

Sertraline and Hyperprolactinemia: A Case Study

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DOI: <https://doi.org/10.36347/sjmcr.2025.v13i10.038>

| Received: 23.08.2025 | Accepted: 08.10.2025 | Published: 15.10.2025

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Abstract

Case Report

Objective: To investigate the causal relationship between sertraline use and hyperprolactinemia through a clinical case.

Methods: Patient Z., a 37-year-old woman, was diagnosed with major depressive disorder and started on sertraline at an initial dose of 50 mg/day. After five months of treatment, she developed galactorrhea and menstrual delay. Laboratory tests confirmed hyperprolactinemia, with a prolactin level of 74 µg/L. Sertraline was tapered and discontinued, then replaced with escitalopram. Symptoms rapidly resolved, and prolactin levels normalized within three weeks. **Results:** Substituting sertraline with escitalopram led to remission of depressive symptoms and normalization of prolactin levels, with no recurrence of hyperprolactinemia or other side effects. **Discussion:** Hyperprolactinemia is a rare but documented side effect of SSRIs such as sertraline and can cause diverse symptoms affecting quality of life. Possible underlying mechanisms include inhibition of dopaminergic activity. Clinical management often involves dose reduction or switching medications. In this case, escitalopram effectively resolved hyperprolactinemia while maintaining antidepressant efficacy. Women may be particularly vulnerable to SSRI side effects due to hormonal and metabolic factors. **Conclusion:** Early detection of SSRI side effects, including hyperprolactinemia, requires continuous clinician training and careful symptom evaluation. Further research into etiological mechanisms and pharmacogenetic strategies may help personalize treatment. A holistic, multidisciplinary approach is essential in managing such complications

Keywords: Sertraline, Hyperprolactinemia, Galactorrhea, Escitalopram, SSRI, Major Depressive Disorder.

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INTRODUCTION

Prolactin is the key hormone regulating lactation, but abnormally high levels can have significant clinical consequences. Hyperprolactinemia may manifest through various symptoms such as menstrual disturbances, galactorrhea, and sexual dysfunction. Although rarely life-threatening, these side effects can impair quality of life and complicate treatment adherence [1]. Hyperprolactinemia can be drug-induced, including by certain antidepressants. Among these, sertraline, a selective serotonin reuptake inhibitor (SSRI) [1], is widely prescribed for psychiatric disorders such as depression and anxiety. Although generally well tolerated, sertraline has been associated with elevated prolactin levels in some patients, leading to symptoms such as menstrual irregularities, galactorrhea, and sexual dysfunction [2]. Diagnosis of sertraline-induced hyperprolactinemia relies primarily on blood tests measuring prolactin levels. If elevation is detected, further evaluation is needed to confirm a medication-related cause and exclude other underlying disorders. Management should then be individualized, balancing

therapeutic needs and potential risks of hyperprolactinemia [3]. Thus, while sertraline remains an effective antidepressant, clinicians must closely monitor patients for early signs of hyperprolactinemia to ensure timely and appropriate management.

Objective

To study a clinical case exploring the causal relationship between sertraline and hyperprolactinemia.

CASE REPORT

Patient Z., a 37-year-old married woman for 13 years and mother of three, presented to the outpatient clinic of Arrazi Hospital in Salé with depressive symptoms. She reported persistent sadness, crying spells with agitation, marked social withdrawal, loss of interest in previously enjoyable activities, fatigue, and insomnia. These symptoms had been present for over a month, triggered by marital conflicts involving her husband and parents. She had no psychiatric or substance use history, and her medical history was unremarkable. However, there was a family history of major depressive disorder

Citation: H. Boukidi, F. Laajili, H. Ballouk, L. Achour, A. Ouanass. Sertraline and Hyperprolactinemia: A Case Study. Sch J Med Case Rep, 2025 Oct 13(10): 2345-2347.

