

Drug facilitated sexual assault and toxicological findings in patients after sexual assault. A descriptive study from a sexual assault center

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Introduction The Sexual Assault Center (SAC) at St. Olavs hospital, Trondheim, Norway, offer routinely medical and forensic services, including toxicological screening in urine and/or blood to patients attending after suspected sexual assault.

The aim of the study was to explore the frequency of positive toxicological tests and compare with previous findings from the same SAC. In cases of suspected DFSA, we wanted to explore if positive toxicological tests could be attributed to voluntary intake (opportunistic DFSA) or surreptitious administration (proactive DFSA). Also, we wanted to explore associations between positive toxicological findings and assault characteristics.

Material and methods We conducted a retrospective, descriptive study among female patients ≥ 12 years of age attending the Trondheim SAC between 2012 and 2017. Data were medical record data including toxicological laboratory results. A total of 422 patients were included.

Results Patients' median age was 21 years. Ethanol and/or drugs were found in 274 (65%) patients. Ethanol was most frequently found (49%). There was an increase in the proportion of positive tests for all substance groups other than alcohol since the previous Trondheim SAC study (2003-2010): The proportion testing positive for benzodiazepines/Z-drugs increased from 12% to 15%; for cannabinoids from 5% to 11%; for central stimulants from 6% to 9%. There were no GHB positives.

Proactive DFSA was suspected in 69 cases (16%). Among these, substances not reported having been voluntarily ingested were found in 28 patients: the most common substances and substance combinations in these cases were ethanol and benzodiazepines/Z-drugs (n=5), benzodiazepines/Z-drugs alone (n=4), and benzodiazepines in combination with a central

stimulant, cannabinoid and opioid (n=4)). Unfortunately, information was lacking as to details on how the patients could have been drugged and by what kind of substance.

High blood alcohol concentration (BAC) at time of assault (median 1.8 g/L) was associated with stranger assailant, multiple assailants, public place of assault and extragenital injuries.

Conclusion: Ethanol is still the most found substance, although we see an increase in other substance groups, probably reflecting a general increase in recreational use. High BAC at the time of assault is associated with more serious sexual assaults.