

## Pregabalin induced Amnesia – A Case Report

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### ABSTRACT

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This is a case of 74 year old male patient with memory loss. The patient is a known case of type 2 diabetes mellitus, hypertension. He was recently diagnosed to have herpetic neuralgia and treated with Pregabalin 75 mg and Methylcobalamine 750 µg to control his neuropathic pain. After 2 months of treatment, patient's wife observed symptoms of forgetfulness in the patient such as keeping his belongings in one place and searching in other place. Immediately she reported to the doctor about this observation. Causality assessment of the event with WHO and Naranjo' scales suggest "Possible". However, exact mechanism of pregabalin induced amnesia is unclear. Severity of this reaction was at level-3 as per modified Hartwig and Siegel scale. This reaction found predictable, but not preventable in nature.

**Keywords:** Pregabalin, Memory loss, Herpetic neuralgia

### INTRODUCTION

Pregabalin or S-(+)-3-isobutylgaba is chemically (S)-3-aminomethyl-5-methyl hexanoic acid and is a structural and lipophilic analogue of Gama Amino Butyric Acid (GABA) substituted at 3-position to assist its diffusion across the blood-brain barrier. Although pregabalin is a structural analogue to GABA, it is inactive at GABA receptors and does not appear to mimic GABA physiologically. It is a potent ligand for the alpha-2-delta subunit of voltage-gated calcium channels inside the central nervous system.<sup>1,2</sup>

Food and Drugs Administration (FDA) has approved Pregabalin for the management of neuropathic pain associated with diabetic peripheral neuropathy (DPN), post herpetic neuralgia (PHN), adjunctive therapy for adult patients with partial onset of seizures, fibromyalgia, and neuropathic pain associated with spinal cord injury.<sup>3</sup>

Adverse effect profile observed during controlled clinical trials with Pregabalin 75 mg/day is reported to cause dizziness, abnormal thinking, somnolence, tremor, confusion, twitching, dry mouth, speech disorder, cognitive changes, sedation, peripheral edema, increased appetite, weight gain, blurred vision and headache.<sup>4</sup>

### CASE REPORT

A 74 year-old- male ambulatory patient suffering from type 2 diabetes mellitus and hypertension since 17 years and was on atenolol 25mg, simvastatin 10mg, alprazolam 0.25mg from

last four years and well controlled. Five months ago, he was diagnosed to have herpetic neuralgia and was started with 75 mg pregabalin with methyl cobalamine 750 µg. Patient was counseled about his disease and also about his medication. In a recent follow-up, patient's wife has informed that, patient is keeping his belongings such as spectacles, pens, towel in one place and searching the same in another place. In a personal interview with the patient, he has also confirmed about his recent forgetfulness. However, no laboratory investigations were performed.

### DISCUSSION

This is a case of an iatrogenic amnesia. The impact of drugs on memory disorders is particularly pronounced in elderly individuals due to poly pharmacy. It is established that there is a decrease of mnesic abilities with ageing; however iatrogenic influence cannot be ruled out when memory alteration occurs suddenly and/or recently in an elderly person without other symptoms of dementia.<sup>5</sup>

The action of drugs on memory is more or less specific and serious depending on the memory system affected. Thus, analysis of the type of memory alteration can be used to inculpate a particular drug during poly pharmacy. Memory loss is an unusual forgetfulness and is mainly caused due to medicines such as benzodiazepines, anticonvulsants, antiepileptics, anticholinergic agents, isotretinoin, cyclosporin, and selective serotonin reuptake inhibitors.<sup>6</sup>

Manifestations of memory loss include forgetting the location of spectacles, pens, towels which they have kept, phone numbers, and bank account number. The patient did not present these symptoms prior to receiving of pregabalin. Causality assessment of the event with WHO and Naranjo' scales suggest "Possible". However exact mechanism of pregabalin induced amnesia is unclear. Severity was assessed

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by using Modified Hartwig and Siegel scale and found the severity is at level-3. This reaction is predictable, but not preventable in nature.<sup>7</sup>

In controlled clinical trials, pregabalin induced amnesia was reported with the use of pregabalin at a dose ranging from 150 mg to 600 mg/day for the management of neuropathic pain associated with diabetes, post herpetic neuralgia, fibromyalgia, and epilepsy.<sup>8</sup>

In a French pharmacovigilance database of nine year period starting from January 2000 to December 2009, only seven case reports with pregabalin induced amnesia were reported. Among them only two reports were seen in the patients with more than 75 years of age suggesting that age has limited association in developing amnesia.<sup>9</sup> Causes like medications in poly pharmacy may not be ruled out. In a case report of 75 year old patient, pregabalin had shown an association of inducing confusion and symptoms were resolved after de-challenging pregabalin.

In this patient, amnesia manifestations were observed only after taking pregabalin. After dechallenge, patient reported improved mnesic abilities confirming the association of Amnesia with Pregabalin.

#### CONCLUSION

FDA had reported very few cases of pregabalin induced amnesia in controlled clinical trials. However, this is the first case report observed in a patient who developed amnesia following pregabalin use.

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