



Incidence of Withdrawal in Critically Ill Patients Being Held Home SSRI or SNRI Medications Upon Admission to the ICU

William Ng, PharmD Candidate 2021; Laura Baumgartner, PharmD, BCPS, BCCCP; Rima Bouajram, PharmD, BCCCP; Claire Bainbridge, PharmD,

University of California San Francisco Medical Center, San Francisco, CA | Touro University California College of Pharmacy, Vallejo, CA



University of California San Francisco

INTRODUCTION

- Home medication often cannot be restarted in the Intensive Care Unit (ICU) due to a lack of information regarding the patient's home regimen, no enteral access available, or critical illness preventing a restart.
- There is limited data assessing the effects of holding home Selective Serotonin Reuptake Inhibitors (SSRI) or Selective-Norepinephrine Reuptake Inhibitors (SNRI) during an ICU admission.
- It is unknown if holding these medications can cause withdrawal or impact patient's sleep.
- A tool is needed to assess withdrawal to understand the effects of holding SSRI and SNRI, but there is a lack of data researching a standardized approach to assess withdrawal.

STUDY OBJECTIVE

- To determine if patients who had their home SSRI or SNRI medication held at hospital admission experienced withdrawal or changes in sleep patterns.

METHODS

Study design: Prospective observational cohort study

Patient population:

- Adult ICU patients (≥18 years old) at the University of California San Francisco Medical Center from September 2019 to March 2020

Inclusion criteria:

- Late Restart Group: Home SSRI or SNRI held upon admission to the hospital for greater than 4x the half-life of medication
- Early Restart Group: Home SSRI or SNRI restarted within 4x the half-life of the medication

Exclusion criteria:

- Pregnant women, active alcohol withdrawal, active illicit substance use, primary neurologic disorders

Primary outcome:

- The incidence of withdrawal in patients who had their home SSRI or SNRI held upon hospital admission

Positive withdrawal if ≥ 3 of the follow:

- Anxiety (RASS score > +1), AMS (+ CAM ICU Score), pain/discomfort (+CPOP score), hemodynamics (either SBP > 140 or HR > 100), temperature > 101, any sleep disturbance

RESULTS

Table 1. Demographics

Patient Characteristics	Early Restart of SSRI/SNRI (n=59)	Late Restart of SSRI/SNRI (n=56)	P-value
Age (years)	62.7 ± 15.2	59.8 ± 11.9	0.28
Sex (male)	20 (34)	20 (36)	0.7
Average ICU Length of Stay (days)	5.7 ± 7.7	12.8 ± 15	< 0.01
Average Hospital Length of Stay (Days)	16.3 ± 21.5	24.9 ± 37	0.13

Table 2. Withdrawal Data

Withdrawal Data	Early Restart of SSRI/SNRI (n=59)	Late Restart of SSRI/SNRI (n=56)	P-value
Positive for Withdrawal (Sleep Disturbance)	30 (51)	36 (68)	0.04

Table 3. Sleep Data Part 1

Sleep Data	Early Restart of SSRI/SNRI (n=59)	Late Restart of SSRI/SNRI (n=56)
On scale of 0 to 10, 0 being extremely light sleep and 10 being extremely deep sleep, how deep was your sleep last night?	5.99±3.06	6.05 ± 3.02
On a scale of 0 to 10, 0 being you never fell asleep, 10 being you fell asleep immediately, how quickly did you fall asleep?	6.43 ± 3.19	6.46 ± 2.91
On a scale of 0 to 10; 0 being you were awake all night long, 10 being you were awake very little; how frequently were you awakened last night?	6.18 ± 3.09	5.85 ± 3.22
On a scale of 0 to 10; if you were awakened last night; 0 being you couldn't fall back asleep after you were awakened and 10 being you fell back asleep immediately; how quickly did you return to sleep?	6.17 ± 3.44	6.16 ± 3.30

*None of the sleep data was statistically significant

RESULTS

Table 4. Sleep Data Part 2

Sleep Data	Early Restart of SSRI/SNRI (n=59)	Late Restart of SSRI/SNRI (n=56)
On a scale of 0 to 10; 0 being a bad night's sleep and 10 being a good night's sleep, how would you rate your sleep quality?	6.02 ± 3.22	5.91 ± 3.34
On a scale of 0 to 10, 0 being very noisy and 10 being very quiet, what was the noise level last night?	6.85 ± 2.95	7.79 ± 2.70
RCSQ Total Score	33.15 ± 14.35	33.29 ± 13.19
RCSQ Mean Score	6.63 ± 2.87	6.66 ± 2.64
Did you have difficulty sleeping last night?	47.9 %	46 %
Would you describe the quality of your sleep last night as good?	68.5%	71.8%

CONCLUSION

- Patients who had their home SSRI and SNRIs held upon hospital admission demonstrated a significant difference in withdrawal symptoms as compared to patients who had their home medication restarted, including a longer ICU length of stay.
- ICU length of stay was significantly reduced in the early restart group as compared to the late restart group (5.7 vs 12.8 days, p = <0.01).
- The incidence of withdrawal was significantly greater in patients in the late restart group, with 68% of those patients experiencing withdrawal as compared to 51% in the early restart group (p=0.04).
- The average RCSQ score in the late restart group was 6.66 as compared to 6.63 in the early restart group (p=1)

LIMITATIONS & FUTURE WORK

- No validated measure of withdrawal
- Unable to confirm medication compliance with patients
- Larger prospective studies focusing specifically on sleep are needed to determine factors that influence sleep quality.