

Case Report

Presumed Antihistamine-Induced Cataract in Two Young Males

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Abstract

The use of systemic and topical steroids, amiodarone, and phenothiazines has been established as risk factors for the development of cataract. Antihistaminics are commonly prescribed drugs for a wide range of allergic disorders but have rarely been associated with cataract formation. We herewith report cases of two young males who were on long-term antihistaminics for allergic conditions and presented with blurring of vision. Slit lamp examination revealed bilateral posterior subcapsular cataract. The patients did not have any other systemic or ocular condition predisposing for cataract formation; hence, a diagnosis of antihistaminic-induced cataract was made.

Keywords: Antihistaminic, cataract, cetirizine, drug-induced cataract, fexofenadine, hydroxyzine

INTRODUCTION

Cataract is the most common cause of preventable blindness worldwide.^[1] Advancing age is the most common cause for cataract; it can also be secondary to trauma, systemic conditions (diabetes, atopic dermatitis, and myotonia dystrophica), or drug induced.^[2] Corticosteroids, phenothiazines, and miotics are by far the drugs most commonly responsible for cataract formation.^[3] However, cataract formation as an adverse effect of antihistamines has never been reported in literature. We herewith report two cases of antihistamine-induced cataract in young males.

CASE REPORTS

Case 1

A 28-year-old Asian male presented with complaints of photophobia and blurring of vision for the past 3 months. He was a known case of urticaria and was on oral antihistaminics – fexofenadine 180 mg and hydroxyzine 25 mg twice daily for the past 8 years. The cumulative doses were 1051 g and 146 g, respectively. The patient had no history of systemic or topical steroid use and was nondiabetic. Also the patient did not give the history of long hours of work-related outdoor sunlight exposure.

On examination, the best-corrected visual acuity was 20/30 and 20/20 in the right and left eye respectively. Slit lamp

examination revealed a plaque-like posterior subcapsular cataract in both the eyes, which was denser on the right side as compared to the left [Figure 1a and b]. Fundus examination of both eyes was unremarkable. The patient gave consent for publication of his photographs and clinical details for research purpose.

Case 2

A 25-year-old Asian male presented with complaints of photophobia and blurring of vision for the past 6 months. The patient gave a history of chronic allergic rhinitis and consumed tablet cetirizine 10 mg daily for the past 6 years. The cumulative dose was 21.9 g. The patient had no other systemic disease, long hours of sunlight exposure, or steroid usage in the past.

On examination, the best-corrected visual acuity was 20/30 and 20/20 in the right and left eye respectively. Slit lamp examination revealed posterior subcapsular cataract in both the eyes [Figure 2a and b]. Fundus examination of both eyes was unremarkable.

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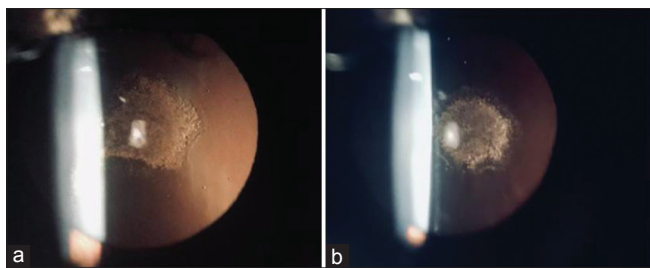


Figure 1: (a and b) Slit lamp examination (retroillumination) of the right and left eye, respectively (Case 1), showing posterior subcapsular cataract

A presumptive diagnosis of antihistamine-induced cataract was entertained in both these cases, and the patients were advised to consult the dermatologist and otolaryngologist for alternative medications and to undergo cataract surgery in the right eye. The patient gave consent for publication of his photographs and clinical details for research purpose.

DISCUSSION

Cataract is a degenerative process commonly affecting elderly individuals. Causes of cataract developing in young individuals include congenital and developmental cataract, trauma, and systemic disorders such as diabetes mellitus, complicated cataract secondary to ocular diseases such as chronic uveitis, retinitis pigmentosa, high myopia, and long-term usage of drugs such as steroids, amiodarone, and phenothiazines.^[3]

Hydroxyzine, cetirizine, and fexofenadine are 1st-, 2nd-, and 3rd-generation antihistamines, respectively. These drugs are indicated in the treatment of allergic conditions such as hay fever, urticaria, and allergic rhinitis.^[4,5] Sedation, dizziness, headache, and antimuscarinic effects are well-recognized adverse effects of these antihistaminics.^[5]

Usual prescribed dosage of fexofenadine is 180 mg twice daily. Review analyses created by eHealthMe based on reports of 42,696 consumers of Allegra (fexofenadine hydrochloride) from Food and Drug Administration show that 365 (0.85%) consumers reported cataract formation.^[6] Consuming the drug for a time period of 2–5 years had association with cataract formation in 58.33% of consumers.^[6] However, in the reported cases, 63.81% consumers were over 60 years of age group, while only 0.37% affected were in the age group of 20–29 years.

A similar analysis of hydroxyzine by eHealthMe shows that of 15,710 hydroxyzine consumers, 120 (0.76%) reported to have cataract formation when used for a time period of 1–2 years and 46.15% of these were above 60 years of age.^[7]

Since in both the analysis, majority of patients were above 60 years of age, it would be difficult to conclude whether the cataract was age related or actually an adverse effect of both these drugs. Similarly, it is not clear whether the patients in the younger age group were on any other drugs such as corticosteroids or had any other predisposing factors.

Antihistaminics have anticholinergic properties; hence, the reported ocular side effects include anisocoria, blurring of vision

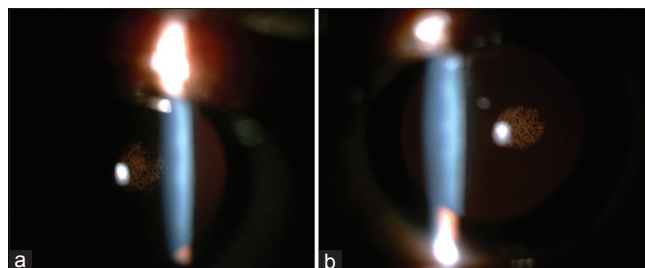


Figure 2: (a and b) Slit lamp examination (retroillumination) of the right and left eye, respectively (Case 2), showing posterior subcapsular cataract. The nature of cataract is similar to first patient but is less denser

resulting from altered accommodation, and dryness of eyes and mouth.^[8,9] However, cataract resulting from long-term use of antihistaminics in any form has never been reported, and to the best of authors' knowledge, these are the first two reported cases.

Antihistaminics are very commonly prescribed drugs, and because of the chronic nature of allergic conditions, many patients keep on using the drug for a long period on a regular basis. The physician should explain the patients regarding cataract formation as a possible rare adverse effect and advise regular comprehensive ophthalmic evaluation for all patients on long-term systemic antihistaminics.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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