

SNRI-Induced SIADH in Patient Utilizing Duloxetine for Chronic Musculoskeletal Pain

Austin Thompson, MD¹; Jimmy Le, BA²; Jayesh Vallabh¹
(1) Physical Medicine and Rehabilitation, The Ohio State University Columbus, OH, United States of America;
2The Ohio State University, Columbus, OH, United States of America

INTRODUCTION

Antidepressant induced hyponatremia is a rare side effect that has been noted in the literature.¹ According to Picker et al, SNRIs, such as venlafaxine, have a similar incidence of hyponatremia to SSRIs. Furthermore, a large retrospective cohort study notes that Duloxetine is associated with hyponatremia at a greater rate than the other studied antidepressants.³ When combined with certain patient risk factors, use of SNRIs should be monitored by clinicians as a potential cause of hyponatremia.

CASE DESCRIPTION

A 51-year-old male with a past medical history of chronic low back pain presented with repeat low sodium levels on outpatient lab work after dose increase of duloxetine. Of note, his initial treatment with duloxetine was delayed due to spontaneous low sodium levels which resolved without treatment and was attributed to normal dietary fluid shifts. Sodium levels remained stable with initiation of duloxetine 30mg daily. However, after duloxetine dose was increased to 60mg daily, the patient developed hyponatremia. SNRI-induced SIADH was suspected. After tapering off duloxetine over 2 weeks, his levels returned to normal and was then treated with non-SNRI pain medications.



24th Annual
Pain Medicine Meeting
November 13-15, 2025 | Austin, TX



Patient specific risk factors such as premorbid hyponatremia as well as dose alterations should be taken into consideration when prescribing SNRI's and determining the electrolyte monitoring schedule.

DISCUSSION/CONCLUSION

Similar to SSRIs and TCAs, SNRIs, such as duloxetine, have also been shown to cause hyponatremia .³ Given the efficacious nature of duloxetine in treating chronic musculoskeletal and neuropathic pain, it is often prescribed as a first-line medication, especially in those with contraindications to NSAIDs and gabapentinoids. Therefore, it is beneficial to assess for patient-specific factors that may increase the likelihood of developing low sodium levels, such as previous history of hyponatremia in this patient. Additionally, this patient did not develop hyponatremia until the daily dose was increased from 30mg to 60 mg. Certain dose increases may predispose patients to develop SIADH, especially important for patients who may not follow up for regular lab checks. This case can help guide future treatment planning as well as support closer monitoring of sodium levels in specific patients with increasing dosing.

REFERENCES

1. De Picker , Livia, et al. “Antidepressants and the Risk of Hyponatremia: A Class-byClass Review of Literature.” Psychosomatics, U.S. National Library of Medicine, 21 Apr. 2014, pubmed.ncbi.nlm.nih.gov/25262043/.
2. Ma, Xuezhi, et al. “Efficacy and Safety of Duloxetine in Chronic Musculoskeletal Pain: A Systematic Review and Meta-Analysis - BMC Musculoskeletal Disorders.” BioMed Central, BioMed Central, 18 May 2023, bmcmusculoskeletdisord.biomedcentral.com/articles/10.1186/s12891-023-06488-6#Sec8.
3. Mo H, Channa Y, Ferrara TM, et al. Hyponatremia associated with the use of common antidepressants in the all of US research program. Clin Pharmacol Ther. 2025;117:534–43.
4. Zhao, Zinan, et al. “SSRI/SNRI -Induced Hyponatremia: A Case Series of 26 Patients in a Single Institution from 2018 to 2020 - Psychiatric Quarterly.” SpringerLink, Sp