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## Drug abuse as a cause for ICU admission in Spain<sup>☆</sup>



### Las drogas de abuso como causa de ingreso en las unidades de cuidados intensivos en España

Dear Editor,

We read the article written by Socías Mir et al. where they analyze the time-line of admissions due to intoxications in Spanish intensive care units (ICU).<sup>1</sup> It is surprising to see that there are several drugs among the top 10 most common toxic drugs available (except for ethanol, and benzodiazepines) from 2002 through 2006, a period that amounts to 26.7% of the cases reported (cocaine, 9% of the cases; opioid analogues, 9%; heroin, 5%, and methadone, 3%). Also, that such prevalence has been reduced to less than half (13.2%) during the period from 2013 to 2014 with a change in the representation of the most prevalent drugs (opioid analogues, 6%; *cannabis*, 4%, and cocaine, 4%). Although in a small percentage, it is also surprising to see the presence of *cannabis* as the drug that triggered the ICU admission during the second period—which is probably associated with its progressive increase of agonist power on the CB1 and CB2 receptors—its greater consumption prevalence, and more side effects associated.<sup>2</sup>

Given that the emergency medical services (EMS) are a good medical resource from which to monitor these changes since most patients with drug-related clinically relevant adverse events seek medical care in these services,<sup>2,3</sup> we would like to comment on 2 multicenter registries we participated in where patients intoxicated with drugs were prospectively included.

Two Spanish hospitals (Hospital Clínic de Barcelona, Catalonia, Spain, and Hospital Son Espases de Palma de Mallorca, Spain) participate in the European EuroDEN-Plus network.<sup>4</sup> From 2014 to 2018, a total of 43 633 cases were reported out of which 2982 came from these centers. A total of 61 patients (2.0%) were admitted to the ICU setting and 13 patients died (0.44%). On the other hand, the REDUrHE is a Spanish network of 11 EMSs from 6 different autonomous communities that reported on 4526 patients who sought medical attention due to drug-related emergency cases between 2017 and 2019,<sup>3</sup> 90 (2.0%) out of whom were admitted to the ICU, and 12 (0.27%) died at the hospital. Table 1 includes the drugs involved both in the cases of ICU admission and in the deaths reported. Also, the relative frequency with which each drug triggered these situations reported. As Socías Mir et al. indicate<sup>1</sup> the mortality rate reported is very high (although it drops down to 6.06% in the 2013-2014 period), which means that, with the obvious limitations, the mortality rate of patients admitted to the ICU setting due to drug intoxications is much lower compared to the mortality rate reported due to intoxications.

On the other hand, regarding the observation conducted by Socías, Mir et al. on the probable presence of dangerous consumption patterns like ethanol, our group found that, in the REDUrHE registry, in 3925 patients in whom ethylic alcohol consumption was reported with co-intake in 58.3% of the cases, such co-intake did not impact the need for ICU admission (OH<sup>+</sup>, 2.2 vs OH<sup>-</sup>, 1.9%; OR, 1.103; 95%CI, 0.688–1.770).<sup>5</sup>

In conclusion, it is uncommon that patients assisted by the EMS due to drug-related adverse events will also need ICU admission and, when that is the case, the mortality rate is low.

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**Table 1** Absolute and relative frequencies—detailed by drug groups—of patients who sought medical attention at the intensive care unit and who eventually died in the 2 registries reviewed.

	EuroDEN-Plus				REDUrHE					
	2014–2019 (2 Spanish hospitals)				2017–2019 (11 Spanish hospitals)					
	No. total	No. of ICU admission	Rate of ICU admission	No. of deaths	Rate of deaths	No. total	No. of ICU admission	Rate of ICU admission	No. of deaths	Rate of deaths
Cocaine	1,358	34	2.5	8	0.59	2164	37	1.7	8	0.37
Cannabis	968	13	1.3	4	0.41	2011	24	1.2	3	0.15
Amphetamines	745	11	1.5	2	0.27	1296	32	2.5	3	0.23
Opioids	294	10	3.4	1	0.34	348	8	2.3	0	0
GHB	292	6	2.1	0	0	210	7	3.3	1	0.48
Benzodiazepines	220	3	1.4	0	0	403	7	1.7	0	0

GHB, gamma-hydroxybutyric and derivatives; ICU, intensive care unit.

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