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## Case Report

# A rare case of pregabalin induced central serous chorioretinopathy

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### ABSTRACT

A 34 years old man was prescribed pregabalin 75 mg per day for chronic back pain. After 2 weeks of the start of the therapy, the patient developed seeing circular dark spots in his vision in the left eye along with decreased colour perception for all colours. The drug was stopped and the circular dark spots in his vision decreased gradually and colour perception was better after 7-10 days. The patient had no history of prior disturbance of vision. He was non-, diabetic and non-hypertensive. The event recurred when a combination drug containing pregabalin and methylcobalamin was administered after 6 months. The drug was stopped immediately and the event resolved.

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## 1. Introduction

Pregabalin is frequently prescribed for peripheral and central neuropathic pain in adults, as an adjunctive therapy in partial seizures and generalised anxiety disorder. It belongs to the pharmacotherapeutic group of antiepileptics, other antiepileptics (ATC code: N03AX16). The efficacy of pregabalin has been shown in trials of diabetic neuropathy, postherpetic neuralgia, and spinal cord injury. Efficacy has not been studied in other models of neuropathic pain. The mechanism of action of pregabalin is that it binds to an auxiliary subunit ( $\alpha 2-\delta$  protein) of voltage-gated calcium channels in the central nervous system. The oral bioavailability is estimated to be  $\geq 90\%$  and half-life is 6.3 hours. Blurry vision, diplopia, dizziness, somnolence, headache, vertigo, nausea, vomiting, muscle cramp and nasopharyngitis are common and listed adverse events for pregabalin.<sup>1</sup> Central serous chorioretinopathy (CSCR) is a disease, in which there is a serous detachment of the neurosensory retina occurs over an area of leakage from

the choriocapillaris through the retinal pigment epithelium (RPE). It is a mostly a self-limited macular disease marked by distortion, blurry vision, and metamorphopsia.<sup>2</sup> The recurrence rate is relatively high, and its etiology and pathogenesis remain largely unknown.<sup>3</sup> Here we report a case of CSCR after pregabalin therapy.

## 2. Case Report

A 34 years old man was prescribed pregabalin 75 mg per day for chronic back pain. After 2 weeks of the start of the therapy, the patient complained of seeing circular dark spots in his vision in the left eye along with decreased colour perception for all colours. The patient also complained of seeing distorted horizontal lines. A diagnosis of CSCR was made after thorough investigation. The drug was stopped and the symptoms decreased gradually and colour perception improved gradually (7 to 10 days) and only a slight colour discrimination persisted. The patient was not having any other medications during this period in which the 1st episode occurred. The patient's had no hypertension and was non-diabetic; moreover, the patient did not complain

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of any problems related to vision prior to this event. The event recurred when a combination drug containing pregabalin and methylcobalamin was administered again after 6 months of the initial episode. The drug was completely stopped and the events resolved gradually.

### 2.1. Investigations

The patient was advised Optical Coherence Tomography (OCT) after clinical evaluation. Optical coherence tomography (OCT) was first reported in 1991, as a non-invasive ocular imaging technology.<sup>4</sup> OCT confirmed CSCR of the left eye (Figure 1).

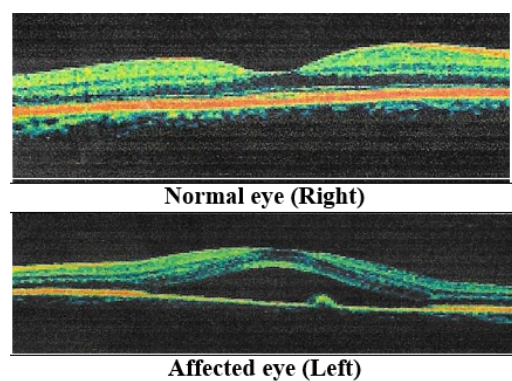


Fig. 1: OCT of Right (top) and Left eye (below)

### 2.2. Treatment

Treatment consisted of withdrawing the suspected drug in both the episodes. Conservative therapy with antioxidants and bromfenac eye drops were advised. Once pregabalin was stopped there was gradual improvement in the affected eye.

### 2.3. Outcome and follow-up

The events resolved slowly (within 7-10 days) during both the period with a sequela of minor colour discrimination for all colours, in the left eye. The colour discrimination was resolving slowly in the next 2-3 months.

## 3. Discussion

Pregabalin treatment can be started at a daily dose of 150 mg and given in 2 or 3 divided doses. It is based on the reaction and tolerability of the individual patient.<sup>1</sup> CSCR is known to resolve spontaneously within 3 months.<sup>5</sup> The study by Dogan YE et al., reported 2 cases of pregabalin induced CSCR. Pregabalin is an L-type calcium channel antagonist which can lead to vasodilation of choroidal vessels in blood-retinal barrier which, in turn, can cause oedema in retina. The events occurred after 7 and 9 months of pregabalin therapy.<sup>6</sup> In contrast, in our case the patient developed CSCR just within 2 weeks of start of therapy. In the former

case the event resolved after drug discontinuation; which is also seen in the case of our patient.

An ophthalmic check-up prior to start of any pregabalin therapy is suggested or monitoring at regular interval in case of long-term therapy. In view of limited cases reported on the association of such events with the drug, large case-control studies are required to validate the association.

## 4. Conclusion

Considering the temporal relationship, the positive dechallenge and positive rechallenge the role of pregabalin could not be ruled out. According to WHO casualty scale, the casualty is judged to be probable for the suspect drug. The patient needs to refrain from using pregabalin or its combination.

## 5. Disclaimer

Views expressed here are entirely of the authors and do not represent or endorse any institution or organisation.

## 6. Conflict of Interest

The authors declare no relevant conflicts of interest.

## 7. Source of Funding


None.

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