



## Baclofen Withdrawal Presenting as Acute Altered Mental Status in an Elderly Woman: A Structured Clinical Case Report

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### Keywords

Baclofen withdrawal syndrome, altered mental status, confusion, psychosis, elderly

### Abbreviation

EEG: Electroencephalogram; AMS: Altered mental status; CNS: Central nervous system

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### Abstract

**Background:** Baclofen withdrawal is a potentially life-threatening syndrome that can present with acute neuropsychiatric and autonomic disturbances, particularly in older adults. Prompt recognition is essential, as symptoms may mimic other causes of encephalopathy or delirium. This case report describes a 78-year-old woman who developed acute altered mental status due to baclofen withdrawal, highlighting diagnostic challenges and management strategies.

**Case Summary:** A 78-year-old woman with a history of chronic baclofen use for spasticity presented with acute confusion, agitation, and autonomic instability after abrupt discontinuation of baclofen. Initial evaluation revealed no infectious, metabolic, or tumoral etiology. The diagnosis of baclofen withdrawal was established based on clinical history and exclusion of alternative causes. Reinitiating baclofen and supportive care led to the rapid resolution of symptoms.

**Conclusion:** Baclofen withdrawal should be considered in the differential diagnosis of acute encephalopathy, especially in elderly patients with a history of baclofen use. Early recognition and prompt reintroduction of baclofen are critical for favorable outcomes.

### Introduction

Altered mental status (AMS) is a common cause of hospital admission among elderly patients and is frequently multifactorial [1,2]. Medication-related adverse effects and withdrawal syndromes are important but often underrecognized contributors, particularly in patients with chronic pain and polypharmacy [3,4]. Baclofen, a gamma-aminobutyric acid (GABA)-B receptor agonist widely prescribed for spasticity associated with neurological disorders such as multiple sclerosis, spinal cord injury, and cerebral palsy. Its use includes off-label indications, such as alcohol use disorder and chronic pain syndromes, often at higher doses than originally approved [4–6]. While generally well tolerated, abrupt cessation—whether oral or intrathecal—can precipitate a withdrawal syndrome characterized by neuropsychiatric, autonomic, and neuromuscular symptoms can cause significant neuropsychiatric manifestations when abruptly discontinued [6–9].

This clinical emergency could manifest by delirium, hallucinations, agitation,

and may progress to severe complications such as seizures, autonomic instability, rhabdomyolysis, and even death if not promptly recognized and treated [9–11]. The syndrome is often underdiagnosed, particularly in older adults, due to its non-specific presentation and symptom overlap with other causes of acute encephalopathy, such as infection, metabolic derangements, or medication toxicity. Early recognition of baclofen withdrawal is critical, as prompt reinitiation of therapy can lead to rapid clinical improvement and prevent unnecessary investigations [12]. We present a case of baclofen withdrawal manifesting as altered mental status in an elderly woman, initially mimicking infectious and neurologic etiologies.

### Case Presentation

A 78-year-old woman was brought to the emergency department of BSA Hospital in Amarillo with a two-day history of waxing and waning altered mental status. Her past medical history was significant for fibromyalgia, chronic backpain, hypertension, obstructive sleep apnea, pulmonary hypertension, chronic pain syndrome, gastroesophageal reflux disease, and

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prior gastric bypass surgery. Most of the history was obtained from her daughter, who was present at the bedside. At baseline, the patient lived at home and had chronic pain managed with multiple medications. Her home regimen included baclofen, hydrocodone, zolpidem, lisinopril, and pantoprazole. She had previously been prescribed ketamine powder for breakthrough pain. However, this medication had not been refilled for approximately one month, and the family reported that the patient had discarded it. She had not taken zolpidem for the two nights preceding admission due to excessive somnolence. The patient denied alcohol use or illicit substances and was a former smoker who quit over 20 years earlier. She had used cannabidiol gummies in the past but not recently.

According to the family, the patient developed progressive confusion characterized by repetitive speech, bizarre conversations, and sending nonsensical text messages. In the days prior to presentation, the patient had developed new right leg pain described as a burning sensation going from the anterior hip to the knee, associated with difficulty lifting the leg. She received two intramuscular ketorolac injections with partial relief, but its oral relay (oral ketorolac) was discontinued due to dizziness and nausea. Additional symptoms included urinary leakage and constipation, with an unclear last bowel movement. On the morning of admission, she was found naked in a wheelchair in a dark room, appearing disoriented and experiencing visual hallucinations. Emergency medical services were contacted due to concern for acute mental status changes and abnormal-appearing urine. Upon arrival, the patient was initially following commands but subsequently became unresponsive.

On initial evaluation, she required 1.5 liters of supplemental oxygen via nasal cannula. Physical examination revealed fluctuating attention and alertness without focal neurologic deficits. The other systems (cardiovascular, digestive, etc..) were normal. Laboratory tests, including complete blood count, comprehensive metabolic panel, inflammatory markers, ethanol level, and urinalysis, were unremarkable. Urine drug screening was positive for opiates, consistent with prescribed hydrocodone use, and negative for other substances.

