

The Problem of Inappropriate Benzodiazepine Use

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Editorial

Benzodiazepine drugs were first used in clinical practise as anxiolytic and hypnotic agents about fifty years ago. Despite widespread concerns about their use for three decades, these drugs are still widely prescribed in most industrialised countries, with diazepam reputedly being one of the most widely prescribed drugs of all time. These concerns stem from their unfavourable side-effect profile, as well as their proclivity for dependence and abuse. Furthermore, the clinical effectiveness of these drugs is hotly debated, and there is mounting evidence that their chronic prescription is a major source of concern among health professionals, legislators, and, most importantly, patients.

Risk—Benefit analysis of chronic benzodiazepine use

Benzodiazepines exert biological activity by binding to an allosteric site on the GABA-A chloride channel, increasing GABA binding and inhibiting GABAergic neurotransmission. As a result, various other neurotransmitters within the brain are inhibited, resulting in psychomotor retardation and Central Nervous System (CNS) depression. Benzodiazepines have a wide range of activities, including anxiolytic, hypnotic/sedative, amnesic, anticonvulsant, and anti-spasmodic effects, which is due to the distribution of different GABAergic receptor subtypes in the brain, as well as the distinct affinity of specific drugs for specific receptor subtypes. As a result, their therapeutic applications are diverse, including the treatment of anxiety disorders, muscle spasms, alcohol and amphetamine withdrawal, agitation, psychosis, and pre-operative sedation. These drugs are generally classified as either short-acting or long-acting, a distinction that reflects differences in their pharmacokinetic handling. Short-acting agents, such as lorazepam and flunitrazepam, are typically used as hypnotics, whereas longer-acting drugs, such as diazepam (Valium) and clobazam, are more commonly used as anxiolytics, anticonvulsants, and muscle spasm treatment.

Long-term benzodiazepine use has been linked to cognitive impairment and memory deficits, impairment in motor skills, and significant physical and psychological dependence, which can lead to a potentially fatal withdrawal syndrome, including elevated blood pressure and seizures. Impaired motor performance has been linked to an increase in hip fractures as a result of falls and road traffic accidents. Furthermore, prescribing guidelines specifically discourage their long-term use in the elderly due to the risks of confusion,

depression, dizziness, and ataxia in this patient population. Because of the age-related decrease in metabolic function, long-acting agents can be especially problematic in the elderly.

Recent research suggests that benzodiazepines, such as diazepam and lorazepam, increase the risk of pneumonia and its associated mortality. The abuse potential of benzodiazepines is more difficult to assess, but it is clear that there is a "black market" for these drugs and that prescribed medication is frequently diverted to other users who are not under the care of a healthcare professional. Overdoses of benzodiazepines can cause respiratory depression and coma, and they are a major cause of death, particularly among the elderly. According to a recent report in Ireland, they are a factor in 31% of drug-related deaths, and this statistic is shared by many other countries around the world. These disadvantages of benzodiazepine use always outweigh the benefits and thus serve as the foundation for prescribing guidelines. Although benzodiazepines have some efficacy in the short term for anxiety relief, and long-term users generally perceive them to be beneficial in promoting sleep, meta-analyses of clinical trials generally show a lack of efficacy [1-5].

Conflict of Interest

None.

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