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026. Fentanyl-Overdose Patients Reporting Self-Harm or Suicide Intent Versus Those Seeking Euphoria: A Comparison

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Background: The intent of opioid use is complex and multifactorial, and there is little data describing overdose intent, or the dose of a drug that is used related to that intent. We sought to evaluate the characteristics of patients who overdosed on fentanyl with the intent for self-harm/suicide and compare those who were pursuing euphoric effects.

Hypothesis or Research Question: Among those with fentanyl in their blood, subjects who use fentanyl for the purpose of self-harm/suicide use by a familiar route and have higher average fentanyl concentrations compared to those seeking euphoric effects.

Methods: The Toxicology Investigators Consortium (ToxIC) Drug Overdose Toxicosurveillance (DOTS) Reporting Program included 13 patients ages 13 and older who presented to 17 U.S. medical centers with suspected opioid or stimulant overdoses. Data collection included comprehensive chart reviews, detailed patient interviews, and qualitative and quantitative toxicology analyses conducted by the Center for Forensic Science Research and Education for the detection of over 1,200 drugs and metabolites. This analysis compared subjects who reported that the intent of substance use was self-harm/suicide to those who reported utilizing the substance for euphoria. Variables included use-history, fentanyl concentrations, and naloxone doses.

Results: There were 609 subjects who completed interview questions and presented as a clinical opioid overdose. Thirty subjects (4.8%) reported intent of self-harm, 326 (52.5%) were seeking euphoria, and 263 (42.7%) used for other reasons. The self-harm group had a median ($\mu\text{g/mL}$, IQR) fentanyl concentration of 2.6 (1.6, 5.5), whereas the euphoria-seeking group had a median concentration of 4.7 (2.3, 9.4). The self-harm/suicide group self-reported (# of subjects, %) having used the following drugs: opioids only (16, 53.3%), stimulants only (4, 13.3%), opioids and stimulants (3, 10.0%), pharmaceuticals only (1, 3.3%), and other combinations (6, 20.9%). Of the 17 subjects who reported their first time using this drug. Subjects with the intent of self-harm/suicide were more likely to report ingestion/swallowing of the overdose drug compared to those with euphoric intent (42.3% vs. 12.6%; respectively, $p=0.004$) and first time use the drug (12.9% vs. 11.3% respectively, $p=0.01$).

Conclusion: Approximately five percent of all opioid overdoses reported their fentanyl use as a self-harm/suicide attempt. Our results are limited by reliance on subject self-report and recall bias, and self-harm/suicide may be underreported. These subjects had lower blood fentanyl concentrations compared to those with euphoric intent to use.

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