

Abstract for Poster

Abstract Details:

- **Title of the Poster:**

A systematic review on tramadol toxicity in Iran – A distinct profile

- **Authors:**

Yasna Rostam-Abadi, MD, MPH student

Iranian National Center for Addiction Studies (INCAS), Tehran University of Medical Sciences, Tehran, Iran; Email address: y-rostamabadi@student.tums.ac.ir

Masoumeh Amin-Esmacili, MD, MPH;

Email address: mamines1@jh.edu

Anousheh Safarcherati, MD

Email address: anousheh73@yahoo.com

Jaleh Gholami, MD, PhD

Email address: zh_gholami@farabi.tums.ac.ir

Ramin Mojtabai, MD, PhD, MPH

Email address: rmojtab1@jhu.edu

Mohammad Reza Ghadirzadeh, MD, MPH

Email address: ghadirzadeh@gmail.com

Hosein Rahimi, MSc

Email address: h.rahimi@fda.gov.ir

Afarin Rahimi-Movaghar, MD, MPH

Email address: rahimia@tums.ac.ir

- **Learning Objectives**

1. In spite of control measures, tramadol toxicity still occurs and poses public health challenges in Iran.
2. Most cases of tramadol toxicity in Iran are young males attempting suicide which may report a previous history of tramadol abuse or dependence.

Abstract

Background: Tramadol, an opioid analgesic, was introduced as safe pain medication in 2002 in the pharmaceutical market of Iran. Nevertheless, rising reports of tramadol toxicity, tramadol induced seizures, and tramadol related mortality, incompatible with previous studies in other countries, resulted in the implementation of control policies since 2007 in Iran.

Objective: We aimed to systematically review all the relevant studies on tramadol toxicity and its health consequences in Iran.

Methodology: Four international (Web of Science, Scopus, Medline) and one local (SID) databases were systematically searched up to June 2019 using a comprehensive search strategy. Any study providing data on tramadol toxicity on the Iranian population was eligible. Data on tramadol toxicity and its health outcomes were presented without pooling due to high heterogeneity.

Results: In total, 56 records investigated tramadol toxicity in Iran. Tramadol toxicity patients were mostly under 30 years and were males. The most common reason for toxicity were suicidal attempts. The mean dose resulting in toxicity was 363.2 to 3248 mg. Previous tramadol abuse or dependence was reported by 3.8% to 66.4% of the patients. Seizure prevalence ranged from 12.0% to 69.3%; however, the most prevalent clinical manifestations were nausea, vomiting and altered mental status. The mortality rate due to tramadol toxicity ranged from 0% to 10.0%.

Conclusions: Tramadol toxicity remains a public health challenge in Iran in spite of control measures. Most toxicity cases were young males attempting suicide. Tramadol related seizures and also tramadol related fatal cases had been reported in numerous studies.