Computed tomography of the head without contrast showed age-related changes without acute pathology. Magnetic resonance imaging of the brain with and without contrast demonstrated mild chronic microvascular ischemic disease and cerebral atrophy, without evidence of acute intracranial abnormality. Chest radiography revealed pulmonary edema, and the patient was treated with intravenous furosemide with improvement in oxygenation.

Neurology consultation concluded that the presentation was most consistent with delirium, likely related to age and medication effects, with consideration of an underlying cognitive disorder. Infectious etiologies, including meningitis and encephalitis, were deemed unlikely due to the absence of fever, leukocytosis, inflammatory markers, or meningeal signs. Normal pressure hydrocephalus was considered but not fully evaluated during hospitalization.

Despite supportive care, the patient's mental status fluctuated, and by hospital day five, she developed worsening agitation and delusions, requiring a bedside sitter for safety. Electrocardiography demonstrated transient QT prolongation, which normalized on repeat testing. Low-dose quetiapine was initiated for agitation. Given the absence of fever and normal inflammatory markers, we excluded CNS infections or inflammatory diseases. Stroke and dementia were ruled

out by the occurrence mode and the brain imaging. These manifestations were more suggestive of drugs interactions or withdrawal syndrome.

Upon further review of the patient's medication history, concern arose for baclofen withdrawal, as baclofen had been unintentionally withheld prior to admission. Baclofen was restarted at 5 mg three times daily. Within 24–48 hours of reinitiation, the patient demonstrated marked improvement in mentation, with complete resolution of hallucinations and agitation. She became alert and oriented to person, place, time, and situation.

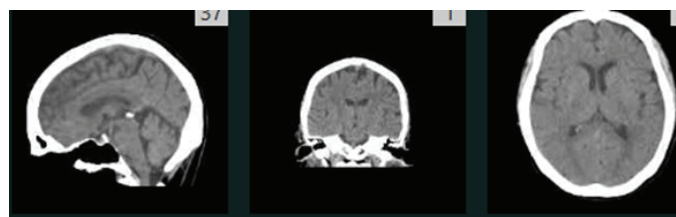
The patient was discharged to a rehabilitation facility in stable condition without the need for a sitter. Zolpidem was discontinued due to concern for contribution to delirium, and outpatient neurology follow-up was recommended.

### Laboratory work: Case report Baclofen withdrawal

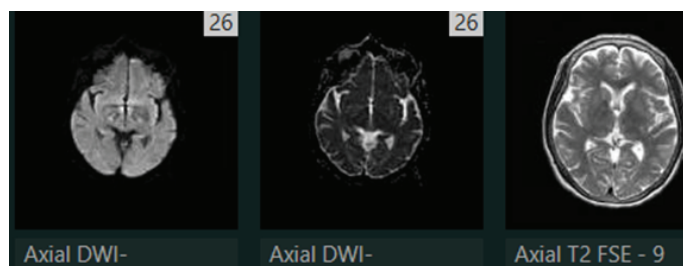
**Table1:** Biological characteristics of the reported case and evolution.

| Biological Parameters | At entrance          | 96 h later | At discharge | Normal Range     |
|-----------------------|----------------------|------------|--------------|------------------|
| WBC                   | 7.8                  | 7          | 5.5          | 4.8-10.8 k/ul    |
| Hemoglobin (Hb)       | 14.3                 | 15         | 13           | 12.0-16.0 g/dl   |
| Platelet (PLT)        | 229                  | 253        | 193          | 130-400 k/ul     |
| Na <sup>+</sup>       | 141                  | 142        | 141          | 135-145 mmol/l   |
| K <sup>+</sup>        | 4.2                  | 4.1        | 4.1          | 3.6-5.0 mmol/l   |
| Blood Urea            | 27                   | 18         | 28           | 7- 25 mg/dl      |
| Serum Creatinine      | 1.08                 | 0.88       | 1.05         | 0.60-1.30 mg/dl  |
| Albumin               | 4.3                  | 4          | 3.4          | 3.5- 5.7 g/dl    |
| Total Bilirubin       | 0.5                  | 0.6        | 0.4          | 0.30- 1.00 mg/dl |
| Total Protein         | 7.3                  | 7.2        | 5.9          | 6.4-8.9 g/dl     |
| Glucose               | 109                  | 104        | 100          | 70-105 mg/dl     |
| ALT                   | 5                    | 15         | 22           | 7-52 U/l         |
| AST                   | 23                   | 27         | 31           | 13-39 U/l        |
| Magnesium             | 2.1                  | 2.1        | 2.3          | 1.7-2.3 mg/dl    |
| Phosphate             | 2.9                  | 3.6        | 3.3          | 2.5-4.5 mg/dl    |
| Vitamin D             |                      | 23         |              | 30-50 ng/ml      |
| Urine Analysis        | Negative             | Negative   | Negative     |                  |
| Urine drug screen     | Positive for opiates |            |              |                  |

### Imaging: Case report Baclofen withdrawal



**Figure 1.** Brain CT without contrast 1/20/2026 Images of the reported case: Minimal leucoaraiosis, otherwise negative Head CT



**Figure 2: Brain MRI with and without contrast 1/22/2026** Image of the reported case: No acute intracranial abnormality, Mild chronic microvascular ischemic disease and cerebral atrophy. No abnormal focal parenchymal enhancement.