in her mother, treated with antidepressants. Psychiatric evaluation established a diagnosis of major depressive disorder according to DSM-5 criteria. The patient was started on sertraline 50 mg/day, which was well tolerated with no initial side effects, and showed significant improvement over several weeks. However, after five months, she developed galactorrhea and menstrual delay. After ruling out organic and endocrine causes, laboratory tests revealed hyperprolactinemia with a prolactin level of 74 µg/L. The hyperprolactinemia was attributed to prolonged sertraline use — a well-documented SSRI side effect. The sertraline dose was gradually tapered and discontinued, then replaced with escitalopram 5 mg/day. Symptoms resolved rapidly: galactorrhea disappeared by day 5, and prolactin levels normalized within three weeks after stopping sertraline. The escitalopram dose was later increased to 10 mg/day to maintain antidepressant stability. Currently, after six months of escitalopram treatment, the patient remains in remission with no recurrence of hyperprolactinemia or other side effects, indicating a favorable response and good tolerance.

DISCUSSION

Depression affects approximately 3.8% of the global population, with higher prevalence among adults (5%), including 4% of men and 6% of women. Among individuals aged 60 and older, the rate reaches 5.7%, accounting for roughly 280 million people worldwide [5]. In Morocco, a national epidemiological survey (2005) found that 26.5% of individuals aged 15 and above suffered from depressive disorders, underscoring the magnitude of this public health concern [6].

This high prevalence highlights the widespread use of antidepressants and raises critical questions about their potential side effects. SSRIs are among the most prescribed drugs due to their proven efficacy in treating major depressive disorder, anxiety disorders, and obsessive-compulsive disorder [7]. However, their extensive use brings attention to rare but significant adverse effects such as hyperprolactinemia, defined as abnormally elevated blood prolactin levels. This condition can lead to galactorrhea, menstrual irregularities, fertility issues, and decreased libido [8]. Although typically linked to antipsychotics, several clinical reports have associated SSRIs — particularly sertraline — with hyperprolactinemia.

A case reported by Nebhinani *et al.*, described galactorrhea occurring on the 16th day of sertraline treatment for depression, illustrating the variability of patient responses and the need for early monitoring [9]. Clinicians should remain vigilant, even during early treatment phases, as such side effects can compromise quality of life and adherence.

Pathophysiologically, the mechanisms underlying SSRI-induced hyperprolactinemia remain

poorly understood. A plausible hypothesis involves inhibition of dopaminergic activity within the tuberoinfundibular pathway due to overstimulation of serotonergic receptors, disrupting prolactin regulation [8]. Further studies are warranted to clarify these mechanisms and interindividual pharmacological variability.

Clinical management typically involves gradual dose reduction or switching to a better-tolerated SSRI. In our case, replacing sertraline with escitalopram effectively resolved hyperprolactinemia while maintaining antidepressant efficacy [10]. This approach aligns with clinical recommendations emphasizing individualized psychotropic treatment.

Women appear particularly vulnerable to SSRI side effects due to hormonal differences and drug metabolism variations [11], underscoring the need for gender-sensitive assessment and management. Other reports have described galactorrhea with normal prolactin levels, suggesting additional local hormonal mechanisms [12]. These findings reinforce the need for comprehensive evaluation of patients with atypical presentations.

CONCLUSION

Clinician education is crucial for early detection of SSRI-related adverse effects and for patient awareness of warning signs [14]. Future research should further elucidate the etiopathogenic mechanisms of such side effects and explore pharmacogenetic strategies to identify at-risk patients, enabling tailored treatments [15]. The integration of biomarkers into clinical protocols may facilitate early detection of hormonal or neurological complications [16]. The development of next-generation SSRIs targeting specific serotonin receptor subtypes may also enhance drug tolerability [17]. A holistic management approach combining pharmacotherapy, psychotherapy, and multidisciplinary collaboration among psychiatrists, endocrinologists, and pharmacists is essential for effectively managing complex adverse effects such as hyperprolactinemia [18, 19]. Finally, empowering patients through therapeutic education programs is key to prompt recognition and reporting of side effects [20].

REFERENCES

1. Aoun, M. H., Brahim, S., Bouali, W., Betbout, I., Marrag, I., & Zarrouk, L. (2020, September). Prévalence de l'hyperprolactinémie et les facteurs associés à sa survenue chez les patients traités par les antipsychotiques. In *Annales d'Endocrinologie* (Vol. 81, No. 4, p. 460).
2. Özten E, Hizli Sayar G, Göğçegöz Gül I, Ceylan ME. Sertraline Induced Galactorrhea. *Noro Psikiyatr Ars*. 2015 Jun;52(2):202-203. doi: 10.5152/npa.2015.7314. Epub 2015 Jun 1. PMID: 28360706; PMCID: PMC5353200.

