

CASE REPORT

Pain management in our daily practice: should we re-evaluate?

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Abstract

Treatment strategies of back pain are variable. We describe an unusual case of polyuria and erectile dysfunction with a short-term tramadol use. A 29-year-old man presented to our clinic with worsening lower back pain. After poor control of his pain on Non steroidal anti-inflammatory drugs, tramadol was prescribed. After 3 days of starting tramadol, he experienced significant polyuria and erectile dysfunction with inability to ejaculate or obtain orgasm. He denied any systemic symptoms. On follow-up, he reported complete resolution of his polyuria and erectile dysfunction within 24 h of stopping tramadol, in addition to satisfactory control of his pain. Polyuria and erectile dysfunction are very uncommon side effects of tramadol, reported in <1% of chronic users. This is the first case report to demonstrate such a rapid and aggressive onset of this combination of rare side effects with the complete resolution after tramadol discontinuation.

INTRODUCTION

Low back pain is a very common problem in the general population, affecting as many as 84% of adults in their lifetimes [1]. While the overall long-term prognosis of low back pain is favorable, the symptoms can be persistent and severe, leading to significant impacts on patient lifestyles and quality of life. There are a variety of treatment strategies that include pharmacologic and nonpharmacologic interventions. For most patients, first-line pharmacologic agents include acetaminophen or nonsteroidal anti-inflammatory drugs; time-limited courses of opioids may be considered for debilitating pain that is not controlled with acetaminophen or NSAIDs [2]. Tramadol is an analgesic with some activity at μ -opioid receptors, in addition to inhibition of serotonin and norepinephrine uptake. Side effects of tramadol most commonly include gastrointestinal disturbances such as constipation, nausea and vomiting, as well as dizziness and somnolence [3]. In this report, we describe a very unusual case of marked urinary symptoms and erectile dysfunction in association with a short-term course of tramadol.

CASE REPORT

A 29-year-old man with no significant past medical history presented to our outpatient clinic with worsening intermittent sharp or burning pain and occasional numbness in his left buttock shooting down into the posterior thigh. The symptoms were infrequent and mild when they first started 2 years ago, but his symptoms had become more severe over the past 6 months, interfering with his sleep and studies as a graduate student. He denied any history of bowel or bladder incontinence, saddle anesthesia or history trauma to his spine. He denied any systemic or urinary symptoms. His physical examination was significant for tenderness at L5 vertebra and sacrum, pain and limited range of motion with lumbar flexion, a positive left straight leg raise test. His presentation was consistent with sciatica and he has a BMI of 35 kg/m². Accordingly, he was counseled about proper diet and exercise, and ibuprofen 800 mg TID for a week was prescribed with gabapentin 300 mg daily at bedtime if he had no improvement with ibuprofen alone. He was also referred for physical therapy. X-ray imaging of the lumbar spine

Received: March 23, 2015. Revised: September 12, 2015. Accepted: September 30, 2015

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and of the bilateral hips and pelvis showed partial sacralization of the L5 vertebrae and minimal retrolisthesis of L4 with respect to L5. There was no evidence of fracture, dislocation or diatheses of the pelvis or hips.

On follow-up of 3 weeks later, he reported minimal improvement with ibuprofen and gabapentin. He had not yet commenced physical therapy at that time. His gabapentin dose was changed to 300 mg in the morning and 600 mg at bedtime, and an MRI of the lumbar spine was done and it showed a 5-mm central posterior protrusion of the L4–L5 disc without significant dural sac or nerve root compression, mild left foraminal stenosis at the L4–L5 level and a markedly degenerated and hypoplastic L5–S1 disc with sacralization of the L5 vertebra bilaterally. He returned to the office after 4 days in order to follow-up on the MRI results and for further pain management, stating that the increase in gabapentin helped the sciatica to some degree, but he was continuing to have significant lower back pain. At that time, he was started on tramadol 50 mg TID as needed for pain, in addition to ibuprofen and gabapentin.

The patient returned to the office 3 days after starting tramadol. He reported that his lower back pain had been completely resolved with tramadol, but after the second dose of tramadol, he was experiencing increased urinary frequency. He recalled needing to urinate at least 15 times in a 24-h period, including 9 or 10 times at night. He also noted erectile dysfunction, with the absence of morning erections, inability to maintain an erection and inability to ejaculate or obtain orgasm. He denied dysuria or any systemic symptoms and reported having the same fluid intake. His urine analysis was normal. Based on these findings and the apparent cause–effect relationship, tramadol was stopped and he was prescribed Norco every 6 h as needed for pain for 10 days until he could start physical therapy.

Two weeks later, the patient came for follow-up. His pain was well controlled on Norco, and he had complete resolution of his urinary and erectile dysfunction within 24 h of stopping tramadol. He was scheduled to start physical therapy the following week and he is doing very well now.

DISCUSSION

Both polyuria and erectile dysfunction are very uncommon side effects of tramadol, reported in <1% of people taking the drug [4–6]. The effects of tramadol on sexual dysfunction are relatively expected despite the apparent rarity of the side effect, as it has been used in various studies for the treatment of premature ejaculation [7, 8]. Tramadol is an analgesic with centrally acting opioid activity (weak μ -opioid effect) in addition to inhibition of reuptake of 5-hydroxytryptamine and norepinephrine. It is hypothesized that the increased synaptic content of serotonin and norepinephrine at the level of the spinal cord and peripheral sensory nerves provides the mechanism for these side effects as well as for effective treatment of premature ejaculation. A prove to this hypothesis is that tramadol is being used more often in the treatment on premature ejaculation as an off-label use. Urinary dysfunction, though it has been reported to the FDA, is less common than erectile dysfunction. Out of 38 627 people who reported side effects while taking tramadol, the majority of those reporting urinary frequency (63%) or polyuria (100%) had been taking tramadol for at least 2 years, with only 2 of the 38 627 reporting

urinary frequency within 1 month of taking tramadol [4, 5]. Gender distribution was equal in those experiencing urinary frequency, but predominantly female in those experiencing polyuria. Patients reporting these side effects tended to be older than age 50 years. The large majority had no resolution of symptoms with discontinuation of the medication. Of note, tramadol has been successfully tried as a treatment for overactive bladder [9]. The mechanism of tramadol-induced polyuria is not completely understood and contradicts the abovementioned proposed mechanism of action, since despite having some possible anticholinergic effects (tricyclic antidepressant-like effect) and the fact that it has been successfully tried as a treatment for overactive bladder, it is not clear how tramadol can cause polyuria instead of urine retention.

This case was very unique and interesting for its presentation of polyuria and erectile dysfunction in a relatively young healthy male. Moreover, we believe that this is the first case report to demonstrate such a rapid and aggressive onset of this combination of rare side effects as well as the complete resolution of the symptoms within 24 h of tramadol discontinuation.

CONFLICT OF INTEREST STATEMENT

None declared.

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