

## Medicolegal Aspects Concerning Tramadol Abuse. The New Middle East Youth Plague: An Egyptian Overview 2010

Marwa M Fawzi\*

8 wagih st kourneesh elnil- shoubra-elsahal-P.O BOX 11241, Egypt

### Abstract

An increasingly alarming phenomenon of tramadol drug abuse has been demonstrated in the Egyptian community in the last four years. Although the issue of drug abuse is not a newcomer to the Egyptian society, tramadol has been associated with a wide range of drug abuse and its illegal drug transactions had made it easily accessible and readily provided at cheap costs despite of its being a scheduled drug. The alleged usages of tramadol had also contributed greatly to its popularity and massive use especially among Egyptian youth as a remedy for premature ejaculatory function and for extended orgasm and increase sexual pleasure as promoted through many online drug stores and media.

**Aim of the work:** To study the impact of tramadol increasing rates of drug abuse on the observed association with forms of aggression and accidents.

**Patients and methods:** This study was carried out on the patients who presented to Poison Control Center of Ain Shams University Hospitals, Egypt in the year 2010 presented with trauma with suspected associated drug toxicity for toxicological assessment. **RESULTS:** Number of studied cases was 640 with the adult population showing a higher prevalence (67.9%). The prevalence was higher in males (77.2%). Abuse form of drug intake was the highest (50.8%). The oral route of intake is the highest (96.8%). Patients abusing tramadol presented with any clinical finding denoting involvement in an act of violence or giving history of it (36.3%), forms of accidents whether road traffic accidents (18.7%), acts of violence as fights and domestic violence (33%) and accidental fall and unintentional self-induced injuries (48.3%). The most frequent forms of injuries were cerebral edema (55.9%) and the least being inter cerebral hemorrhage (5%) both diagnosed both clinically and as a CAT SCAN brain finding. Whilst as forms of injuries were lacerated wounds (38.9%), contusions (35.3%), abrasions (31.3%), cerebral concussion (22%), and bone fracture (17.8%), and polytrauma (11%).

**Conclusions:** The significantly notable increasing violence forms are closely related to drug abuse. Tramadol's prevalence is the mostly noted due to its wider availability and cheaper prices than other types of abused drugs.

**Recommendations:** Drug screening for tramadol should be added to all forms of basic toxicological screening. Especially in cases of patients involved in violent crimes and road traffic accidents, also for those applying for drivers' license fitness program. **Keywords:** Abuse-Tramadol-Egypt-Youth-Violence.

### Introduction

An increasingly alarming phenomenon of Tramadol (Tramal, Amadol, Tramax, Contramal, Trama SR, Ultradol, Tramundin) abuse have been heavily demonstrated in the recent years. Although the issue of drug abuse is not a newly introduced issue to Egyptian society but the wide range of usage and illegal transactions associated with tramadol abuse making it the most easily accessible and readily provided drug at cheap cost.

The alleged usages of tramadol had contributed greatly to its popularity and massive use especially among youth and middle aged groups as a remedy for premature ejaculatory function and for extended orgasm and increase sexual pleasure as promoted in many online drug stores and media [1].

It also seems that it is not only an Egyptian problem but also in neighboring countries even Israeli reports noted that some supplies of the drug are smuggled into Gaza from Egypt through tunnels, tramadol being the mostly used one. Their lower price and availability without prescription make them very popular. It relieves psychosomatic symptoms related to stress, like headaches and abdominal pain, as well as depression and nervousness [2].

Thousands of young men in Gaza are becoming addicted to a prescription painkiller used to alleviate the stress of living in the besieged Palestinian territory. Students, laborers and even professionals

are buying large quantities of tramadol, a synthetic opioid painkiller similar to morphine, although milder, on the black market. There are no exact figures, but one researcher estimates that up to 30% of males between 14 and 30 use it regularly, and that as many as 15,000 are addicted [3].

In United Arab Emirates the phenomenon of selling Tramadol in an unlawful manner has been on the rise. 21 cases of trafficking Tramadol had been probed since January 2010 [4].

Tramadol was approved for marketing as a noncontrolled analgesic in 1995 under the trade name of Ultram®. Although the producing company initially claimed that this substance produced only very weak narcotic effects, recent data demonstrate that opioid activity is the

\*Corresponding author: Marwa M Fawzi, 8 wagih st kourneesh elnil- shoubra-elsahal-P.O BOX 11241, Egypt, E-mail: [marwamohfawzi@gmail.com](mailto:marwamohfawzi@gmail.com)

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overriding contributor to the drug's pharmacological activity. Because of inadequate product labeling and lack of established abuse potential, many physicians felt this drug was safe to prescribe to recovering narcotic addicts and to known narcotic abusers. As a consequence, numerous reports of abuse and dependence have been received [5].

