CASE REPORT

Corticosteroid Induced Cataract In COPD Patient

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Abstract

Corticosteroid induced complications like cataract are well reported with varied manifestation. Many hypothesis to explain the mechanisms and etiology of corticosteroid induced cataracts have been reported. To best of our knowledge, this is one of a case reports establishing corticosteroid systemic use as a possible cause for mature white cataract (bilateral), warranting clinician's attention as the condition is important, in relation to indiscriminate systemic use of steroids in relation to ophthalmological complications.

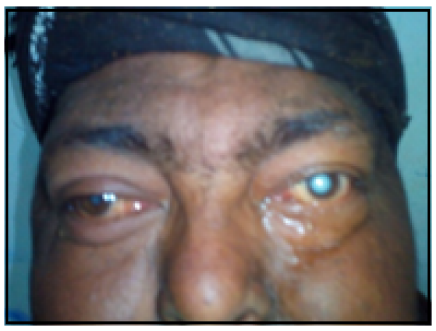
Introduction

The systemic use of steroid over a prolonged duration of time, causing cataract has been well reported in the literature. This type of toxic cataract manifests in the form of posterior subcapsular opacities, studies have been reported. The exact cause and relationship between dose and duration of corticosteroid therapy with the development of cataract is still not clear.

However, prolonged use of steroids in high doses may result in cataract formation. Our patient was on systemic steroids for some allergic etiology nature of which is not known, which resulted in formation of white cataract. Furthermore relation between cataract and systemic steroid could be established in the said case making him almost blind. Therefore, the case report of the patient was made and reported.

Case Report

35 yrs old male patient weighing 85 kgs who was diagnosed as a case of steroid induced bilateral cataract. He was admitted in eye ward -10 on 11-12-2014 with chief complains of diminishing of vision in both eyes which was gradual, painless and progressive ,re>le. Patient was admitted for cataract surgery.



Past History: After proper history taking and examination, it was highlighted that he is a known case of COPD with cor pulmonale with ccf and was on injectable steroids for 7-8 years, prescribed by some local physician.

He had also been admitted earlier due to chief complain of shortness of breath and chest pain, fever. (Fig.1)

He was then also put on Tab. Defza 6mg alt. day, Inj. Dexamethasone, Inj. Avil, O2 inhalation. In lasix, inj.zintec etc. However he was discharged later and after that he has been on regular systemic steroids. The records were studied by us, as given by the attendants.

Clinical Examination showed patient was grossly over weight, fat built, cushingoid face, afebrile;

Pallor (+), Icterus Nil, No palpable lymphadenopathy, P.R = 90/min,JVP raised

B.P = 140/88mm of Hg

Chest B/L Crepts (+)
Wheeze (+)

CVS S1S2 heard ,No murmur, P/A soft.

CNS - NR tone, power, reflexes

Lab investigation revealed

Hb - 9 gms

TLC - 9000/mm3

DLC - P70L27E1M2

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microcytes also seen.
ESR - 28
LFT - WNL
Bld Sugar (R) - 170 mg %
S.Urea-6.5
S.Creatinine - 1.2

Table1: Ocular examination.

Visual acuity	PL+PR+	HM+
Ocular adnexa	Edematous lids	Edematous lids
Ocular movements	Full and adequate	Full and adequate
Conjunctiva	quiet	Quiet
Cornea	clear	Clear
Anterior chamber	Nr depth and contents	Nr depth and contents
Iris	Nr pattern	Nr pattern
Pupil	Round, regular, rct to light	Round , regular, rct to light
Lens	cataractous	Cataractous
Iop	20.6	18.6

S. Na+ 140, S.K+ - 4.6
USG Abdomen - WNL

Family/Personal History: No history of smoking, alcohol or drug abuse. He had no personal/family h/o of HTN, diabetes, T.B.The following treatment was started ,since patient had B.P at the time of admission, medicine call was done and he was started with tab Tresar AM 1 tab od, Tab. Anxit 0.25 mg. In Lasix 2 ampules BD, B.P monitoring. The next day the B.P was controlled and he was subjected to SICS R/E under topical anesthesia.

He was subjected to post operative examination next day. His corticosteroids were stopped and B.P stablised. His vision improved to on 2nd postop day and he was discharged on 5th Postop day. Thus the diminished vision could have been due to steroid induced cataract. The ADR was probable as assessed by Scale.

Discussion

This prolonged use of systemic steroids lead to the formation of cataract as stated in the studies. This results in visual hampering of the patient and making him socially dependent.The association linking corticosteroid therapy with development of cataract has been studied (1). prolonged use of corticosteroids is a significant risk factor for thedevelopment of posterior subcapsular cataract.The mechanism responsible for opacification is unknown (2).Glucocorticoids may be capable of inducing changes to transcription of genes in lens epithelial cells that are related to many cellular processes (3). The mechanism of ADR is not fully established but, it is recommended that all patients with diseases requiring prolonged systemic corticosteroid therapy should be regularly examined on slit lamp by an ophthalmologist (4,5). The same has been highlighted by this case report.The long term use of glucocorticoids is associated wih several deleterious side effects (6).While the cataractogenesis effect of corticosteroids are beyond dispute,disagreement exists concerning effects of dose, intensity of dose and durationof the drug on cataract formation (7). The ophthalmic examination of these patients is important,so that these patients who are already shattered by systemic complication of steroids have proper vision to carry out their daily routine a activities (8).However, the exact causal relationship between dose and duration of systemic corticosteroid therapy still remains a matter of further research (9).

Conclusion

Corticosteroids are one of the most commonly used drugs.Corticosteroid induced cataracts constitute one of the common cause of drug induced cataract. Early diagnosis and a coordinated approach by physician and ophthalmologist, can help in proper management of the patient.

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