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Another ketamine analogue on the horizon

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To the Editor—Ketamine analogues are new psychoactive substances that share the arylcyclohexylamine backbone of ketamine and produce dissociative effects through antagonistic activity at the N-methyl-D-aspartate receptor.[1] Ketamine and its analogues have plagued Hong Kong over the last two decades. Our laboratory has identified outbreaks of multiple ketamine analogues in Hong Kong, including 2-oxo-phenylcyclohexylethylamine in 2017,[2] 2-fluorodeschloroketamine (2F-DCK) and deschloroketamine in 2019,[3] and tiletamine in 2019 to 2022 (according to data on file in the Hospital Authority Toxicology Reference Laboratory).

We report identification of a new ketamine analogue, fluoro-2-oxo-phenylcyclohexylethylamine, also known as fluorexetamine (FXE). Recreational use of FXE was first reported in 2018.[4] Our laboratory has detected increasing use of FXE in Hong Kong since mid-2023, with FXE now identified in urine samples of 14 patients. Detection of FXE can be difficult since it does not cross-react with bedside ketamine immunoassay and shares common metabolites with 2F-DCK. This may lead to misidentification of FXE metabolites as 2F-DCK metabolites on routine toxicology testing. Clinically, FXE appears to possess similar toxicity to ketamine and 2F-DCK and co-ingestion with other recreational drugs is common, often complicating the clinical presentation.

Effective prevention of the emergence of new psychoactive substances can be achieved through prompt communication and accurate toxicology testing. This approach has been successful in halting the upward trajectory of various ketamine analogues. When encountering patients with clinical features of ketamine abuse but negative immunoassay or urine toxicology results, clinicians are encouraged to submit urine specimens to our laboratory for further testing.

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All authors had full access to the data, contributed to the study, approved the final version for publication, and take responsibility for its accuracy and integrity.

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