The most observed copresentations with tramadol abuse in the cases presented to emergency departments is the noted involvement of these patients with Abuse of tramadol as well as tramadol-related deaths have been increasing in Iran. Biological samples obtained during the autopsy were analyzed. Tramadol was detected in 294 cases by itself or together with other drugs. The majority of the cases were young male adults.

Tramadol-related deaths in 2008 were 32.5 times more than in 2005. These results suggest that tramadol-related fatalities are growing in Iran especially among substance abusers [6].

### Aim of the work

To point out the danger of uncontrolled increasing drug abuse and trading of tramadol widely spread among Egyptian youth and its associated forms of aggression that can possibly explain the violence rage recently noted.

### Patients and methods

This study was carried on the patients presented to Poison Control Center Ain Shams University (PCC-ASU) Hospitals Egypt in the year 2010.

The patients included were either those presented to emergency unit PCC-ASU in acute toxicity, withdrawal symptoms or referred from the neurosurgery emergency department for toxicological screen for suspected drug toxicity. Present history data and clinical of violence or struggle were documented and toxicological screen for tramadol was used as an additional confirmatory tool in some cases presented with unknown drug toxicity. Data were documented tabulated and statistically analyzed and results were interpreted.

### Consent

Informed consent was obtained from all patients involved in the study with the assurance of confidentiality of their personal information.

### Acknowledgements

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### Results & Discussions

The present study showed that the total number of studied cases were 640 with the adult population higher prevalence (67.9%) to child which presented only (32.1%) of the studied cases. Mostly the adult population is those in close relation to tramadol prescribed and non prescribed uses.

Tramadol is a mu opioid agonist that also inhibits the reuptake of norepinephrine and serotonin. Because non-medical use of prescription opioids, including tramadol, has increased in the U.S. over the last several years [7].

The male sex prevalence was higher presented by (77.2%) of the cases to (22.8%) only female presentation and this is mostly explained by the prementioned suggested causes for increased tramadol abuse related to its alleged enhancement of sexual performance. As for tramadol manner of intake the abuse form was the highest (50.8%)

this is related to its addicting effects. Present results indicated that a clinically-prescribed dose of oral tramadol has abuse liability-related effects in recreational drug users suggest the need for further abuse liability testing of the oral formulation in opioid abusers [8].

The oral route of intake is the highest among route of intake forms (96.8%) as being more prevalent easily administered form, while rectal suppositories have been used by some addicts orally at times of shortage in market availability as being less restricted form.

The tramadol abuse overdose studied cases with violence copresentations both by history taking and clinical examination for associated injuries were higher (63.7%) and this related to many factors the serotonin syndrome associated mechanism is the mostly prominent. In addition to the socio economic status factors of most tramadol addicts being unemployed, low socioeconomic status, suburbs residents uneducated or with minimal educational levels.

Serotonin syndrome is a serious condition caused by excess serotonergic activity and characterized by altered mental status and heightened neuromuscular and autonomic activity. Serotonin syndrome is commonly associated with the use of antidepressants alone or in combination with other serotonergic medications [9].

Tramadol side effects also include dizziness, confusion, drowsiness, seizures, and respiratory depression [10]. Any of these side effects can negatively affect the performance and good judgment of a driver or pilot and increase the risk of being involved in road accidents whether as a driver, passenger or pedestrian. Tramadol abuse overdose is highly associated with different forms of accidents whether road traffic accidents (18.7%), act of violence as fights and domestic violence (33%) and accidental fall and self-unintentional induced injuries (48.3%).

A prospective cohort design with data from national population-based registries—the Norwegian Prescription Database and the Norwegian Road Accident Registry—and observation of >8 million person-years were used in order to examine whether a driver who has filled a prescription for codeine or tramadol is at increased risk of being involved in a road accident resulting in injury to persons. During a 33 months study, 181 road traffic accidents were registered with personal injury where the driver had been exposed to codeine and 20 after exposure to tramadol. "Exposure" is defined as the first 7 days after the dispensing of a prescription for a codeine- or tramadol preparation [11,12].

