

UNUSUAL SIDE EFFECTS OF LEVETIRACETAM

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Published :BMJ Publishing Group 2021

INTRODUCTION

- ❖ Gait disturbances and cognitive decline are causes of functional impairment and morbidity in older adults. Most gait disorders in this population are multifactorial and have both neurological and non-neurological components.
- ❖ Drugs considered a part of neurological causes, as anticholinergics, antiparkinsonian, antipsychotics, benzodiazepines and old generation of the anticonvulsants which provoke gait disturbance in the elderly through many mechanisms, including decreased cognition/confusion, visual blurring, sleepiness and orthostatic hypotension
- ❖ Levetiracetam (LEV) is considered a new generation of antiepileptic drugs, is one of the most prescribed new antiepileptic medications treatment for epilepsy. cognitive decline and gait difficulties are not known as related to its side effects.

CASE PRESENTATION

75 years old man who was admitted to our hospital because of 4 months of gait disturbance, cognition impairment and general deterioration and weakness which appeared very close to the start of levetiracetam (LEV) as a new anti-epileptic drug.

Several months before, he had an episode of paroxysmal, atrial fibrillation following a transcatheter aortic valve implantation procedure due to severe aortic stenosis; apixaban 5 mg two times per day was initiated as a new oral anticoagulant.

The patient was known to have grand mal epilepsy since he was 20 years old. He was treated with carbamazepine 800 mg, lamotrigine 200 mg and valproic acid 1000 mg per day and is epileptic free in the last 3 years. Due to the known interaction between apixaban and carbamazepine, carbamazepine was replaced with LEV 1000 mg per day and he continued his other drugs without changes.

Neurological examination revealed mild weakness at his four limbs with areflexia, inability walking with out help, wide-based gait with small-sized steps helped with walker. MMT was 19/30 with mainly impairment of short memory and concentration .

After excluding other reasons explaining patient's status, thinking that there may be a correlation between the new drug LEV added in the last months, and his clinical condition, we stopped LEV-administration.

Several days after stopping the drug, marked improvement in his alertness ,cognitive status and balance

DISCUSSION

- ❖ LEV yielded mild to moderate, non-dose- dependent side effects most commonly related to somnolence, asthenia, dizziness, depression, irritability and personality disorder. LEV has been reported to cause varying degree of psychiatric adverse effects including behavioral disturbance such as agitation, hostility, psychosis, mood symptoms and suicidality.
- ❖ Our case presented above, with unexplained cognitive impairment, and gait problems that disappeared upon discontinuation of the LEV, these symptoms described are most likely to be side effects of LEV.
- ❖ There is no mention in the literature of similar side effects to LEV treatment.