CASE REPORT

Delayed onset of rotatory self-motion perception, dysdiadochokinesia and disturbed eye pursuit caused by low-dose pregabalin

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SUMMARY

A 30-year-old woman with chronic foot pain after an orthopaedic surgery and chronic neck pain presented to the emergency department (ED) with a history of self-rotatory vertigo with unsteadiness. She had started low-dose pregabalin, 25 mg two times a day 9 months before experiencing symptoms with the dose gradually increased to 150 mg two times a day over this period. Clinical examination revealed difficulty performing eye pursuit with left eye and dysdiadochokinesia of the left arm. Owing to a suspicion of multiple sclerosis she underwent cerebral MRI, which was normal. Pregabalin was tapered over 2 months with a complete disappearance of the symptoms. We concluded that symptoms were due to pregabalin treatment.

BACKGROUND

Sudden acute vertigo is a challenging primary symptom when patients are evaluated in the emergency department (ED). The differential diagnosis includes metabolic, cardiac, central or peripheral origin. Vertigo caused by medication is rarely reported in the literature. Pregabalin is a member of a class of medications that is used to treat refractory chronic pain, which inhibit calcium channels centrally, results in decreased neurotransmitters' release. Although pregabalin is known to have multiple side effects, there is a lack of information about its side effects at low dose and its imitating neurological presentation.

CASE PRESENTATION

A 30-year-old woman with a medical history of migraine and ankle surgery was treated by her neurologist for chronic right ankle and neck pain.

She started pregabalin at a dose of 25 mg two times a day 9 months before her admission. The dose was increased 1 month later progressively to 50 mg two times a day. Three months later her neck pain disappeared but her ankle pain did not improve significantly. Treatment was again increased to 125 mg two times a day. Six months later at a dose of 150 mg two times a day, she reported fatigue and tremor. Her neurologist decided to maintain pregabalin at the same dose for 3 months and then taper it over the course of several weeks. When she was admitted in emergency with vertigo she was still at a dose of 150 mg two times a day.

On admission she reported a 4-day history of self-rotatory vertigo. These episodes lasted an

average of 1.5 h and were associated with nausea. This self-rotatory vertigo was associated with weakness in her left arm and difficulty with execution of movement with her left eye. She also reported right-sided otalgia with hypoacusia.

Otological examination and audiological examination were normal. Neuro-otological examination revealed no nystagmus but difficulty with execution of left eye pursuit and a dysdiadochokinesia of the left arm. These symptoms suggested left cerebellar and left eye oculomotricity impairment.

INVESTIGATIONS

MRI of the head.

DIFFERENTIAL DIAGNOSIS

All differential diagnoses evoked below were excluded during medical investigations.

Multiple sclerosis is a disseminated disease that may present with motor, sensory, visual and musculoskeletal dysfunction during episodes of attack. MRI of the brain may show active plaques. This diagnosis was excluded because MRI of the head was normal.

A transient ischaemic attack is a temporary loss of motor and/or sensory function. Symptoms resolve in less than 24 h. This diagnosis was excluded because our patient reported several attacks a day over a period of several days.

Migraine-associated vertigo is an atypical form of migraine that may present with spinning or rocking sensation, intolerance to head and eye displacement associated or not with migraine symptoms. This diagnosis was excluded because the patient presented musculoskeletal dysfunction.

TREATMENT

The dose of pregabalin was reduced by 25 mg every 2 weeks and definitely stopped 2 months after she was seen in ED. The last dose before eliminating treatment was 50 mg two times a day.

OUTCOME AND FOLLOW-UP

The patient underwent an MRI of the head to exclude a possible acute episode of multiple sclerosis. MRI showed no lesion compatible with multiple sclerosis. Since the patient reported worsening vertigo, which appeared at any position and at any moment, she was unable to work for 2 weeks.

The dose of pregabalin was reduced by 25 mg every 2 weeks. She stopped pregabalin completely 2 months after she was seen in ED.

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The patient failed to keep her 4-month follow-up appointment but during a phone follow-up reported she was symptom free. We concluded that symptoms were consistent with pregabalin therapy.

DISCUSSION

Pregabalin is a drug used for the treatment of neuropathic pain especially in cases of diabetic peripheral neuropathy and post-herpetic neuralgia.¹ Other approved indications include epilepsy, anxiety disorder and fibromyalgia. Pregabalin is widely prescribed by primary care providers, neurologists, pain practitioners and mental health providers.

Vertigo has been previously reported to be associated with pregabalin treatment² and with other serious effects.^{3–5} Nevertheless it is worth noting that the low dose of pregabalin and time after initiation of medication at the time of presentation of vertigo have not been reported.

Learning points

- ▶ Pregabalin is a very common treatment for chronic neuropathic pain.
- ▶ Pregabalin treatment can cause adverse central nervous system side effects that may mimic disorders such as multiple sclerosis.
- ▶ This case shows the adverse effects of pregabalin therapy even after long-term treatment at low dose.

The dose our patient was taking at presentation, 150 mg two times a day, is at the lower end of the daily dose (150–600 mg) recommended for treating peripheral neuropathic pain.⁶ In case of pregabalin abuse the dose could be more than 10 times higher.⁷

To the best of our knowledge, this is the first case report of delayed onset of acute vertigo with cerebellar and oculomotor dysfunction at a low dose of pregabalin treatment.

This case illustrates the need for a heightened awareness that even low doses of medication can be associated with unusual and significant side effects.

Competing interests None.

Patient consent Obtained.

Provenance and peer review Not commissioned; externally peer reviewed.

REFERENCES

- 1 Tausson DM, Boyce E, Guyer J, *et al.* Pregabalin: a novel gamma-aminobutyric acid analogue in the treatment of neuropathic pain, partial-onset seizures, and anxiety disorders. *Clin Ther* 2007;29:26–48.
- 2 Zaccara G, Gangemi P, Perucca P, *et al.* The adverse event profile of pregabalin: a systematic review and meta-analysis of randomized controlled trials. *Epilepsia* 2011;52:826–36.
- 3 Knake S, Klein KM, Hattmer K, *et al.* Pregabalin-induced generalized myoclonic status epilepticus in patients with chronic pain. *Epilepsy Behav* 2007;11:471–3.
- 4 Hellwig S, Amtage F. Pregabalin-induced cortical negative myoclonus in a patient with neuropathic pain. *Epilepsy Behav* 2008;13:418–20.
- 5 Shimizu T, Yoshida T, Kitamura K, *et al.* Disturbance of consciousness and involuntary movements caused by pregabalin. *BMJ Case Rep* 2012;2012:pii: bcr2012007559.
- 6 Van Seventer R, Bach FW, Toth CC, *et al.* Pregabalin in the treatment of post-traumatic peripheral neuropathic pain: a randomized double-blind trial. *Eur J Neurol* 2010;17:1082–9.
- 7 Grosshans M, Mutschler J, Hermann D, *et al.* Pregabalin abuse, dependence, and withdrawal: a case report. *Am J Psychiatry* 2010;167:869.

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