A ten years follow-up on psychoactive tryptamines deliverance and results of analysis

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Introduction

- Currently only five simple tryptamines are worldwide regulated as hallucinogenic substances: psilocin (4-HO-DMT), psilocybin (4-PO-DMT), N,N-diethyltryptamine (DET or T-9), N,N- Dimethyltryptamine (DMT) and a-Ethyltryptamine (etryptamine or a-ET).
- DMT is present in natural preparations like ayahuasca or *Psicotria viridis* and psilocybin and psilocin are the main components of hallucinogenic mushrooms (Farré et al. 2015).
- Non-controlled tryptamines effects are considered similar to those of the already controlled tryptamines such as psilocybin or DMT (Farré et al. 2015).
- These molecules are similar to regulated psychoactives and are offered as a non-illegal alternative to them (Tittarelli et al. 2015).
- However, there is not enough scientific evidence assessing potential differences in their epidemiology and potential differences.

Objectives

1) To evaluate the presence of psychoactive tryptamines among samples delivered to and analyzed by the Spanish harm reduction service Energy Control,
2) To compare the amount of regulated and non-regulated tryptamines delivered and
3) To compare the results of the analysis.

Materials and methods

All samples delivered as simple psychoactive tryptamines from 2006 to 2015 delivered to Energy Control were analyzed by Gas Chromatography-Mass Spectrometry. A cross-sectional descriptive analysis of the samples was then conducted.

Results

Substance delivered are described in Flowchart 1 and results of analysis of tryptamines delivered as tryptamines is detailed in Table 1.

Flowchart 1. Substances delivered.

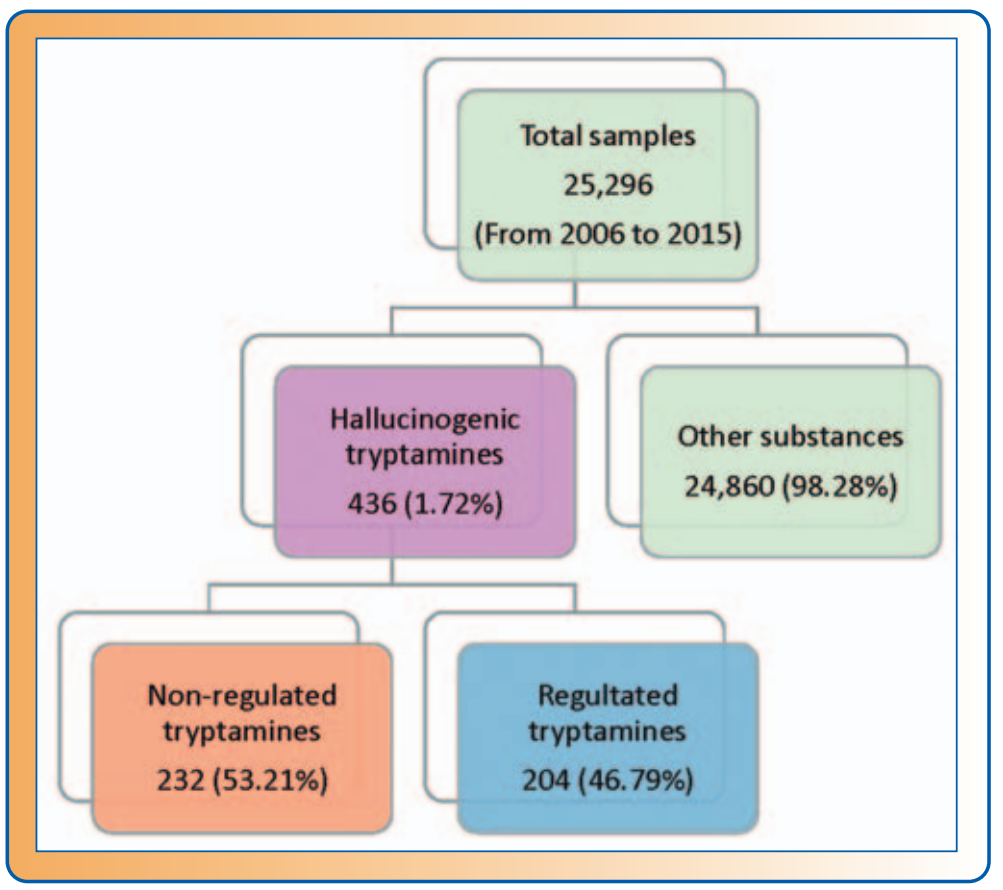

Table 1. Results of substance analysis.

		Non-regulated	Regulated	Total	Significance
Result of the analysis	One single unadulterated substance	150 (64.7%)	128 (62.7%)	278 (63.8%)	p≤0.001
	Substance delivered plus another psychoactive tryptamine	57 (24.6%)	43 (21.1%)	100 (22.9%)	
	Other psychoactive tryptamines	15 (6.5%)	4 (2.0%)	19 (4.4%)	
	Other psychoactive substances	5 (2.2%)	7 (3.4%)	12 (2.8%)	
	No active substance	5 (2.2%)	22 (10.8%)	27 (6.2%)	

Conclusion

- During the whole period of study, a slightly higher number of non-regulated psychoactive tryptamines was delivered.
- Percentages of samples containing only one unadulterated substance are consistent with other national studies on other NPS using convenience samples (Caudevilla-Gálligo et al. 2013).
- However, very few substances delivered as tryptamines were found to contain substances different from psychoactive tryptamines leading to think that sources are highly reliable regarding the content. Results of analysis of new regulated tryptamines was more consistent with the sample delivered than that of classical tryptamines.
- Further monitoring of these substances should be maintained in order to assess future trends. It would be interesting in further studies to analyze the different effects of the different hallucinogenic tryptamines molecules in order to evaluate the implications of samples adulteration.

References

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