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Brief Communication

Anterior Segment Involvement in Antipsychotics - An Unusual Presentation

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Summary

Anti-psychotics used for treatment of psychiatric disorders can have various ocular side effects. We hereby report a case of advanced capsular and sub-capsular lenticular opacities in a 58 year old male that was secondary to long term chlorpromazine use. The deposits persisted after discontinuation of the drug. There were however no associated deposits on the cornea. This case highlights the rare occurrence of lenticular deposits without associated corneal involvement. Periodic eye examination of patients on long term antipsychotic drugs is necessary. A timely discontinuation of the offending drug may arrest further progression.

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Introduction

Antipsychotics used for the treatment of psychiatric disorders can lead to various ocular side effects. Lenticular changes in association with corneal endothelial deposits is a common phenomenon. We hereby report a case of lenticular opacification post antipsychotic use without the involvement of corneal endothelium. As cumulative dosage leads to the development of cataract, corneal and retinal changes, timely intervention can prevent progression of these vision-threatening complications. Awareness and prompt action on the part of ophthalmologists and psychiatrists is the need of the hour.

Case Report

A 58-year-old male with paranoid schizophrenia was referred from psychiatry for regular ocular examination. There was no history of trauma, pain, blurring of vision. Paranoid schizophrenia was diagnosed 35 years back, and since then he was on chlorpromazine 100 mg, substituted with a second-generation antipsychotic nine years back.

On examination, he had a visual acuity of 6/9 (20/30) in both the eyes. Slit lamp examination revealed capsular and subcapsular lenticular opacities of grade 4 in a stellate pattern in the pupillary area in both eyes (Figure 1). The rest of the lens was found to be clear. There were no corneal endothelial deposits (Figure 2). The deposits persisted in spite of substitution of the drug with second-generation antipsychotic. Fundus examination was normal. Intraocular pressure was within normal limits. Investigations including the liver function tests and peripheral smear were normal. No concomitant causes of lenticular deposits like trauma, use of other medications were present.

Discussion

Chlorpromazine is a first generation atypical antipsychotic drug; it is an aliphatic phenothiazine commonly used in psychiatric disorders especially schizophrenia. The common side effects are drowsiness, headache, postural hypertension, anti-cholinergic side effect and extrapyramidal symptoms,

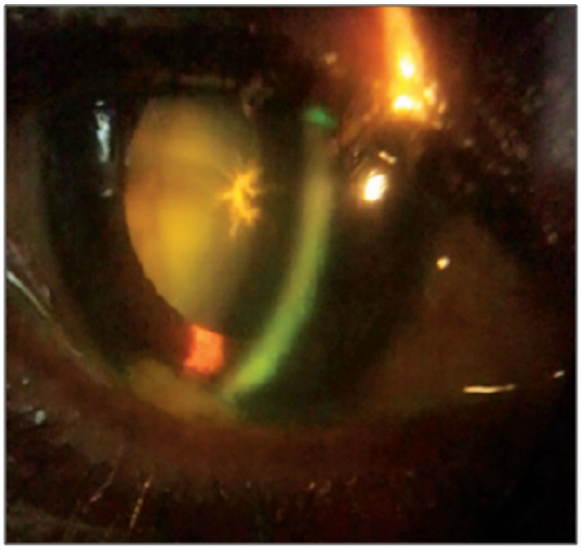

Figure 1: *Stellate pattern of Lenticular deposits*

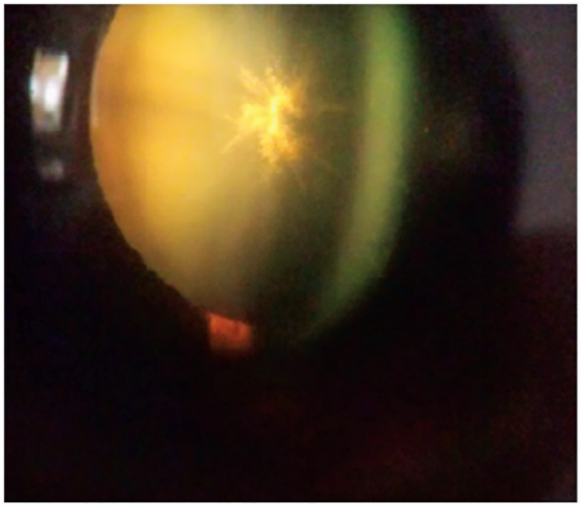

Figure 2: *No corneal endothelial deposits seen associated with lenticular deposits*

which are all dose-related. There are few hypersensitivity reactions such as skin pigmentations, agranulocytosis and photosensitivity. The most common ocular side effects are capsular and subcapsular lenticular opacities, followed by corneal endothelial changes. Other rare ocular side effects, i.e. discoloration of the sclera, conjunctiva and fundal pigmentary changes have been reported. Alexander and his colleagues found that about 67% of treated cases have capsular and subcapsular deposits and 45% corneal endothelial changes.[1] Thaler and his colleagues described that lenticular opacities have five stages of gradings. They are golden brown pigmentations present on the anterior surface of the lens. The stellate branching pattern is characterised as grade 4 lenticular changes seen within the pupillary area which was present in our patient.[2]

The mechanism of the lens and cornea deposition is unknown. The deposits may be due to drug interaction with ultraviolet rays leading to denaturation and opacification of proteins.[3] Cataract formation is common in patients taking cumulative dose of higher than 1000 mg.[4,5] Advanced lenticular changes without any corneal involvement has not been previously reported.

Both psychiatrists and ophthalmologists should be aware of these consequences to prevent and treat the ophthalmic complications promptly. A timely discontinuation/ substitution of the offending drug may arrest further progression.

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