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LETTER TO EDITOR

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# Seizure and Rhabdomyolysis: Serious Complications of Tramadol Overdose

MOHAMMAD MAJIDI<sup>1,\*</sup>, SOLMAZ NEKOUEIFARD<sup>2</sup>

<sup>1</sup> Department of Medical Toxicology and Forensic Medicine, Urmia University of Medical Sciences, Urmia, Iran

<sup>2</sup> General Practitioner, Urmia Health Center, Urmia, Iran

To the Editor;

Tramadol, a synthetic opioid is mainly used to treat acute and chronic pain. Although this drug is not an over-the-counter medication, it has been illicitly accessible to and abused by opium addicts (1-3). Studies showed excessive and widespread use of tramadol in Iran (1-4). Tramadol may cause constipation, drowsiness, tachycardia and respiratory distress, while the most severe complications of tramadol overdose include refractory seizures, rhabdomyolysis and renal failure (1-5). These serious complications may occur in sequence in tramadol overdose, as seizure can induce rhabdomyolysis, and renal failure mostly results from rhabdomyolysis (2,3). It has been reported that seizure develops in approximately one-third of cases with tramadol overdose (1,3,4).

Rhabdomyolysis is likely to occur following multiple seizures (2,5). Clinical diagnostic triad of rhabdomyolysis is muscle weakness, muscle pain and dark urine (6,7). Presence of myoglobinuria is highly suggestive of rhabdomyolysis, though it is not adequately sensitive. The level of serum creatine phosphokinase (CPK) has been considered as the most reliable diagnostic test for rhabdomyolysis (6). Over 5 times increase in serum CPK in the presence of muscular symptoms, establishes the diagnosis of rhabdomyolysis (6). Among poisonings, the most common causes of rhabdomyolysis are opium, alcohol and tramadol (2,3,5,7). Rhabdomyolysis results in rise of CPK, hyperkalemia, arrhythmia, disseminated intravascular coagulation and renal failure. Highly increased CPK has

been shown to be related to rise of serum creatinine and subsequently renal failure (6). Rhabdomyolysis can be treated by aggressive hydration and sodium bicarbonate (6). The overall prognosis depends on rapidness of diagnosis and treatment (6,7) For patients with tramadol-induced seizures and highly increased CPK, the possibility of development of rhabdomyolysis should always be taken into account.

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\* Correspondence to: Mohammad Majidi, MD. Assistant Professor, Department of Medical Toxicology and Forensic Medicine, Urmia University of Medical Sciences, Urmia, Iran.

Tel: +98 441 344 1150, E-mail: mohammad.majidi57@yahoo.com

Received 21 February 2014; Accepted 16 May 2014