Drug Misuse and Abuse in the Elderly

Research into substance misuse and old age psychiatry can be hampered by the unpopularity of the subject generally and the difficulty in obtaining reliable clinical data. It has been reported in 2002 that lifetime experience of any illicit drug use is 24 per 1000 in the 65–69 age group and 34 per 1000 in the 70–74 age group. The same study showed that drug use in the previous year among the same population was 10 and 6 per 1000 respectively. (1) leaving aside alcohol and tobacco, factors that may increase substance exposure are gender, chronic painful illness (opoid analgesics, hypnotic drugs and anxiolytics), long term prescribing (sedative hypnotics and anxiolytics) and care-giver over-use of medication with institutionalised elderly. (2)

Anxiolytics, sedatives and hypnotics are medicines that work on the central nervous system to relieve anxiety, aid sleep, or have a calming effect. The benzodiazepines are the main class of drugs that fit into this category. Although there are more than twenty benzodiazepine derivatives, only certain ones have been approved to treat anxiety (eg, alprazolam, clonazepam, diazepam, and lorazepam), sleeplessness (insomnia) (eg, estazolam, flurazepam, quazepam, temazepam and triazolam), or panic disorder (eg, alprazolam). Barbiturates are an older class of medicine that used to be used for these indications as well; however, barbiturates have a window of effectiveness before toxicity occurs, and are more likely to cause respiratory depression, coma and death, and are very rarely used nowadays. Dependence is the main issue with the use of benzodiazepines. Benzodiazepines differ in their propensity to cause sedation and in the length of time they act for. All benzodiazepines are thought to work by enhancing the inhibitory action of γ-aminobutyric acid (GABA).

On average, elderly people are prescribed twice as many medications as working-age adults. Prescribing is often less rational, with less stringent monitoring, particularly in institutional settings, and there is increased complexity of medications, hoarding and drug-sharing with others (4). Untrained or inexperienced GP's may well contribute to this. Psychotropic drug misuse is four times greater among women than men and the risk of dependence is increased if the women are widowed, less educated, of lower income, in poor health and with reduced social support (5). An association may exist between age-related physical morbidity (such as arthritis) and misuse of medications. A study conducted in Pennsylvania reported that 77% of prescription drug users were on drugs that interacted with alcohol and 19% reported concomitant alcohol use. Sixteen per cent of opioid analgesic and benzodiazepine users reported concomitant alcohol use (7). Of all emergency department visits involving opioid analgesics, 72% were associated with multiple drug misuse.
Benzodiazepine use in elderly people is associated with falls, road-traffic accidents, hip fracture and cognitive impairment (6). Cognitive impairment from drug use might be overlooked, misdiagnosed and mistreated in elderly patients. Physical illness that impairs sensory and motor systems, prescribed medication use and functional psychiatric illnesses can affect the cognitive assessment. Cognitive function is also influenced by variations in the quantity and duration of substance use and the phase of intoxication or withdrawal. There is evidence to demonstrate that drug misuse in elderly people constitutes a major public health problem influencing health and social services.

Antipsychotics

In 2008, the government commissioned an independent report regarding the use of antipsychotic medication for people with dementia in the NHS in England. The review was commissioned as there were increasing concerns over the use of these drugs in dementia. (3) The report found that the current approach to treating the psychological and behavioural symptoms of dementia was largely based on the use of antipsychotics. It also found that the evidence regarding the use of antipsychotics in people with dementia is complex and sometimes contradictory. The report concluded that, overall, the evidence suggests that antipsychotics appear to have only a limited positive effect in treating these symptoms and cause significant harm to people with dementia. It was estimated that each year, 180,000 people with dementia receive antipsychotics in England and up to 36,000 of

these people may benefit to some degree from the treatment. However, around 1,620 additional cerebrovascular adverse events (such as stroke) will result from the treatment and each year, about 1,800 additional deaths will be caused by the treatment in this frail population. The report (3) made a number of recommendations that aim to reduce the use of antipsychotics to a level where the benefits outweigh the risks, estimating that antipsychotic use could be reduced to a third of the then current level, done safely over 36 months. People with dementia should receive antipsychotics only when they really need them. and reducing the use of antipsychotics in people with dementia should be a priority for the NHS. Adverse effects offset advantages in the efficacy of atypical antipsychotic drugs for the treatment of psychosis, aggression, or agitation in patients with Alzheimer's disease (12)

