

Title:

Donepezil induced seizure in a 44 year old male with recent TBI: A Case Report

PRESENTER:

Sean Silverman, DO PGY3

Brief Case Description: Patient suffered a traumatic bilateral subarachnoid hemorrhage of the temporal lobes following a motorcycle accident, which resulted in post traumatic amnesia lasting 4 weeks. He was being followed by psychiatry as an outpatient for refractory depression following his accident. He had been tolerating bupropion, fluoxetine, buspirone, as well as escitalopram which was incorrectly continued. Patient was placed on donepezil by the psychiatrist for memory deficits. A seizure occurred shortly thereafter. Patient's donepezil was stopped and there have been no subsequent seizures.

In patients with bi-temporal contusions following a traumatic brain injury, donepezil likely lowers the seizure threshold, placing this patient population at greater risk for post traumatic seizures.

Discussion:

Donepezil is a reversible cholinomimetic with high specificity for brain tissue that is used off-label for memory impairment after TBI. Adverse drug reaction analyses have indicated that cholinomimetics can lower the seizure threshold but there is currently no evidence of donepezil resulting in seizures for a patient recovering from TBI.

Conclusion:

Patients with TBI have lower seizure thresholds. 60% of post traumatic seizure occur in bi-temporal contusion. Attention should be given prior to starting donepezil in a patient with TBI, particularly in those with bilateral injuries and/or those already on seizure lowering medications.

Sean Silverman, DO, PGY3
Husain Bawany MS IV,
Heather Ma, MD, MS



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