Visual Hallucinations Induced By Tramadol Overdose: Case Report

Yüksek Doz Tramadole Bağlı Görsel Halüsinasyonlar

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ABSTRACT Tramadol is a centrally acting analgesic commonly used in the treatment of moderate to severe pain. Visual hallucinations after tramadol overdose has rarely been reported. In this case report, we describe a 15-year-old girl with no medical history with headache, dizziness, nausea, vomiting, drowsiess and visual hallucinations such as white dressing men, prophet and cemetery due to tramadol intoxication. She transferred to the intensive care unit and discharged from hospital on the third day. Early recognition and proper immediate treatment are essential to reversing this complication. This case warns physicians that visual hallucinations to tramadol overdose, an unusual unpredictable adverse reaction, must be kept in mind, underlying mechanisms and therapeutic approach are discussed.

Key Words: Tramadol; hallucinations; overdose

ÖZET Tramadol santral etkili bir analjezik olup orta ve şiddetli ağrı tedavisinde kullanılmaktadır. Tramadol yüksek doz kullanımı neticesinde görsel halüsinasyonlar nadiren bildirilmiştir. Bu olgu sunumunda, yüksek doz tramadol kullanımı neticesinde baş ağrısı, baş dönmesi, bulantı, kusma, uyku hali ve beyaz adamlar, peygamber ve mezarlıklar şeklinde görsel halüsinasyon görme şikayeti olan özgeçmişinde özellik saptanmayan 15 yaşında kadın hasta anlatılmıştır. Hasta yoğun bakım ünitesine alınmıştır ve hastaneden üçüncü gün taburcu edilmiştir. Erken teşhis ve uygun tedavi bu komplikasyonun tedavisinde en önemli etmenlerdir. Bu olgu sunumu, hekimleri yüksek dozda tramadol kullanımına bağlı nadir gelişen komplikasyon olan görsel halüsinasyonlar konusunda uyarmakta, neden olan mekanizmalar ve tedavi yaklaşımı tartışılmaktadır.

Anahtar Kelimeler: Tramadol; halüsinasyonlar; yüksek doz

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Tramadol is a centrally acting analgesic commonly used in the treatment of moderate to severe pain. It has a low affinity to μ-opioid receptors and inhibits reuptake of serotonin and norepinephrine neurotransmitters. Thus tramadol enhances inhibitory effects on pain transmission both by opioid and monoaminergic mechanisms.[1]

Tramadol use is largely considered safe by physicians. Frequently reported side effects include nausea, vomiting, drowsiness, vertigo, constipation, headache, dizziness, somnolence, respiratory depression and seizures.[1-3] Several deaths have also been reported when tramadol was ingested alone in overdose.[4-6]

Hallucinations after tramadol use have rarely been reported.[7]

In this paper, we report a case with visual hallucinations due to the tramadol overdose.

CASE REPORT

A 15-year-old girl with no medical history was admitted to the emergency department with headache, dizziness, nausea, vomiting, drowsiness and visual hallucinations such as white dressing men, prophet and cemetery. Three hours before admission to the emergency department she had taken ten tramadol capsules (Contramal® 50 mg) because of severe headache. She had taken no other medications. Neurological examination was unremarkable. She was responding to verbal commands. There was no frothing, no uprolling of eyes, pupils were normal in size and shape and reactive to light.Vigilance and higher-order functions were normal. There was no evidence of weakness or impairment of vibration, pinprick or touch sense, and cerebellar function and cranial nerve examinations were normal. Tendon reflexes were symmetric. Electroencephalography and electromyography were unremarkable. A brain computed tomograpy and magnetic resonance imaging showed no signs of intracerebral bleeding or other abnormalities. All laboratory values were normal.

The patient transferred to the intensive care unit for observation. In the intensive care unit, the heart rate, respiratory rate, and oxygen saturation were continuously monitored. Her body temperature was 36.2 °C, pulse rate 100 beats per min^{-1}, blood pressure 129/87 mmHg. Arterial blood gases showed pH: 7.37, pO_2:118 mmHg, pCO_2: 31 mmHg and oxygen saturation was 98 with 5 lt/min nasal oxygen. The chest radiograph was normal. Isotonic saline infusion was started and famotidin was given for prophylaxis. On the first day she had one episode of visual hallucinations that continued for 30 minutes and recovered without any medications. During hallucinations and other days, neurological examination were unremarkable. No hallucinations were observed on the other days. On the third day she discharged from intensive care unit without any abnormalities.

DISCUSSION

In this case report, we describe visual hallucinations due to the administration of tramadol overdose.

Adverse reactions to tramadol have been reported for years. Frequently reported side effects include nausea, vomiting, drowsiness, vertigo, constipation, headache, dizziness, somnolence, respiratory depression and seizures.[1-3] Several deaths have also been reported when tramadol was ingested alone in overdose.[4-6]

Hallucinations and visual hallucinations after tramadol have been reported.[7]

Kabel et al.[7] using the database of the Netherlands Pharmacovigilance Centre and reported 18 patients with tramadol concerning visual hallucinations. The mean age of the patients was 72 (between 9-80), the daily dose of tramadol was 132 mg, mean time of onset of the visual hallucinations was six days, but in eight cases the onset time was less than two days. The outcome was found 67%. The database of the WHO Uppsala monitoring center contains 303 reports of visual hallucinations in association with tramadol. The mechanism of opioid-induced hallucinations is unknown.

Tramadol stimulates the μ-receptor, and to a lesser extent the δ- and κ-opioid receptors. It also decreases the reuptake of norepinephrine and serotonin.[8] Tramadol may cause serotonin syndrome particularly when it is used at high doses or in combination with other agents increasing serotonin levels.[9]

A number of the case reports of serotonin syndrome with visual hallucinations following concomitant use of tramadol with antipsycotic medications have been reported. A case report from Germany a 70-year-old woman with visual hallucinations after using tramadol and citalopram.[10] Symptoms resolved following discontinuation of tramadol. In another case report a 44-year-old woman had visual hallucinations after ingesting 800 mg/day tramadol and fluoxetine 80 mg/day. Discontinuation of fluoxetine and gradual dose reduction of tramadol led to complete

remission of the physical symptoms within six days.[11]

Our patient was admitted to the emergency department after taking ten tramadol capsules (500 mg) with headache, dizziness, nausea, vomiting, drowsiness and visual hallucinations such as white dressing men, prophet and cemetery. She had visual hallucinations one hour after drug intake. Our patient's medical history was clear without any drug usage.

This case warns physicians that visual hallucinations due to tramadol overdose, an unusual unpredictable adverse reaction, must be kept in mind. Early recognition and proper immediate treatment are essential to treat this complication.

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