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Death related to a recreational abuse of propofol at therapeutic dose range

Editor—We report the case of a 27-yr-old male anaesthetic nurse found dead at home after self administration of propofol, for recreational purpose. He had several puncture wounds suggesting a chronic abuse during the preceding days. Three empty ampoules of propofol of 20 ml (10 mg ml^{-1}) were discovered beside him and unused ampoules were found in his car.

Toxicological analysis detected propofol in blood, bile and urine by gas chromatography/mass spectrometry. These propofol concentrations were within therapeutic range [blood ($0.026 \text{ } \mu\text{g ml}^{-1}$) and bile ($0.25 \text{ } \mu\text{g ml}^{-1}$)]. Lidocaine was identified in the blood at a subtherapeutic concentration ($1.5 \text{ } \mu\text{g ml}^{-1}$) by liquid chromatography/diode array detection. A lidocaine spray found beside him may have been used to avoid pain during the placement of the intubation tube. No other substances were detected.

Forensic investigation found acute pulmonary oedema and haemorrhagic pancreatitis, two rare propofol-induced adverse drug reactions.^{1,2} It is well known that propofol administration, even at therapeutic dose, can cause

respiratory depression.² In this case, death could have occurred as result of a pulmonary oedema as he did not receive ventilatory or medical assistance.

Euphoria, sexual hallucinations and disinhibition have been described on recovery of propofol anaesthesia.^{1,2} These effects could explain the recreational use of the drug. Moreover, several experimental studies strongly suggest the potential for abuse and dependence on propofol,^{3–5} and few cases of abuse and dependency have been described, mostly in medical professionals. As propofol is generally not recognized as a substance of abuse, and because of its safe profile, it is important to remember that rare adverse reactions of propofol could produce death in a context of abuse, even at therapeutic dose range, in the absence of ventilatory and medical assistance.

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