A Case of Persistent Genital Arousal Disorder Successfully Treated With Topiramate in a Physically Healthy Individual

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Persistent genital arousal disorder (PGAD) was first described in 2001 by Leiblum and Nathan.[1] In 2003, it was recognized as a clinical condition by the International Definitions Committee[2] and characterized by 5 diagnostic criteria as a physical genital arousal that is (1) involuntary and persistent, (2) unresolved with repeated orgasms, (3) unrelated to sexual desire, (4) intrusive and unwanted, and (5) distressing. Limited available literature suggests that PGAD may be related to nervous system dysfunction, and therefore benzodiazepines, anesthetics, and anticonvulsants have been experimentally used to treat the symptoms.[3]

A case of a seizure patient whose concurrent PGAD symptoms resolved following seizure treatment with topiramate has been reported.[4] To date, however, there are no case reports of topiramate in the treatment of PGAD in healthy individuals. This case report is of a woman with PGAD treated with topiramate, which resulted in marked alleviation of symptoms and improvement in quality of life.

Case report. Ms A, a 33-year-old woman, was diagnosed with *DSM-IV-TR* anxiety disorder not otherwise specified due to symptoms of insomnia, intrusive and repetitive anxious thoughts, catastrophic thinking, excessive worry about the future, and occasional panic attacks. The patient also reported that after becoming pregnant at age 32 she began experiencing symptoms consistent with the established diagnostic criteria for PGAD[2] (not in *DSM-IV-TR*). Last year, the patient described experiencing spontaneous genital arousal on a daily basis that worsened at night and during the time period surrounding her menstrual cycle. She was compelled to engage in sexual activity or self-stimulate to the point of reaching an orgasm, which lessened the intensity of genital arousal. The patient reported frustration with unpredictable, intense, and repetitive exacerbations of genital arousal and that this often led to feelings of frustration, crying spells, and hopelessness. She reported that the symptoms interfered with her daily life: work, parenting, socializing with friends and family, and quality of sleep.

Previous unsuccessful treatments consisted of various combinations of antidepressants and benzodiazepines, which were tried for about 2 years. The medication regimen consisted of citalopram 30 mg/d with alprazolam 1 mg or escitalopram 40 mg/d with alprazolam 1 mg/d, with a final combination of paroxetine 50 mg/d and clonazepam 1 mg twice daily. The treatment goal was to utilize antidepressant medication side effects to target Ms A's incorrectly diagnosed "hypersexual feelings."

The patient was started on treatment with topiramate 50 mg nightly, in addition to her regimen of paroxetine 50 mg/d and clonazepam 1 mg nightly. Within 1 week, the patient reported decreased intensity of daily physical arousal symptoms and denied panic attacks, hopelessness, and crying spells when exacerbations of genital arousal did occur. By the end of week 2, the topiramate dose was gradually increased to 150 mg nightly, and the patient reported diminished genital sensitivity with no urge to self-stimulate. The topiramate dose was further increased to 200 mg nightly, and at 3 weeks after initiating treatment, Ms A described the arousal symptoms as "minimal." The patient continued taking topiramate 200 mg nightly. Over the next month, she reported situational anxiety related to work and family, but stated that the PGAD symptoms had remained in subsidence during the same time period. During treatment, the patient ran out of medication and reported reexperiencing PGAD symptoms within days, which resolved after she resumed topiramate treatment at 200 mg nightly. She continued to be compliant with topiramate for several months, with no complaints of PGAD.

Persistent genital arousal disorder is underreported and thus poorly understood. Increasing clinicians' awareness of the need to screen for and diagnose the condition is essential, as patients are reluctant to report symptoms of such an intimate nature. The symptoms of PGAD may not be extremely rare, as one study[5] reports that as many as one-third of participants endorsed at least 1 of the 5 diagnostic criteria. The present case suggests that PGAD can be successfully treated and resolved with topiramate in a physically healthy patient whose PGAD symptoms are not believed to be related to or caused by a clinically recognizable seizure disorder. On the basis of the hypothesis of neuronal dysfunction in PGAD, topiramate, an anticonvulsant, may be altering the release of neurotransmitters and affecting neuronal activity by blocking voltage-dependent sodium channels, augmenting γ-aminobutyric acid activity, or decreasing the activity of glutamate receptors.[6] Further research is needed to improve understanding of PGAD in terms of incidence, etiology, and treatment.

References

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Drug names: alprazolam (Xanax, Niravam, and others), citalopram (Celexa and others), clonazepam (Klonopin and others), escitalopram (Lexapro and others), paroxetine (Paxil, Pexeva, and others), topiramate (Topamax and others).

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