ADVERSE EVENTS ASSOCIATED WITH THE SELF-REPORTED USE OF SYNTHETIC CANNABINOIDS: A RETROSPECTIVE CASE SERIES REVIEW

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Background: Since 2012 more than 20 synthetic variants of ∆9- tetrahydrocannabinol have been identified, with each new variant demonstrating a greater propensity for specific physiological and psychological effects. Anecdotal observations suggest a rise in presentations to the emergency department in recent years with increasing acuity.

Objectives: To determine the incidence of patients attending the emergency department requiring ongoing psychiatric care or hospital admission following the use of synthetic cannabinoids;To develop background data enabling the creation of a practice standard for the screening of synthetic cannabinoids at triage and timely referral to appropriate services; To identify the common adverse effects associated with the self-reported use of synthetic cannabinoids in patients presenting to the emergency department.

Methods: Retrospective chart review of patients identified by the Alcohol and Drug Service with the self-reported use of synthetic cannabinoids over a 4 year period. Data were entered in to an electronic collection tool and exported to MS Excel for descriptive analysis.

Results: 104 cases identified, with 93 records available (75 male, 18 female). The mean age was 29 years (SD=9.1). Mean length of stay was 3.6 days (SD=6.1), with 13% requiring in-patient psychiatric care. Of those presenting to the emergency department reporting use, only 43% had a history of previous drug related admissions. Alcohol was the most common co-ingestion (29%), followed by amphetamines (10.7%).

Cardiac findings included tachycardia (31%), hypertension (26.8%), bradycardia (11.8%) and chest pain (5.3%). Acute respiratory complications were rare despite 98% smoking the product. Vomiting occurred in 9.6% of cases and nausea in 8.6%.

Seizures were relatively common (12.9%), typically with onset within minutes of using the drug. Other commonly reported neurological effects included confusion (11.8%), behavioural changes (22.5%), hallucinations (10.7%), paranoia (10.7%), anxiety (5.3%) and delusions (4.3%). Agitation was observed in 21.5% of cases. 32% of all admitted patients required sedation and 7.5% required restraint.

Subsequent to the admission 44% of patients re-presented to a government hospital for psychiatric reasons including psychosis and suicidal ideation, 32% of which had no previous psychiatric history.

Conclusions: The authors recommend screening all patients on admission for the use of synthetic cannabinoids in addition to alcohol and other illicit substances. The high proportion of cardiovascular, neurological and psychiatric effects warrants increased vigilance of those presenting to the emergency department reporting the use of synthetic recreational drugs. Further research is required to determine the impact of co-ingestions upon risk for readmission, seizures or ongoing psychiatric pathology.