Case Report

Gabapentin-induced sexual dysfunction☆

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Abstract

Sexual dysfunction is a key adverse effect leading to medication noncompliance. Psychotropic drugs associated with sexual dysfunction include antiepileptic drugs, antidepressants, and antipsychotics. Gabapentin, frequently used off-label to treat psychiatric and pain disorders, has previously been reported to cause sexual dysfunction at a minimum total daily dose of 900 mg. This report addresses dose-dependent gabapentin-induced sexual dysfunction reaching total sexual dysfunction (loss of libido, anejaculation, anorgasmia, and impotence) at a total daily dose of only 300 mg.

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1. Introduction

Male sexual dysfunction is characterized by decreased libido, ejaculatory inhibition/failure, premature ejaculation, retrograde ejaculation, anorgasmia, priapism, and/or erectile dysfunction/impotence [1,2]. Sexual dysfunction may be comorbid to multiple medical diseases including chronic kidney disease, diabetes, hypertension, congestive heart failure, coronary artery disease, hyperlipidemia, epilepsy, autoimmune disorders, and depression [3–9]. Sexual dysfunction can also be a significant adverse effect associated with pharmacotherapy used in the treatment of these diseases [1,2,4,5,7,10–12]. Psychotropics associated with sexual dysfunction include antiepileptic drugs (AEDs), antidepressant drugs [especially selective serotonin reuptake inhibitors (SSRIs) and serotonin-norepinephrine reuptake inhibitors (SNRIs)], and both typical and atypical antipsychotic drugs [1,2,7,10–16]. This key adverse effect may lead to medication noncompliance [4,17,18]. Furthermore, unless sexual dysfunction symptoms are targeted questions during each evaluation, the patient may not volunteer important information as this problem develops [2,14].

Gabapentin is an AED approved by the US Food and Drug Administration for the treatment of postherpetic neuralgia and for the adjunctive treatment of partial seizures with/without secondary generalization [19]. Gabapentin is frequently used off-label for the treatment of both psychiatric and pain disorders [19,20]. There is limited literature on gabapentin-induced sexual dysfunction [10,13,17,21–24]. This case describes the stepwise development of sexual dysfunction as gabapentin was titrated at low daily doses.

2. Method

Case analysis with PUBMED literature review was employed.

3. Case report

A 34-year-old man presented with major depression, social anxiety, and anxiety disorder not otherwise specified by DSM-IV criteria with denial of any sexual dysfunction [25]. At the time of initial consultation, his psychotropic regimen included duloxetine 60 mg twice daily and bupropion XL 300 mg every morning. Complete blood count, comprehensive metabolic panel, and thyroid function tests were all normal. Gabapentin was added to treat his social anxiety and was slowly titrated. After 1 week on gabapentin 100 mg every night, the patient did not notice any sexual dysfunction; however, after 3 weeks on gabapentin 200 mg every night, the patient noted a moderate decrease in sexual function. Though libido was normal, he
required longer foreplay to reach an effective erection and found that he had ejaculatory delay. The patient did not inform the treating psychiatrist that he had experienced any sexual dysfunction. As the patient continued to have depressive and anxiety features, his psychotropic regimen was changed to duloxetine 60 mg twice daily, bupropion XL 300 mg every morning, bupropion SR 100 mg daily at 2:00 PM, and gabapentin 300 mg every night. The patient described the following progressive sexual dysfunction after gabapentin was increased to 300 mg every night: (1) within 1 week, decreased libido; (2) within 2 weeks, partial erection with anorgasmia; (3) at 4 weeks, no libido, anejaculation, anorgasmia, and impotence. The patient concluded that the sexual changes were all secondary to gabapentin, and therefore, he independently discontinued this medication by titrating down by 100 mg each week. When seen in follow-up after being totally off gabapentin for 1 week, the patient described normal libido with normal erectile function, normal orgasms, and nondelayed ejaculation. On only duloxetine and the increased bupropion, the patient also denied any further depressive or anxiety features. Of note, the patient’s wife later contacted the treating psychiatrist to ensure that the patient had explained all of the adverse effects associated with gabapentin and that he had discontinued this medication.