NICE recommendations on the use of antipsychotics in dementia include:

- People with dementia who develop non-cognitive symptoms (psychosis and/or agitated behaviour causing significant distress) or challenging behaviour should be offered a pharmacological treatment in the first instance only if they are severely distressed or there is an immediate risk of harm to the person or others. An assessment to establish likely factors that may cause, aggravate or improve such behaviour should be carried out at the earliest possible opportunity and a care plan drawn up.
- People with Alzheimer's disease, vascular dementia, mixed dementias or dementia with Lewy Bodies (DLB) with mild-to-moderate non-cognitive symptoms should not be prescribed antipsychotic drugs because of the possible increased risk of cerebrovascular adverse events (e.g. stroke) and death. Those with DLB are at particular risk of severe adverse reactions.
- People with Alzheimer's disease, vascular dementia, mixed dementias or DLB with severe non-cognitive symptoms may be offered treatment with an antipsychotic drug provided there is a full discussion with the person and their carers of the risks of adverse effects, there are specific treatment aims and goals and treatment effects which are regularly assessed and recorded. The drug should be selected on an individual basis, started at low dose, monitored regularly and changed or withdrawn as indicated.

Antipsychotic drugs (also known as 'neuroleptics' or 'major tranquillisers') are a group of medications that are usually used to treat people with mental health conditions such as schizophrenia. In some people, antipsychotics can eliminate or reduce the intensity of certain symptoms. However, they also have serious side effects. There are many antipsychotic drugs that are used to treat behavioural and psychological symptoms in people with dementia. Not all antipsychotics have the same benefits, and Risperidone is the only one that is approved for this use. Risperidone is licensed for the short-term treatment of aggression in Alzheimer's disease, if aggression poses a risk or the person has not responded to non-drug approaches. Risperidone works by blocking the receptors of chemical messengers called dopamine and serotonin. Other antipsychotic drugs prescribed for people with dementia are done so 'off-label'. This means that the doctor can prescribe them if they have good reason to do so, and provided they follow rules set out by the General Medical Council. The latest recommendations are that an antipsychotic other than Risperidone should only be prescribed for a person with dementia if they have psychosis (delusions or hallucinations) that developed before – and so is not caused by – their dementia.

Drug trials have shown that Risperidone has a small but significant beneficial effect on aggression and, to a lesser extent, psychosis for people with Alzheimer's disease. 90% of people with dementia experience behavioural and psychological symptoms (BPSD), such as aggression, agitation, loss of inhibitions and psychosis (delusions and hallucinations). People with dementia who experience BPSD are often, and inappropriately, prescribed antipsychotic drugs If a person with Lewy body dementia (dementia with Lewy bodies or Parkinson's disease dementia) is prescribed an antipsychotic drug, it should be done with the utmost care, under constant supervision and with regular review. This is because people with Lewy body dementia, who often have visual hallucinations, are at particular risk of severe adverse (negative) reactions to antipsychotics. Antipsychotic drugs do not help with

other behavioural and psychological symptoms such as distress and anxiety during personal care, restlessness or agitation. These symptoms need other, more individualised, approaches

Antipsychotic drugs can cause serious side effects, especially when used for longer than 12 weeks. All prescriptions should be monitored and if possible stopped after 12 weeks. People can stop taking the drugs after this period with no worsening of symptoms. If distressing symptoms return, they can resume. Possible side effects of antipsychotics include sedation (drowsiness), parkinsonism (shaking and unsteadiness), increased risk of falls, increased risk of blood clots, increased risk of ankle swelling, increased risk of stroke and worsening of other symptoms of dementia The side effects of antipsychotics were widely publicised in 2009 (3) but there is evidence that some people with dementia who don't need antipsychotics were still being prescribed them. For example, antipsychotics were being prescribed for people with mild symptoms before non-drug approaches had been tried. This was certainly the case prior to 2009, GP's with little understanding of dementia were prescribing Rispiridone for far too long for no real reason except that the patient had dementia.

