INTRODUCTION

Poisoning and medication toxicity account for a significant factor in mortality and morbidity worldwide annually. Whether intentional or accidental exposure, medication toxicity causes life-threatening complications (1-3). New drugs come to the era, bring new variations of lethal toxicity problems that have to take into consideration(4).

Annually, **tramadol** poisoning or toxicity primarily account**s** for **the** mortality and **morbidity linked to it all across the globe**. Whether **the exposure to it is intentional or accidental**, i**ts** toxicity causes life-threatening complications (1-3). **In addition, introduction of new drugs** that have **fatal and toxic side effects must also be taken into consideration**(4).

Pain relief medications play a significant role in post-operational life satisfaction and also have benefits in long-life pain management in osteoarthritis and other chronic pains. Tramadol is an analgesic agent used to manage mild to moderate pain and even moderate to severe pain(5), is one of the most common causes of toxicity in patients with a history of drug addiction. Sometimes, they abused tramadol in a higher dosage attempting to suicide (5-8). It first introduced in 1997 in Germany and then spread worldwide cause of it's both weak opioid agonist action and monoamine neurotransmitter reuptake inhibition(9). Tramadol centrally acts on serotonergic and noradrenergic pain receptors and also on the μ-opioid receptor. The pain relieving mechanism of tramadol is multi-modal acting by increasing the concentration of serotonin and noradrenaline and μ-opioid receptor activator(10).

Pain **relievers** play a salient role **in post-operative** life satisfaction, and also benefit **long-term pain management** in osteoarthritis **and in** other chronic pains. Tramadol is an analgesic agent used to manage **mild to moderate or moderate to severe pain**(5), and **is among the established causes of toxicity** in patients with a history of drug addiction. **Its ingestion in high doses is intended as an attempt to commit suicide**(5-8). **It was first brought into use in** 1997, Germany and **from there it spread globally**. **The reason for its swift spread was its** weak opioid agonist action and monoamine neurotransmitter reuptake inhibition(9). It centrally acts on serotonergic and noradrenergic pain receptors, and also on **the μ-opioid receptor**. Its action is

facilitated by a multi-modal pain **relieving mechanism that acts by increasing the concentrations of** serotonin, noradrenaline and μ-opioid receptor activator(10).

Tramadol addiction is less likely than other opiates such as morphine since tramadol dependency has a low potential to happen. Even so, taking a prolonged period of time, more than several weeks to months, has a higher chance of dependency. Especially in persons with a history of substance abuse and using oral tramadol. Supra-therapeutic doses are misused in addicted persons, following a tramadol intoxication. Symptoms include central nervous system (CNS) depression, including coma, nausea and vomiting, tachycardia, cardiovascular collapse, seizures, and respiratory depression up to respiratory arrest and serotonin syndrome accompany with fatal hyperthermia(11-14). By the way, intoxication in therapeutic doses, considering cytochrome P450 enzyme polymorphism in different patients, have been reported. Because tramadol is metabolized in the liver by the cytochrome P450 enzyme (15).

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Tramadol addiction is seldom seen compared to other opiates viz. morphine, since development of its addiction has a low potential. Even then, a prolonged abuse, say more than several weeks to months, has a higher chance of dependency especially in people with a history of substance abuse or in those who have been using oral tramadol. A tramadol intoxication ensues from supratherapeutic drug abuse by addicts. Its symptoms include central nervous system (CNS) depression including coma, nausea and vomiting, tachycardia, cardiovascular collapse, seizures, and respiratory depression up to respiratory arrest and serotonin syndrome accompanied with fatal hyperthermia (11-14). Additionally, therapeutic dose intoxication, considering cytochrome P450 enzyme polymorphism in different patients, has also been reported particularly because tramadol is metabolized in the liver by cytochrome P450 enzyme (15).