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Zonisamide-Induced Hallucinations: An Anticonvulsant's Psychosis

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Introduction:

Zonisamide is a new-generation anticonvulsant that works by altering the sodium and T-type calcium channels in the brain. It is currently approved for partial seizures, and trials are ongoing to evaluate the effectiveness against mania and chronic pain in adults. Psychosis is a rare side effect with an incidence of 2%

Case presentation:

Our patient, a 52-year-old female with a past medical history of osteoarthritis and chronic pain only relieved by zonisamide, is brought to the emergency department (ED) after a two-day history of altered mental status, agitation and visual hallucinations. One month prior, she had undergone total knee arthroplasty complicated with right knee cellulitis managed by IV (intravenous) long-term antibiotics of vancomycin and ertapenem. Physical examination was remarkable for disorientation to person, place, and time with intact remainder of the neurological exam. Initial laboratory work was unremarkable and a computerized tomography (CT) scan of the brain showed no acute intracranial abnormalities. The patient was treated as ertapenem-induced with altered mental status and the antibiotic was switched to meropenem upon discharge. Two weeks later, the patient presented to the ED with similar non-resolving complaints. As the patient's symptoms didn't improve after ertapenem discontinuation, the decision was made to stop zonisamide and carefully monitor for possible withdrawal symptoms. Progressively, our patient had a timely resolution of symptoms with a full return to baseline within a week.

Conclusion:

This case demonstrates the potential severity of zonisamide-induced psychosis. Additional studies are warranted to analyze the mechanism explaining its neurological side effect profile.