Anxiolytics, sedatives, and hypnotics

If you have ever taken Valium, Xanax, or some other benzodiazepine to calm your nerves or sleep better, you may have felt woozy or hungover the next day. Experts have long assumed that people's heads would clear once they stopped taking the drug. That may not be the case. A reported study suggests that benzodiazepine use may promote the development of dementia (8)

A team of researchers from France and Canada linked benzodiazepine use to an increased risk of being diagnosed with Alzheimer's disease. In the study, the greater a person's cumulative dose of benzodiazepines, the higher his or her risk of Alzheimer's. The association isn't surprising given past research on the subject suggests Benzodiazepines are risky to use in older people because they can cause confusion and slow down mental processes but although there is an association, it's not possible say that benzodiazepines actually cause Alzheimer's. The researchers relied on a database maintained by the Quebec health insurance program. From it, they identified nearly 2,000 men and women over age 66 who had been diagnosed with Alzheimer's disease. They randomly selected more than 7,000 others without Alzheimer's who were matched for age and sex to those with the disease. Once the groups were set, the researchers looked at the drug prescriptions during the five to six years preceding the Alzheimer's diagnosis. People who had taken a benzodiazepine for three months or less had about the same dementia risk as those who had never taken one. Taking the drug for three to six months raised the risk of developing Alzheimer's by 32%, and taking it for more than six months boosted the risk by 84%.(10). The type of drug taken also mattered. People who were on a long-acting benzodiazepine like diazepam (Valium) and flurazepam (Dalmane) were at greater risk than those on a short-acting one like triazolam (Halcion), lorazepam (Ativan), alprazolam (Xanax), and temazepam (Restoril).
The researchers acknowledge that the use of benzodiazepines could be just a signal that people are trying to cope with anxiety and sleep disruption,two common symptoms of early Alzheimer's disease. If that's true, their use of a benzodiazepine may not be a factor in causing dementia but an indication it is already in progress.

Although the addictive potential for zopiclone has been suggested to be less than for benzodiazepines, there are case reports of emergence of addiction. Hence, caution should be taken when prescribing this agent for insomnia (11). Although there has been a surge in the use of non-benzodiazepine sedative hypnotics (such as zopiclone), benzodiazepines and opioid analgesics continue to be the commonly misused drugs among older adults .

Opioid Painkillers

A painkiller commonly used by people living with dementia could make symptoms worse, according to researchers who found it was linked to an increase in problematic side-effects including sedation and confusion. The painkiller buprenorphine is an opioid that is available in several forms, including as a patch that delivers the drug through the skin. It is thought to result in fewer side-effects than morphine, with the added benefit that it can be given to people who have difficulty swallowing. In the UK there around 850,000 people living with dementia. In Norway, between 10% and 15% of people with dementia are prescribed the buprenorphine patch. In a person who has used this treatment over time with no sign of adverse symptoms, there may not be cause for concern but new research suggests doctors should be cautious in the use and dosage of buprenorphine. Many people with dementia are prescribed drugs [that act on the nervous system], often several in combination, for long periods of time with inadequate assessment of whether or not the patient still has a beneficial effect from treatment. The research, describes how 44 people with advanced dementia who were living in nursing homes in Norway were randomly assigned to received a patch containing buprenorphine, while a further 45 individuals received a placebo patch. Neither the individual nor their carers knew which patch had been given, and the trial lasted for 13 weeks. The results reveal that, compared with those given the placebo patch, those using the buprenorphine patch were 24 times more likely to drop out of the trial, after taking into account factors including age, sex, pain and depression. They were also more likely to have an unwanted side-effect: in total, 23 of those using the buprenorphine patch dropped out of the trial, compared with just six of those using the placebo patch. Those taking antidepressants in addition to buprenorphine treatment were at the highest risk of adverse events, suggesting it is important to consider possible drug interactions. Painkillers are not a one-size-fits-all affair, and that it is important to balance side-effects with beneficial impact.

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