Tramadol can precipitate seizures in epileptic patients by lowering the seizure threshold. There have been several case reports of tramadol precipitating a seizure in non-epileptic patients. There is no formal test for the diagnosis of serotonin syndrome. The onset of clinical effects is relatively rapid (minutes to a few hours) [13]. That explains the highest percent being that of accidental self unintentional injuries associated with the above mentioned side effects as dizziness, confusion, drowsiness singled and altogether increase risk of patient fall and injury. The percent of different forms of recorded injuries associated with tramadol abuse overdose in the studied cases. The highest being cerebral edema (55.9%) and the least being inter cerebral hemorrhage (5%) both diagnosed both clinically and as a CAT SCAN brain finding. Whilst as forms of injuries were lacerated wounds (38.9%), contusions (35.3%), abrasions (31.3%), cerebral concussion (22%), bone fracture (17.8%), polytraumatized patients (11%). All of the mentioned injury forms are related to the formerly discussed side effects.

In any case with associated violence whether road traffic accidents, domestic violence, fights, unexplained rage behavior or action and also

unexplained falls with consequence head injuries or fatalities tramadol abuse should be considered in history taking and basic toxicological screen as well for further medico legal interpretations and insurance and criminal blames.

## Conclusions

Many of the noted nowadays forms of violence, rage and increased traffic accidents are closely related to the recently introduced forms of drug abuse tramadol being the most famous amongst. Tramadol prevalence is due to its wide availability, cheap price and illegal smuggling. The unintentional promotion to these types of drugs through irresponsible media.

Tramadol drug screening is potentially needed to be added to all forms of basic toxicological screening especially to those involved in violence and traffic accidents and for those applied for drivers testing for fitness.

Public awareness should be initiated to point out the fatalities, accidents and uncontrolled behavior that are associated with tramadol abuse, the declaration of alleged usages of the drug.

## References

1. Salem EA, Wilson SK, Bissada NK, Delk JR, Hellstrom WJ, et al. (2008) Tramadol HCL has promise in on-demand use to treat premature ejaculation. *J Sex Med* 5: 188-193.
2. IRIN Middle East | ISRAEL-OPT: Drug abuse on the rise in Gaza specialists humanitarian news and analysis.a service of the UN Office for the Coordination of Humanitarian Affairs.
3. O'Loughlin T: Besieged and stressed Gazans fall victim to black market painkiller Thousands of young men now addicted, says doctor Crisis blamed on tensions created by Israeli blockade. *The Guardian*, Monday 15 December 2008.
4. Crackdown on Tramadol abuse in the UAE An ISET Healthcare portal for medical professionals in the MiddleEast. *GuardianDate*: 15 December 2008.
5. Dayer P Desmeules J Collart L (1997) "Pharmacology of tramadol". *Drugs* 53 2: 18-24.
6. Fariba Sardari Iravani, Maryam Akhgari, Farzaneh Jokar, Leila Bahmanabadi (2010) Current Trends in Tramadol-Related Fatalities, Tehran, Iran 2005-2008. *Subst Use Misuse* 45: 2162-2171.
7. Zacny JP (2005) Profiling the subjective, psychomotor, and physiological effects of tramadol in recreational drug users. *Drug Alcohol Depend* 80: 273-278.
8. Marquardt KA, Alsop JA, Albertson TE (2005) Tramadol exposures reported to statewide poison control system. *Ann Pharmacother* 39: 1039-1044.
9. Junji Takeshita MD, Mark H Litzinger (2009) Serotonin Syndrome Associated With Tramadol. *Prim Care Companion J Clin Psychiatry* 11: 273.
10. Clarot F, Goullé JP, Vaz E, Proust B (2003) Fatal overdoses of tramadol: is benzodiazepine a risk factor of lethality? *Forensic Sci Int* 134: 57-61.
11. Bachs L, Engeland A, Mørland J, Skurtveit S (2009) The Risk of Motor Vehicle Accidents Involving Drivers With Prescriptions for Codeine or Tramadol. *Clin Pharmacol Ther* 85: 596-599.
12. Norwegian Institute of Public Health (2009). Codeine Use And Accident Risk. *ScienceDaily*. Retrieved January 25, 2011.
13. [www.sciencedaily.com /releases/2009/03/090324101749. Html](http://www.sciencedaily.com/releases/2009/03/090324101749.html).
14. Vizcaychipi MP, Walker S Palazzo M (2007) Serotonin syndrome triggered by tramadol. *Br J Anaesth* 99: 919.