longstanding vulnerability.23

Behind the presenting problem of disturbed sleep is an uncertain terrain of overlapping and indistinct disorders that make choices about appropriate therapies complex. Symptomatic treatment, while unsatisfactory, can resolve the diagnostic dilemma in favour of clinical action.

Perceptions of Depression

Family doctors may tend to perceive depression as part of a spectrum that includes loneliness, lack of a social network, and a reduction in function, and to view depression as understandable and justifiable. The biomedical model does not fit with the everyday experience of family doctors or their older patients, who may share the view that depression is a consequence of social and contextual issues in their lives. Patients’ views are characterized by passivity and limited expectations of treatment, and they may not view depression as a legitimate illness to be taken to the family physician. Primary care professionals often recognize that managing late-life depression does fall within their remit but identify limitations in their own skills and capabilities in this clinical area, as well as a lack of other resources to which they can refer patients.24

Given this backdrop, it is easy to see how older individuals who have a long-standing sleep disturbance could pose a diagnostic and therapeutic problem for their family physicians, who may feel that they are contending with the somatization of anxiety and depression in vulnerable, perhaps poorly educated, individuals for whom a potentially stigmatizing diagnosis like depression is less acceptable than an immediate pharmacological solution. Once initiated, this therapy may prove difficult to stop, partly because of the pharmacological problem of withdrawal symptoms and rebound insomnia and partly because of psychological dependence.

A Clinical Strategy

A patient preference trial of BZD withdrawal in family practice demonstrated cognitive advantages to the withdrawal of long-term BZDs and negligible costs in terms of discomfort to patients willing to withdraw the medication.16 The trial has three lessons for family practitioners. First, improvements in performance occurred in map searching, information processing, reaction time, visuospatial abilities, and digit span tests, which reflect real-life cognitive demands. Most people consult maps to locate places and the digit span skill taps everyday requirements of holding numbers in mind (for example, while dialing a telephone number) and of mentally manipulating numbers (for example, while calculating what change is due when shopping). Improved accuracy and speed of information processing enhance performance in many daily activities, as do faster reaction times generally. In particular, enhanced information processing, reaction time, and visuospatial abilities contribute positively to driving performance. These are relatively subtle changes in cognition that change the quality (and safety) of everyday life, and family physicians may well see the changes or receive positive feedback from the patient or the family about them. There can also be savings to health services in terms of reduced drug costs, and possibly through fewer road traffic accidents, falls, and fractures; however, these changes would be seen more clearly at an epidemiological perspective than a clinical one.

Second, the withdrawal of BZD treatment from older adults requires a tapered dose regimen of the BZD (preferably down to placebo capsules), information about sleep, and support from psychologists trained to manage sleep disorders. Withdrawal may be aided by the patient being unsure of the timing of when their drug dose is reduced to placebo. This
Blinded tapering therapy (BTT) seems an effective approach in long-term use of BZDs as it essentially separates the two major aspects of drug taking: pharmacological and psychological. The trial found little in the way of withdrawal problems or sleep problems as the drug dose was tapered (that is, during the pharmacological change). However, when placebo was stopped abruptly at 24 weeks, the psychological aspects of drug taking (that is, those associated with the behaviour of taking the capsule before bed and cognitions about the effectiveness of the capsule in aiding sleep) affected many patients, who were then able to be reassured that they had been taking a placebo for the previous few weeks. There are clearly ethical issues in using BTT methods, and this strategy needs to be explored further in primary care settings.

Third, managed in this way, BZD withdrawal occurred without the emergence of depression or anxiety, at least in the short term, despite professionals’ fears of immediate unmasking of psychopathology. We do not know what the longer-term consequences of such a change in therapy are; this would require a cohort study in primary care. It is possible that withdrawal from BZD hypnotics (in settings similar to the one in this trial) occurs most readily during the remission phase of a relapsing depressive disorder, giving an optimistic impression of the ease and consequences of withdrawal. In addition, we do not know if those who opted to withdraw from BZD use gained lasting advantages over the significant minority who declined to withdraw.

**Conclusion**

The clinical problem of sleeplessness in older people is becoming less difficult to manage as we see both its relationships to depression and anxiety and the potential for avoiding purely symptomatic treatment with BZDs rather than treating the underlying pathology. The acquisition of new strategies for reducing the risks of long-term BZD use means that the cohort of older adults with seemingly intractable sleep problems could continue to decline, provided that the resources needed for withdrawal programs become widely available.

**Key Points**

- Long-term use of benzodiazepines (BZD) hypnotics is significantly higher among older adults than younger people.

- After tobacco and alcohol, BZD consumption is associated with the greatest risk of abuse and dependence among older adults.

- Reinforcement of frailty appears to be the dominant risk of BZD use in later life.

- Treatment of sleep disturbance has seemed to be problematic, and older long-term users of BZDs have appeared to be particularly difficult to manage in primary care.

- Blinded tapering therapy seems an effective approach with long-term users of BZDs.

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**References**

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