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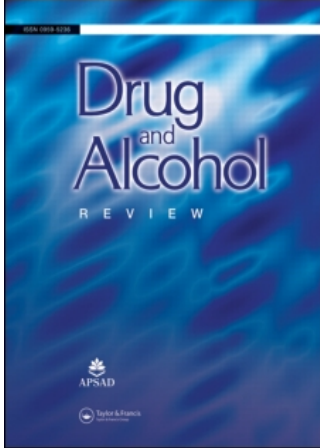
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## BRIEF COMMUNICATION

**Zopiclone misuse: an update from Dublin**NOREEN BANNAN<sup>1</sup>, SIOBHAN ROONEY<sup>2</sup>, & JOHN O'CONNOR<sup>2</sup><sup>1</sup>Consultant Liaison Psychiatry, Connolly Hospital, Blanchardstown, County, Dublin, and <sup>2</sup>The National Drug Treatment Centre, Dublin, Ireland**Abstract**

The prevalence of zopiclone misuse in clients attending a methadone maintenance programme in Dublin through detection of its degradation product, 2-amino-5-chloropyridine (ACP) on urinalysis is outlined. Urine samples from all 158 clients were tested for the presence of ACP, opiates, benzodiazepines, cocaine, alcohol and cannabis. Of the 37 (23%) clients who tested positive for ACP, 23 (62%) were interviewed. A profile of zopiclone misusers is outlined, including details of demographics, drug history, viral status, recent urinalysis results and opinions on zopiclone. Of the 14 (38%) clients who were not interviewed, information was obtained from their clinical casenotes and documented urinalysis results. The prevalence of zopiclone misuse was reported as 23%. Benzodiazepines were the most popular drug of misuse with zopiclone followed by heroin/opiates. Zopiclone is being misused by drug users in Dublin in the context of many other drugs. Prescribing of zopiclone should be restricted, especially among drug misusers. [Bannan N, Rooney S, O'Connor J. Zopiclone misuse: an update from Dublin. *Drug Alcohol Rev* 2007;26:83–85]

**Key words:** zopiclone, polysubstance misuse, drug misuse, drug dependence, hypnotics.

**Introduction**

We wish to report the prevalence of Zopiclone misuse in clients attending a methadone maintenance programme in a Dublin inner-city clinic. Zopiclone was marketed in 1987 [1] as a safe and non-addictive hypno-sedative and as such less likely to cause dependence, withdrawal symptoms or rebound phenomena [1–5]. Zopiclone is a cyclopyrrolone and acts on the gamma-aminobutyric acid (GABA)-A receptor complex [1]. It is chemically unrelated to benzodiazepines and has a half life of five hours [1]. There have been reports of zopiclone misuse [9,19]. A postmarketing study suggested that the risk of misuse of zopiclone is less than that of benzodiazepines, and similar to that of sedating antidepressants [23].

All clients (158) attending a methadone maintenance programme in Dublin (the largest Addiction Treatment Centre in the Republic of Ireland) were tested for

the presence of ACP (2-amino-5-chloropyridine) a zopiclone metabolite. Clients who tested positive for ACP were also tested for the presence of opiates, benzodiazepines, methadone, cannabis, alcohol, tricyclic antidepressants and cocaine. Clients were supervised during urine sampling to reduce the likelihood of bogus samples.

Thirty seven (23%) samples tested positive for ACP and were subsequently tested for other substances of misuse. Twenty three (62%) of the 37 clients who tested positive agreed to be interviewed by the principal researcher. Of the 14 (38%) clients who were not interviewed, information was obtained from their case-notes regarding the prescribing of zopiclone and documented urinalysis results. On re-testing 4–5 months later, 27 (17%) of the total 158 clients remained positive for ACP.

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## Results

The mean age of the sample interviewed was 32 years; 6/23 (26%) were male and 17/23 (74%) were female; 16/23 (70%) were single. Almost all clients 22/23 (95%) had a history of intravenous drug use: the prevalence of Hepatitis C infection was 74%; (the overall prevalence rate of Hepatitis C among clients was 70%) and 98% of clients had a history of intravenous drug use. The mean age of first drug use was 14.5 years, and the mean age of first intravenous use was 20.2 years. The mean duration of intravenous drug use was 11.2 years. The mean age of first use of zopiclone was 28 years and the mean duration of misuse was 4.2 years. The mean dose was 50.2 mg (range 15–300 mg) with 12 (52%) of the sample ingesting zopiclone daily. Urinalysis results did not reveal any further information on the level or pattern of misuse.

Of the 37 (23%) clients who tested positive for ACP on initial screening, 16/37 (43%) also tested positive for opiates, and 24/37 (69.9%) tested positive for benzodiazepines at that time. No clients were prescribed benzodiazepines throughout the course of the study.

Of the 23 clients interviewed, all had a history of opiate, benzodiazepine and cannabis misuse with a mean duration of misuse of 11.8 years, 10.1 years and 13.5 years respectively. Nineteen clients (82%) had a history of alcohol and ecstasy misuse with a mean duration of misuse of 15.6 years and 4.5 years respectively. The most popular current drugs of misuse were benzodiazepines and heroin: 23 (100%) tested positive for benzodiazepines and 14 (61%) tested positive for heroin on initial urinalysis.

## Discussion

Although zopiclone misuse is prevalent in Dublin, dependence following long-term use is rare considering the world-wide extent of usage [1,4–5,14–16]. Large studies conducted in the UK [13] ( $n=13,177$ ) and Spain [17] ( $n=3605$ ) did not report any problems after stopping zopiclone (doses within the recommended prescribing range). A meta-analysis [18] and a review [3] of sleep laboratory studies reported that tolerance, rebound and withdrawal phenomena were marginal and mild. A recent review of 22 case studies, revealed that reporting of zopiclone dependence is rare, and concluded that zopiclone is a relatively safe drug [5].

Nevertheless, there have been reports about the misuse of zopiclone [9,19] and risk of dependency and abuse is greater in alcohol misusers [34], polysubstance misusers [1,2,5–6,12,21], clients who have dependent personalities [7,22] or other psychiatric disorders [5,20–22]. Worryingly, similar problems have also been reported in non-drug users [2,7,8,10,11].

All clients in our clinic preferred zopiclone because it does not cause amnesia to the same extent as the benzodiazepines. They reported that it potentiates their experience on heroin and promotes a feeling of sedation and tranquilisation that is desired. Although zopiclone is only available in Ireland on prescription, clients claim that it is readily available and is freely prescribed by doctors. The street value for 'zimovane' is 1 euro per tablet, while generic zopiclone is only half the price. Our findings are similar to trends in other clinics and concur with real concerns that have been expressed regarding the abuse potential of zopiclone [1,2,4–6,7,9,24–26].

## Conclusion

Zopiclone misuse is prevalent among a significant percentage of clients attending a methadone maintenance programme in a Dublin inner-city clinic. Extra care should be taken when prescribing zopiclone even in the absence of substance misuse. We recommend that doctors should give similar advice to clients commencing zopiclone as would be given when prescribing benzodiazepines. As with all drugs in this class, short-term prescribing with careful monitoring is crucial.

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