**Death following consumption of MDAI and EAPB**

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**Background & Objectives** Ethylaminopropylbenzofuran (EAPB) and 5,6-methylenedioxy-2-aminoindane (MDAI) are two new psychoactive substances with MDMA-like properties. We report the case of a 28-years old man, known as drug addict, found dead at home. External examination by the forensic pathologist revealed an epistaxis but no corporal lesion. As two unidentified powders – a white one and a light-brown one, together with material probably used to snort – were found on the scene, a toxicological cause of death was highly suspected.

**Methods** General unknown screening was performed on powders, blood and urine (which were the only samples available) by HPLC-DAD and UPLC-TOF-MS, after liquid-liquid extraction for biological samples, or simple dilution for powders. Quantifications were made by HPLC-DAD.

**Results** Powders were quite pure, as 68% of MDAI was found in the brown powder and 87% of EAPB in the white one. The same substances were found in the biological samples, and oxazepam was found in urine only. Screening for other drugs of abuse and alcohol was negative. NPS concentrations in blood and urine were respectively 2,09 mg/L and 69,4 mg/L for MDAI; and 6,45 mg/L and 14,8 mg/L for EAPB. The metabolites methylaminopropylbenzofuran (MAPB) and aminopropylbenzofuran (APB) were also found in blood (0,089 mg/L and 0,546 mg/L, respectively) and urine (1,00 mg/L and 4,88 mg/L). After a treatment with beta-glucuronidase, urine concentrations of the four compounds were significantly higher, suggesting that the metabolism of those NPS involves a glucuronidation step. Blood MDAI concentration in the present case is slightly lower than in other (few) reported fatalities [1]. However, no other death involving EAPB is available for comparison in the literature to date.

Depending on the position of the aminopropyl group on the phenyl ring, isomers of EAPB (and corresponding metabolites) exist, as 4-,5-,6- and 7-EAPB. Distinction between the isomers can be done by NRM, GC-MS and even LC-MS [2], but as the isomers share the same legal status in Belgium and are supposed to lead to similar effects, identification is still in progress and quantifications were done using the 5-isomers.

**Conclusion** Purity and potential combined effects of the wide variety of NPS sold on the market can even surprise an experienced drug addict. To the best of our knowledge, the case we report here is the first fatality involving a combination of MDAI and EAPB.

**References** [1] Corkery et al., Hum. Psychopharmacol Clin Exp (2013)28, 345-355 [2] Stanczuk et al., Drug Test Anal (2013)5, 270-6