4. Discussion

This unique case report highlights several important issues concerning pharmacotherapy and sexual dysfunction.

First, when considering sexual dysfunction in patients treated with rational polypharmacy, a detailed history with a timeline of onset of adverse effects is critical in determining the offending agent. Although the patient was taking three psychotropics (duloxetine, bupropion, and gabapentin) when he developed the sexual dysfunction described, his baseline sexual function prior to initiation of gabapentin was normal, which strongly suggested that the current sexual dysfunction was induced by gabapentin as opposed to the SNRI duloxetine. In retrospect, the patient later acknowledged having developed sexual dysfunction when first treated with duloxetine that resolved once he was placed on bupropion. The patient had experienced normal sexual functioning on duloxetine 60 mg twice daily and bupropion XL 300 mg every morning for 2 years prior to the initiation of gabapentin.

Second, the patient may have specific perceptions regarding the significance of the sexual dysfunction and whether it will be transient, resulting in nondisclosure of this adverse effect. In this case, the patient commented that when the need for prolonged foreplay with associated ejaculatory delay occurred on gabapentin 200 mg every night, he presumed that these symptoms would be transient. The patient further presumed that because bupropion had been effective in resolving duloxetine-induced sexual dysfunction, an increased bupropion total daily dose would resolve any gabapentin-induced sexual dysfunction.

Third, targeted questions are required to determine the presence of sexual dysfunction [2,14]. This is especially important with religious patients who may have increased difficulty in discussing sexual themes [2,26]. The patient had denied any adverse effects with the addition of low-dose gabapentin; however, sexual dysfunction adverse effects were not specifically targeted.

Fourth, sexual dysfunction is a common cause of medication noncompliance [4,17,18]. In this case, the patient was noncompliant and discontinued his gabapentin secondary to progressive sexual dysfunction prior to advising the treating psychiatrist of this action. Of note, gabapentin-induced anorgasmia has previously been reported as a cause of gabapentin noncompliance in bipolar disorder [17]. Although gabapentin noncompliance in this case did not have negative psychiatric effects, consider the effect of abrupt gabapentin discontinuation in patients with epilepsy or the abrupt discontinuation of psychotropics in patients with severe mental illnesses.

Fifth, sexual dysfunction may be dose dependent. Case reports of gabapentin-induced sexual dysfunction suggest that the minimum total daily dose required for sexual dysfunction is 900 mg [10,13,17,21,23,24]. In contrast, the patient described in this case report developed his first symptoms of sexual dysfunction at only 200 mg every night and, at 300 mg every night, experienced severe sexual dysfunction with no libido, anejaculation, anorgasmia, and impotence. Sixth, as gabapentin is frequently used off-label (> 80%), the potential for gabapentin-induced sexual dysfunction impacts patients with epilepsy, psychiatric disorders, and pain disorders [10,13,17,19–24,27].

Seventh, psychiatrists, neurologists, and pain management physicians require education regarding potential dose-dependent gabapentin-induced sexual dysfunction that may occur at lower doses than previously reported.

There are several key limitations: (1) Because this is a case report (N = 1), the findings cannot be generalized. (2) Although the case clearly depicts an on/off phenomenon regarding gabapentin-induced sexual dysfunction, for ethical reasons it was not possible to request this patient to pursue a more complete case–control study with repeat challenge to gabapentin. (3) Blood levels of psychotropic drugs were not obtained. (4) Hormonal issues were not considered.

5. Conclusion

Low-dose gabapentin may result in marked sexual dysfunction, including loss of libido, erectile dysfunction, ejaculatory dysfunction, and anorgasmia. Such sexual dysfunction may lead to medication noncompliance. Patients often do not volunteer information regarding sexual dysfunction, and therefore, targeted questions are necessary. Further education of health care professionals regarding gabapentin-induced sexual dysfunction is required.

References