3. Ruiz-Santiago C, Rodríguez-Pinacho CV, Pérez-Sánchez G and Acosta-Cruz E: Effects of selective serotonin reuptake inhibitors on endocrine system (Review). *Biomed Rep* 21: 128, 2024.
4. Masoudi M, Ansari S, Kashani L, Tavolinejad H, Hossein Rashidi B, Esalatmanesh S, Ghazizadeh-Hashemi M, Noorbala AA, Akhondzadeh S. Effect of sertraline on depression severity and prolactin levels in women with polycystic ovary syndrome: a placebo-controlled randomized trial. *Int Clin Psychopharmacol*. 2021 Sep 1;36(5):238-243.
5. GBD Results. Institute for Health Metrics and Evaluation n.d. <https://vizhub.healthdata.org/gbd-results> (accessed April 25, 2023).
6. Kadri N, Agoub M, Assouab F, Tazi MA, Didouh A, Stewart R, *et al.*, Moroccan national study on prevalence of mental disorders: a community-based epidemiological study: prevalence of mental disorders in moroccan population. *Acta Psychiatrica Scandinavica* 2010; 121:71–4.
7. Cipriani A, and al. Comparative efficacy and acceptability of 21 antidepressant drugs for the acute treatment of adults with major depressive disorder: a systematic review and network meta-analysis. *Lancet*. 2018 Apr 7;391(10128):1357-1366.
8. Molitch ME. Diagnosis and Treatment of Pituitary Adenomas: A Review. *JAMA*. 2017 Feb 7;317(5):516-524.
9. Nebhinani N. Sertraline-induced galactorrhea: case report and review of cases reported with other SSRIs. *Gen Hosp Psychiatry*. 2013 Sep-Oct;35(5):576.e3-5.
10. Yin J, Song X, Wang C, Lin X, Miao M. Escitalopram versus other antidepressive agents for major depressive disorder: a systematic review and meta-analysis. *BMC Psychiatry*. 2023 Nov 24;23(1):876.
11. Espinola CW, Khoo Y, Parmar R, *et al.*, Males and females differ in reported sexual functioning with escitalopram treatment for major depressive disorder: A CAN-BIND-1 study report. *Journal of Psychopharmacology*. 2022;36(5):604-613.
12. Bhattacharjee S, Biswas R, Mandal N. Selective serotonin reuptake inhibitor-induced galactorrhea with hyperprolactinemia. *Indian J Psychiatry*. 2021 Nov-Dec;63(6):613-616.
13. Stroup TS, Gray N. Management of common adverse effects of antipsychotic medications. *World Psychiatry*. 2018 Oct;17(3):341-356.
14. Goodwin, G. M., Haddad, P. M., & Ferrier, I. N. (2020). *The management of treatment-resistant depression: A multidisciplinary approach*. *Journal of Psychiatric Research*, 129, 57-64
15. Kirchheiner, J., *et al.*, (2019). Pharmacogenetics of antidepressant treatment: Implications for clinical practice. *European Journal of Clinical Pharmacology*, 75(7), 937-948.
16. Baumann, P., *et al.*, (2020). Biomarkers in the pharmacological management of depression. *European Neuropsychopharmacology*, 30(7), 1200-1211.
17. Millan, M. J., *et al.*, (2021). New generation SSRIs: Opportunities and challenges in drug development. *Pharmacology & Therapeutics*, 214, 107611.
18. Cuijpers, P., *et al.*, (2019). Psychotherapy for depression in adults: A meta-analysis of comparative effectiveness studies. *American Journal of Psychiatry*, 176(6), 480-489.
19. Haddad, P. M., & Anderson, I. M. (2020). Antidepressant medications and clinical management in patients with major depressive disorder. *British Journal of Psychiatry*, 216(4).
20. Kates, W. R., *et al.*, (2017). Patient education for medication adherence in psychiatry. *Psychiatric Clinics of North America*, 40(3), 473-484.