Chlorpromazine Induced Cataract in a Young Patient with Schizophrenia

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ABSTRACT

There is resurgence of first generation antipsychotics use due to the metabolic side effects associated with the use of second generation antipsychotics. Lenticular and corneal abnormalities were reported earlier with Chlorpromazine. However, there has not been much interest in the recent past. Nonetheless, it is important for clinicians to be aware of this side effect as chlorpromazine is a commonly used antipsychotic in developing countries like India. We report a patient who developed cataract possibly due to chlorpromazine and reviewed the relevant literature.

Key words: Antipsychotics, cataract, chlorpromazine, schizophrenia

INTRODUCTION

There is resurgence in the use of first generation antipsychotics, due to the metabolic side effects associated with the use of second generation antipsychotics (SGA). Chlorpromazine due to its low cost is one of the commonly used antipsychotic, especially in developing countries like India. Along with neurological side effects, few cases of chlorpromazine related lenticular and corneal abnormalities were reported earlier. However, there has not been much interest in the recent past, possibly due to decreased use. Also, Indian literature in this area is sparse. As there is resurgence in use of typical antipsychotics, it is important for clinicians to be aware of this side effect, especially in developing countries. We report a patient who developed cataract possibly due to chlorpromazine and review the relevant literature.

CASE REPORT

Mr. A, a 31-year-old male with diagnosis of Paranoid schizophrenia (DSM-IV) presented with 10 years history suggestive of delusions of persecution, reference and third person auditory hallucinations. His symptoms were well-controlled on treatment with Tab. Chlorpromazine 800 mg/day (cumulative chlorpromazine dose of 1460 g) and Inj. Flupenthixol 20 mg intramuscular once in 15 days for nearly five years. He had stopped the medication five months back and had relapse of symptoms. On clarification, he reported complaints of blurred vision since six months and was informed by the ophthalmologist that blurred vision could be due to the drugs. Subsequently, he had stopped the medication with relapse of symptoms. He had no history of ocular trauma, smoking. Further, ophthalmological evaluation using slit lamp examination of anterior segment showed considerable drug deposited in corneal endothelium and stellate central cataract both eyes, suggestive of drug induced cataract. We started him on T Haloperidol 10 mg/day and Inj. Haloperidol deconate 50 mg IM once in 15 days and discontinued other medications, with which his psychotic symptoms improved in 2-3 weeks.
DISCUSSION

The case illustrates the importance of observation for this rare side effect of maintenance treatment with chlorpromazine. The index patient had development of cataract following treatment with chlorpromazine and stellate pattern of cataract. He did not have other risk factors for cataract formation like smoking, ocular trauma, elder age. Thus, we considered the possibility of drug induced cataract.

Earlier reports have indicated that chronic treatment with chlorpromazine is associated with the production of corneal and lenticular opacities.[2,3] Animal models also have shown progressive deposition of Chlorpromazine with continued treatment. The mechanism of production of these opacities is not clearly known; chlorpromazine possibly alters respiratory mechanisms of lens by producing a metabolic block at a site preceding succinate, which may result in cataract.[4] Alternatively, cataract may represent foci of denatured protein resulting from the interaction of light with the drug, a photosensitizing agent, and lens protein.[5]

Antipsychotics differ in their propensity to cause cataract formation; cataract formation has been reported with first generation antipsychotics like: chlorpromazine, thioridazine, thiothixene and trifluperazine.[6] Second generation antipsychotics have not been associated with cataract formation except quetiapine and olanzapine. Quetiapine at higher doses was associated with development of cataract in animal model.[7] Cataract formation was also observed in patients on long-term quetiapine therapy; however, etiological association was not established. Similarly, there were infrequent reports of cataract formation on treatment with olanzapine, but etiological association was not established.[6] This case illustrates the importance of monitoring cataract in those patients who are on treatment with antipsychotics, especially the first generation antipsychotics, considering the possibility of revival of use of these agents.

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