## Discussion

We present the case of a 78-year-old woman living at home with her family and treated for several diseases with Albuterol, Baclofen, Ketorolac, Lisinopril, Pantoprazole, Symbicort, Zolpidem, Methylnaltrexone, Acetaminophen, Hydrocodone and multivitamin that presented an acute altered mental status of acute and rapid evolution. There was no clinical and biological sign of infection nor fecaloma, nor new medication added. Baclofen withdrawal was identified and reintroduced with a clear improvement in mental status.

Baclofen withdrawal is a potentially serious but often overlooked cause of acute delirium, particularly in elderly patients with polypharmacy [3]. Abrupt cessation may result in neuropsychiatric symptoms such as confusion, hallucinations, agitation, seizures, and autonomic instability [9,13]. Older adults are especially vulnerable due to age-related changes in pharmacokinetics, renal function, and central nervous system sensitivity [10]. It presents a diagnostic challenge due to its nonspecific symptoms and overlap with other causes of acute encephalopathy, particularly in elderly patients. A recent systematic review of baclofen withdrawal in older adults found that psychiatric symptoms (hallucinations, delusions, paranoia, delirium) were present in over 90% of cases, with agitation, insomnia, and anxiety also common. Neurological signs such as tremor, rigidity, hypertonia, and motor dysfunction may be less prominent in elderly patients, while autonomic instability (hyperthermia, tachycardia, diaphoresis) is frequently observed. Respiratory distress and hypoxia are rare but may occur in severe cases [9].

Delirium in older adults is multifactorial, with infection, metabolic disturbances, medication effects, and structural brain lesions among the most common etiologies. Laboratory and imaging studies are primarily used to exclude alternative diagnoses. EEG, in this case, may reveal generalized slowing or triphasic waves, consistent with metabolic or toxic encephalopathy, but is not specific for baclofen withdrawal. Serial EEG monitoring can be helpful in severe cases to rule out nonconvulsive status epilepticus and to monitor the evolution of encephalopathy during withdrawal and recovery [1].

Definitive treatment of baclofen withdrawal is prompt reinitiation of baclofen at the previous dose, either orally or intrathecally, depending on the route of prior administration. In cases where oral administration is not feasible (e.g., severe agitation, vomiting, or altered consciousness), alternative routes such as nasogastric tube or intravenous administration (off-label, with caution) may be considered. For patients with intrathecal pumps, urgent neurosurgical consultation is warranted to restore intrathecal delivery [8,13]. In this case,

the absence of infection, metabolic derangement, or structural pathology, combined with a clear history of missed baclofen doses, was critical in establishing the diagnosis. The delayed recognition of baclofen withdrawal highlights the importance of thorough medication reconciliation and awareness of withdrawal syndromes associated with centrally acting agents. The rapid and sustained improvement following reinitiation of baclofen strongly supports the diagnosis.

Family physicians and hospitalists frequently manage elderly patients with complex medication regimens, making early identification of reversible medication-related causes of delirium critical to prevent prolonged hospitalization and unnecessary diagnostic testing.

## Conclusions

Baclofen withdrawal should be considered in elderly patients presenting with acute delirium, particularly in the setting of chronic pain management and polypharmacy. Prompt recognition and reinitiation of therapy can result in rapid clinical improvement and prevent avoidable morbidity.

## Patient's Perspective

*"I don't remember much from when I was sick, but my family told me I was very confused and seeing things that weren't there. I started feeling like myself again after my regular medicine was restarted. I'm grateful the doctors figured out what was wrong."*

## Learning Points

- Baclofen withdrawal can cause acute delirium, hallucinations, and agitation in elderly patients
- Polypharmacy increases the risk of medication-related delirium and withdrawal syndromes
- Careful medication reconciliation is essential in evaluating altered mental status
- Early recognition of baclofen withdrawal can prevent unnecessary investigations and prolonged hospitalization

## Author's Contribution

Conception and design, acquisition of data, analysis, interpretation of data, and follow-up of the patient: CNO, SRSN, JRMT, DNN, SNCS. Drafting the article or revising it critically for important intellectual content: CNO, SRSN, FKL, MN. Final approval: All authors.

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## Competing interest

The authors declare no competing interest.

## Ethical approval and consent to participate

Administrative authorization and ethical approval were obtained from the direction of the BSA hospital at Amarillo. Authorization number:

## Consent for publication

Written informed consent was obtained from the patient for publication of this case report and any accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal.

## Availability of supporting data and materials

The data used to support the findings of this study are restricted by the direction of the BSA in order to protect patient privacy. Data are available from Aimée Tiodoung Timnou Djokam upon reasonable request.

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