

Spread of 'space oil drug' (etomidate) abuse in Hong Kong and consequent emergency department presentations

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To the Editor—The abuse of 'space oil drug' rapidly spread in Hong Kong throughout 2024,¹ particularly among adolescents. 'Space oil drug' contains etomidate and/or its analogues, propoxate and isopropoxate, dissolved in solvents for abuse through e-cigarettes. It may also be mixed with other dangerous drugs such as cocaine and methamphetamine.² Etomidate is a gamma-aminobutyric acid-agonist with ultra-short-acting sedative effect that is often used in anaesthesia induction and emergency intubation.

From May to December 2024, the Hong Kong Poison Control Centre recorded 45 cases of 'space oil drug' abuse presenting to the Hospital Authority emergency departments. Patient ages ranged from 12 to 55 years, with a median of 17 years, and the male-to-female ratio was 1:1.3 (Fig). The reported clinical features of presentation to emergency departments included confusion (n=16), tremor (n=10), unsteady gait (n=7), associated falls and injuries (n=4), syncope (n=4), and myoclonus (n=2). Most neurological symptoms resolved within hours. Hypokalaemia was observed in 62% of these presentations with a median serum concentration of potassium of 3.4 mmol/L (lowest=2.1). Four patients

required intensive care, and three associated deaths were recorded.

Etomidate can cause adrenal dysfunction by inhibiting 11-beta-hydroxylase and 17-alpha-hydroxylase. It can also increase adrenal androgen production and may cause menstrual disorders and hirsutism in women.²

Clinicians should remain vigilant for hidden 'space oil drug' abusers. According to our findings, they were usually young with a history of e-cigarette use. They commonly presented acutely with transient neurological symptoms and unexplained hypokalaemia. Chronic abusers might have frequent falls and injuries while female abusers might also develop menstrual disorders and hirsutism. A multidisciplinary effort is required to halt the spread of 'space oil drug' abuse and to provide appropriate care for the abusers.

Author contributions

All authors contributed to the letter and critical revision of the letter for important intellectual content. 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.

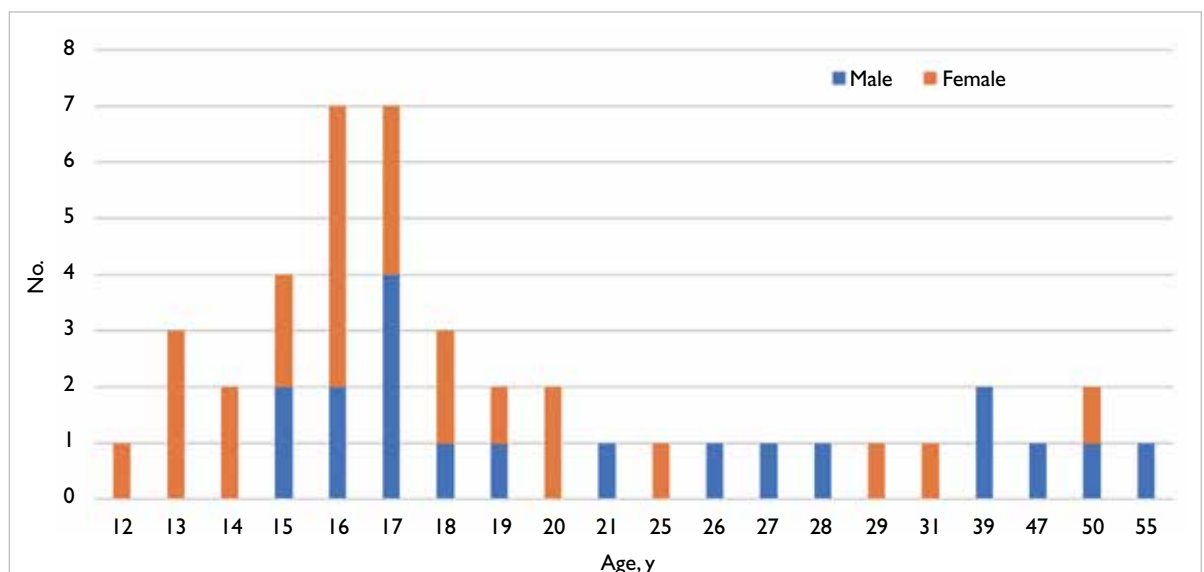


FIG. Age and sex distribution of patients abusing 'space oil drug' during May to December 2024

Conflicts of interest

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