

Intentional Abuse of Loperamide: Exposure Trends Reported to US Poison Control Centers, 2011-2016

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BACKGROUND

Loperamide is a peripherally acting mu-opioid agonist and is an over-the-counter anti-diarrheal in the United States. In high doses loperamide can cross the blood-brain barrier to produce euphoria, and is sometimes abused or used to curb withdrawal symptoms. In light of the ongoing opioid epidemic, we aimed to analyze the epidemiology of loperamide abuse as reported to the American Association of Poison Control Centers (AAPCC).

RESEARCH QUESTION

Has the intentional abuse pattern of loperamide changed over the past half decade and is there evidence of harm?

METHODS

A retrospective review of deidentified (IRB exempt) AAPCC data from January, 2011, to September, 2016, was performed. Single-substance human exposure cases involving loperamide, coded as intentional abuse, were extracted from the AAPCC National Poison Data System. Subjects were excluded if they had no age or gender data, or if they were miscoded.

RESULTS

246 cases were extracted and 17 (7%) were excluded for insufficient data. Of the 229 cases coded as intentional loperamide abuse, 76% were male. The ages ranged from 13 to 87 years (mean 29 years, mode 19 years). From 2011 through 2013, the number of reports remained consistent with an average of 15/year (range 13-18); then a sharp increase was noted with 40 in 2014, 46 in 2015, and 97 in the first 9 months of 2016. Seven (3%) deaths were directly or indirectly attributed to loperamide abuse. Major effects were coded in 40 patients (17%), moderate effects in 71 (31%), minor in 40 (17%), and minimal or no effects in 36 (16%); the outcomes were not coded for 34 patients (15%). The majority of cases, 214, were either enroute or referred to a health care facility. Known biases exist in the AAPCC database.

DISCUSSION

The data shows a marked increase in poison center calls related to intentional abuse of loperamide over time, almost seven-fold from 2011 to 2016, with a majority of cases being managed in a health care facility. This AAPCC data suggests that loperamide abuse is on the rise, and is potentially dangerous. Pharmacists and other healthcare professionals should be alerted to this social phenomenon. Abuse deterrent strategies warrant careful consideration.