

U-47700: the new emerging opioid drug

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Introduction

The trans-3;4-dichloro-N-[2-(dimethylamino-cyclohexyl)]-N-methylbenzamide labelled as U-47700 (Fig. 1) has a high selective affinity with the μ receptor considered to have 7.5 times the binding affinity of morphine; as a result, it is sold as a recreational drug because of its analgesic and euphoric effects. Several toxicity cases and some fatalities have been reported during 2016 (fig. 2).

Objectives

To describe the presence of trans-3;4-dichloro-N-[2-(dimethylamino) cyclohexyl]-N-methylbenzamide in samples delivered to analyse the content of new psychoactive substances (NPS), during 2016 in Barcelona.

Methods

From January 2016 to October 2016, 4,031 samples were delivered and only those samples containing trans-3;4-dichloro-N-[2-(dimethylamino) cyclohexyl]-N-methylbenzamide were studied. Samples were analysed by a Spanish harm-reduction NGO (Energy Control) that offers to the persons the possibility of analysing the substances they intend to consume. Analysis was done by Gas Chromatography–Mass Spectrometry.

Results

From all the samples, only 6 (0.1%) were analysed as trans-3;4-dichloro-N-[2-(dimethylamino) cyclohexyl]-N-methylbenzamide. The presentation of 4 of them was white powder and the rest were not described. The procedence of the samples was Canada (2), USA (1), Sweden (1), Holland (1) and the remaining sample was not described. All samples were received during 2016 (fig.3).

Figure 1: Trans-3; 4-dichloro-N-[2-(dimethylamino) cyclohexyl]-N-methylbenzamide U47700

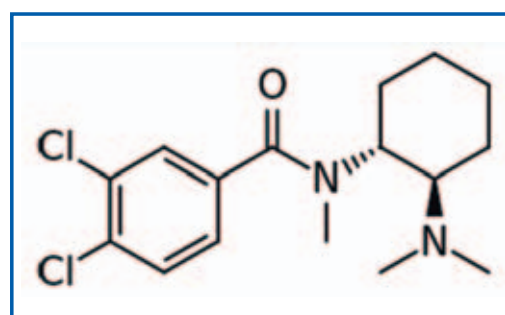


Figure 2: Articles related to U 47700 referred in Pubmed

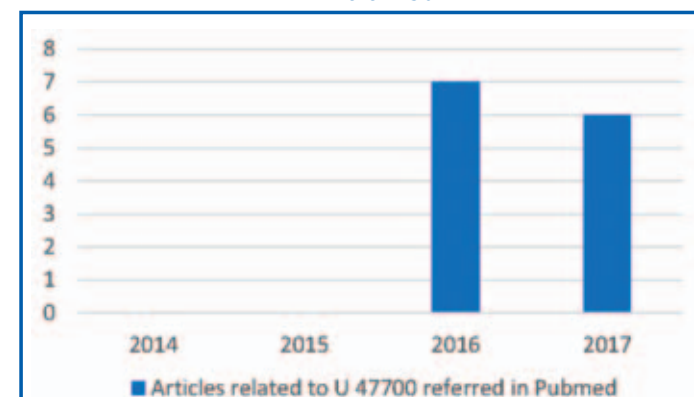


Figure 3: Samples of U 47700 submitted to Energy Control

Samples	Date	Procedence	Appearance	Result
Sample 1	February 2016	Non described	Non described	Trans-3;4-dichloro-N-[2-(dimethylamino) cyclohexyl]-N-methylbenzamide
Sample 2	March 2016	Sweden	Non described	Trans-3;4-dichloro-N-[2-(dimethylamino) cyclohexyl]-N-methylbenzamide
Sample 3	July 2016	Canada	White powder	Trans-3;4-dichloro-N-[2-(dimethylamino) cyclohexyl]-N-methylbenzamide
Sample 4	July 2016	Canada	White powder	Trans-3;4-dichloro-N-[2-(dimethylamino) cyclohexyl]-N-methylbenzamide
Sample 5	July 2016	Holland	White powder	Trans-3;4-dichloro-N-[2-(dimethylamino) cyclohexyl]-N-methylbenzamide
Sample 6	July 2016	USA	White powder	Trans-3;4-dichloro-N-[2-(dimethylamino) cyclohexyl]-N-methylbenzamide

Conclusions

The use of trans-3;4-dichloro-N-[2-(dimethylamino)cyclohexyl]-N-methylbenzamide has appeared in Barcelona NPS' market. Its harmful effects are being reported in recent medical literature and consumption represents an emerging issue, gaining popularity among recreational opioid users. It is potentially lethal when mixed with depressants like alcohol or benzodiazepines and overdose risk is higher compared to other opioids.

References

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