

Altered testosterone levels associated with venlafaxine use: a case report

Kimmyben Patel¹, Ankitkumar B Patel², Pokhraj P Suthar³, Kewal A Mistry⁴

¹Department of Medicine, SBKS Medical Institute and Research Center, Waghodiya, Vadodara, Gujarat, India.

²Department of Physiology, SSG Hospital, Medical College, Vadodara, Gujarat, India.

³Department of Radiology, SSG Hospital, Medical College, Vadodara, Gujarat, India.

⁴Department of Radiology, Dr. Rajendra Prasad Government Medical College, Kangra, Tanda, Himachal Pradesh, India.

Correspondence to: Kimmyben Patel, E-mail:kimmy2111@yahoo.in

Received April 25, 2015. Accepted May 12, 2015

Abstract

Sexual dysfunction is a frequent side effect of selective serotonin reuptake inhibitors and serotonin–norepinephrine reuptake inhibitors. However, accompanying the alteration in testosterone levels is uncommon. We present the case of a patient with major depressive disorder, posttraumatic stress disorder, and panic disorder, whose symptoms were well-controlled with venlafaxine-extended release (150 mg/d). Because of low testosterone levels, the venlafaxine treatment was tapered off.

KEY WORDS: Venlafaxine, testosterone level, psychiatrics

Introduction

Sexual dysfunction is a frequent side effect of selective serotonin reuptake inhibitors and serotonin–norepinephrine reuptake inhibitors. However, accompanying alteration in testosterone levels is uncommon. There is very little literature on the relationship between venlafaxine and testosterone levels. By conducting a literature review, we found a case report with somewhat similar results as those of our patient. In the published case,^[1] a patient was found to have low testosterone levels that got to normal after venlafaxine discontinuation. We present the case of a patient with major depressive disorder, posttraumatic stress disorder, and panic disorder, whose symptoms were well-controlled with venlafaxine-extended release (150 mg/d). Because of low testosterone levels, the venlafaxine treatment was tapered off.

Case report

A 38-year-old man presented with a history of posttraumatic stress disorder, major depressive disorder, and panic disorder. He presented to the mental health outpatient psychiatry clinic complaining of depression, worsened anxiety, and resumption of panic attacks after he was weaned off from venlafaxine treatment 2 weeks earlier. He was experiencing depression and anxiety for 16 months and started taking venlafaxine 12 months before his visit to the outpatient clinic. The taper began after he presented to a primary-care physician with fatigue, low sex drive, and weight gain, with the inability to lose any weight despite a strict diet and exercise regimen. His total testosterone level taken at that time was 225 ng/dL (reference range, 241–827 ng/dL). Patient's luteinizing hormone and follicle-stimulating hormone levels were within normal limits. In reviewing the case, it was found that patient was a healthy adult with no preexisting medical conditions and was not taking steroids, opioids, or any other medications that would cause androgen disturbance or be a potential cause of low testosterone levels. There was no history of current or past illicit drug use such as prescription medication or heroin.

Over the course of 3 weeks, venlafaxine was tapered off by the primary-care provider, assuming that venlafaxine was

Access this article online

Website: <http://www.ijmsph.com>

DOI: 10.5455/ijmsph.2015.25042015311

Quick Response Code:



the cause of his altered testosterone level. He returned to the primary-care provider for follow-up laboratory tests; his total testosterone level was 306 ng/dL. This result was reviewed by the endocrinologist in our outpatient clinic, and it was unnecessary to give him a testosterone supplementation. He was started on sertraline (50 mg/d) but did not show up for follow-up appointments. He was contacted via phone and reported improvement in sexual function and decreased symptoms of anxiety and depression. It is unclear if he remained compliant with sertraline, as he was no longer followed up in the outpatient clinic.

Discussion

There is very little literature on the relationship between venlafaxine and testosterone levels. By conducting a literature review, we found a case report with somewhat similar results as those of our patient. In the published case,^[1] a patient was found to have low testosterone levels that got to normal after venlafaxine discontinuation. With the exception of that case report, literature on the subject is lacking. Shortage of literature may be owing to the rarity of this side effect or it could be because of the lack of monitoring of testosterone levels in patients with symptoms closely resembling those of our patient. It is also worth mentioning that even healthy men may have altered testosterone levels, and a low testosterone level may be transient.^[2]

Free testosterone levels were not taken and would not have added any significant insight to his care, as the level of total testosterone is sufficiently informative. The need for free testosterone levels is not crucial, as the bioavailability of albumin-bound testosterone is supported by evidence.^[3]

In reviewing the case, it was found that patient was a healthy adult with no preexisting medical conditions and was not taking steroids, opioids, or any other medications that would cause androgen disturbance or be a potential cause of low testosterone levels. There was no history of current or past illicit drug use such as prescription medication or heroin. His normal follicle-stimulating hormone and luteinizing hormone levels confirmed that opioids were not the cause.^[4] Psychiatrists and primary-care clinicians should know the drugs and medications that can potentially cause changes in testosterone levels and that low testosterone levels may frequently mimic depression symptoms, such as anhedonia,

low libido, fatigue, poor strength and energy with low appetite, and poor sleep. Some patients may also complain of anxiety symptoms. Unless clinicians are aware, such conditions may go unrecognized and untreated.

To the best of our knowledge, only one other case of low testosterone possibly linked to venlafaxine use has been reported. Although routine testosterone levels are not warranted in all patients receiving venlafaxine, clinicians aware of this possible association may consider obtaining free and total testosterone levels before and after starting venlafaxine in selective patient populations, such as those reporting fatigue or low libido. As testosterone supplementation is not without its own adverse effects, supplementation is considered on a case-by-case basis after discussion with endocrinologist.

Conclusion

Routine testosterone levels are not warranted in all patients receiving venlafaxine; clinicians aware of this possible association may consider obtaining free and total testosterone levels before and after starting venlafaxine in selective patient populations, such as those reporting fatigue or low libido. Supplementation of testosterone can be considered.

References

1. Bell S, Shipman M. Reduced testosterone level in a venlafaxine-treated patient. *Ann Clin Psychiatry* 2000;12(3):171–3.
2. Bebb R. Testosterone deficiency: Practical guidelines for diagnosis and treatment. *B C Med J* 2011;53(9):474–9.
3. Manni A, Partridge WM, Cefalu W, Nisula BC, Bardin CW, Santner SJ, et al. Bioavailability of albumin-bound testosterone. *J Clin Endocrinol Metab* 1985;61(4):705–10.
4. Smith HS, Elliott JA. Opioid-induced androgen deficiency (OPIAD) narrative review. *Pain Physician* 2012;15(Suppl 3): S145–56.

How to cite this article: Patel K, Patel AB, Suthar PP, Mistry KA. Altered testosterone levels associated with venlafaxine use: a case report. *Int J Med Sci Public Health* 2015;4:1624-1625

Source of Support: Nil, **Conflict of Interest:** None declared.