Case Report

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Tramadol-induced Mania: A Case Report

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Citation Dadfar S, Ahadi M. Tramadol-induced Mania: A Case Report. Case Reports in Clinical Practice. 2024; 9(1): 26-28.

Running Title Tramadol-induced Mania

Article info:
Received: January 21, 2024
Revised: February 15, 2024
Accepted: February 29, 2024

Keywords:
Tramadol; Mania; Premature ejaculation

ABSTRACT

This case report describes a rare occurrence of tramadol misuse resulting in a manic episode in a patient without a history of psychiatric disorders. The patient had used tramadol off-label for premature ejaculation. Following discontinuation of tramadol and initiation of mood stabilizer treatment, the manic symptoms resolved. Tramadol, despite its potential antidepressant properties, also poses a risk of inducing psychiatric disturbances. Diagnosis can be challenging and necessitates a thorough examination. Management involves immediate cessation of tramadol and administration of mood stabilizers. Clinicians should exercise caution and closely monitor patients when prescribing tramadol, particularly for off-label indications.

Introduction

Tramadol is a widely used analgesic medication that belongs to the class of opioid agonists [1]. In Iran, tramadol is commonly prescribed for pain management and has become a popular choice due to its perceived safety profile compared to other opioids. However, the widespread availability and easy accessibility of tramadol have raised concerns regarding its misuse and potential public health consequences in the country [2].

Tramadol, an opioid agonist, is primarily prescribed for managing moderate to severe pain. Its efficacy has been well-established across various medical conditions. Tramadol exerts its analgesic effects through multiple mechanisms, including the inhibition of norepinephrine and serotonin reuptake, as well as weak mu-opioid receptor agonism [1,3]. While the United States Food and Drug Administration (FDA) has not approved tramadol for psychiatric indications, it has garnered attention for its off-label use in psychiatric conditions. Notably, some studies suggest potential antidepressant properties due to its serotonergic and noradrenergic effects [3].

One off-label use of tramadol that has garnered attention is its potential role in treating premature ejaculation. Premature ejaculation is a common sexual dysfunction characterized by the inability to delay ejaculation during sexual intercourse, leading to significant distress and interpersonal difficulties. Tramadol's mechanism of action, including

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its effects on serotonin reuptake inhibition, has been hypothesized to contribute to its efficacy in delaying ejaculation [4].

Despite its potential benefits, tramadol is associated with several adverse effects. Common side effects include nausea, constipation, dizziness, and sedation [1]. However, more severe adverse effects have also been reported, including respiratory depression, seizures, serotonin syndrome, and cardiovascular events [1,2]. Of particular interest in this case report is the development of manic behaviors as a side effect of tramadol use in a psychiatric patient. In this case report, we present a patient with a history of taking tramadol for the treatment of premature ejaculation. The patient experienced adverse effects in the form of manic behavior. Our aim is to highlight the importance of recognizing the potential risks associated with the misuse of tramadol, particularly in patients with psychiatric comorbidities.

Case Presentation

The patient, a 31-year-old male, engaged in illicit tramadol use to enhance sexual performance based on a friend's suggestion. After taking tramadol, he immediately experienced improved sexual satisfaction for both himself and his partner, leading to increased daily consumption (3 to 4 pills) over two weeks. During this period, the patient exhibited talkativeness, increased energy, and extravagance, depleting his savings. His mother and sister, who live with him, observed decreased sleep needs and sustained energy despite limited rest. Additionally, they noted irritability and an inflated self-esteem, with the patient claiming connections to influential government and political figures. The night before hospitalization, a dispute with restaurant staff over excessive purchases without sufficient funds resulted in his transfer to the police station and subsequent psychiatric evaluation by a forensic doctor. The patient was diagnosed with a manic episode upon admission to the psychiatric center. Notably, he had no prior psychiatric history, including depression or evidence of manic or hypomanic episodes. No previous psychiatric medications were administered, and he had no known physical illnesses. A comprehensive neurological examination during hospitalization yielded normal results. Following tramadol discontinuation and initiation of mood stabilizers, the patient responded significantly, with symptom resolution within a week.

Discussion

This case report illustrates a rare but serious adverse effect of tramadol misuse in a patient with no prior psychiatric history. The patient developed a manic episode after taking tramadol for the off-label indication of premature ejaculation, which is not approved by the FDA. The patient's symptoms resolved after discontinuing tramadol and receiving mood stabilizer treatment.

Tramadol is a synthetic opioid analgesic that has multiple mechanisms of action, including weak mu-opioid receptor agonism and inhibition of serotonin and norepinephrine reuptake. These effects may confer some antidepressant and anxiolytic properties to tramadol, as well as potential efficacy in delaying ejaculation [2-4]. However, tramadol also carries the risk of inducing or exacerbating psychiatric disorders, such as mania, psychosis, and depression, especially in patients with underlying vulnerabilities or comorbidities [1,2].

The exact pathophysiology of tramadol-induced mania is not fully understood, but it may involve the dysregulation of monoamine neurotransmitters, such as serotonin and norepinephrine, which are implicated in the pathogenesis of bipolar disorder. Tramadol may also interact with other medications or substances that affect the serotonergic system, such as selective serotonin reuptake inhibitors (SSRIs), serotonin-norepinephrine reuptake inhibitors (SNRIs), or illicit drugs, increasing the risk of serotonin syndrome or serotonin toxicity [1-3].

The diagnosis of tramadol-induced mania can be challenging, as it may mimic other psychiatric or medical conditions, such as substance-induced mood disorder, bipolar disorder, or delirium. A careful history of drug use, including the dose, duration, frequency, and source of tramadol, is essential to identify the causal relationship between tramadol and mania. Additionally, a thorough physical and neurological examination, as well as laboratory and imaging tests, may be required to rule out other potential causes of mania, such as infection, metabolic disturbance, brain injury, or tumor [1, 2].

The management of tramadol-induced mania involves the immediate cessation of tramadol and the initiation of mood stabilizer treatment, such as lithium, valproate, or antipsychotics. The choice of mood stabilizer may depend on the severity of symptoms, the presence of comorbidities, and the patient's preference and tolerability. The duration of treatment may vary depending on the patient's response and the risk of relapse. Psychoeducation and psychosocial support may also be beneficial to help

the patient cope with the consequences of tramadol misuse and prevent future episodes [1, 2].

The prevention of tramadol-induced mania requires the awareness and education of both clinicians and patients about the potential risks and benefits of tramadol use, especially for off-label indications. Tramadol should be prescribed with caution and under close monitoring, especially in patients with psychiatric comorbidities or a history of substance abuse. Tramadol should also be used at the lowest effective dose and for the shortest duration possible, and alternative treatments should be considered when appropriate. Furthermore, the regulation and control of tramadol availability and accessibility should be enforced to reduce the misuse and abuse of this medication [3,4].

Ethical Considerations

Compliance with ethical guidelines

There were no ethical considerations to be considered in this article.

Funding

No funding was received to assist with the preparation of this manuscript.

Conflict of Interests

The authors have no conflict of interest to declare.

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