Reviewer’s report

Title: Gender differences in acute recreational drug toxicity: a case series from Oslo, Norway

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Reviewer: Jana Seblova

Reviewer's report:

The topic of the submitted is interesting and relevant as understanding both drug abuse and gender differences in drug toxicity is important, but the paper needs improvement and clarification in many aspects.

Introduction is not clear - even if the presented study concentrates on recreational drug toxicity, the studies mentioned in „Background” section are about dependency in abuse, not about just recreational misuse, so long term consequences and short term snapshot in the study are compared. Some of references cited here deal with alcohol intoxications, which is a different pattern and authors state that alcohol problems are not enrolled in this submitted study (only as a secondary drug).

Maybe more information on specific features of the drug scene in Norway compared to other EU or other countries could be more interesting for international audience (reference 1 and 2 can be a good source for this) - e.g. spectrum of favorite drugs, preferred application ways, incidence and prevalence of drug abusers in Norway etc.

The reason why acute recreational drug toxicity is of special interest is not explained (why to study this form of drug abuse) and it is not defined anywhere in the text. The „Aims” are not described precisely, I’d prefer more structured introduction part with citing only those papers related to the topic of this study and more clear explanation of the aims of the study.

„Methods” section: inclusion criteria should be presented, there is only information that: …”eligible cases were identified retrospectively from the patient registration lists”…. Inclusion was based on case history, information from the patient or other people, screening tests, toxicological analysis? What about patients presenting with some other chief complaint and drug intoxication as a secondary symptom?

„Data collection and classification” - why peak serum levels of creatine kinase and creatinin were measured only in the first year of data collection, was the reason clinical or organizational or other?

„Result section” is insufficient to my opinion and very few data (compared to tables) are presented. Which drugs authors classify as „opioid group”? Moreover, opioid group and heroin intoxications are mentioned separately in the first and second paragraph.
Based on table 1, there is a mix of various drugs including alcohol as a secondary drug, a group „more than 1 toxic agent" and other/unknown, this classification doesn’t seem concise.

„Discussion section" - is insufficient, too.

What is the explanation/hypothesis for higher abuse of GHB in females?

Intubation is mentioned in the discussion without any previous remark about this airway management technique - why, if it was in a small numer of cases ? And why the other therapy (Table 2) is not discussed properly? (sedation, antidotes, length of stay etc.)

There are some other potentially interesting differences in the tables but not discussed in the text.

The reason for separate analysis of outpatient clinic and hospital ED is not clearly described.

I think that major revisions are needed and I don’t recommend for publication now, however the topic is promising.

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Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

No

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

No
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I recommend additional statistical review

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