Over The Counter Drugs-How Dangerous Can It Be

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Abstract: The sale of over the counter (OTC) medicines can help individuals to self-manage symptoms. However, some OTC may be abused with overuse. There is an example of such a OTC drug who was suffering from a dermatological condition and was given steroids to relieve his symptoms and it really worked amazingly so he started using it continually for a period of 4 yrs. which landed him into various other problems like Cushing syndrome and ophthalmological problems like steroid induced glaucoma and cataract formation.

Keywords: cataract, over the counter drug, steroid induced glaucoma

I. Introduction
Cataract and glaucoma are major causes of blindness worldwide. Corticosteroids given orally, intravenously, or topically have been associated with increased risks of cataract formation and glaucoma development. It has been noted that posterior subcapsular cataracts (PSC) are more frequent in people taking steroids. Steroids, especially when taken in high doses, have multiple effects on the trabecular meshwork (TM), thereby raising the risks of glaucoma. Studies have shown that the use of systemic corticosteroid therapy is a risk factor for developing cataracts. There have been many attempts to correlate prolonged corticosteroid use with ocular complications, such as development of cataracts and glaucoma. At best, the results were conflicting.

II. Case Report
A 35 year old male patient presented with complain of progressive diminished vision in left eye more than right since last 5 months associated with pain and redness. He has no history of glasses and was not a known case of DM and HTN. The patient was on steroid therapy for skin allergy from past 5 yrs (Tab prednisolone 10 mg), which constitute steroid. On examination cornea of both eyes showed mild edematous changes, pupils were sluggishly reacting to light, vision in right eye was 6/24 with an improvement to 6/18 with pinhole and left eye 6/36 with an improvement to 6/24 with pinhole.

Fig 1a: slit lamp picture showing posterior sub capsular opacity

2. Investigation: Blood pressure - 100/70 mmhg, RBS - 120 mg/dl, intra ocular pressure of right eye was 54 mmhg and left eye 64 mmhg at 12:30pm
Slit-lamp examination - bilateral corneal edema, thick central psc around 60% in left eye and 40% in right eye. Fundus examination - media was hazy due to cataract; RE 0.6 cup neuro retinal rim was healthy, blood vessels showed thinning, background was normal, macula was not visualized, LE 0.9 cup thinning of neuro retinal rim nasal shifting of vessels, background was normal macula could not be visualized.

2. Treatment: Patient was started immediately on anti-glaucoma drugs but even after 3 weeks of medical management the iop could not be brought to normal so we planned to do iridotomy and the results were satisfactory. Later cataract surgery in left eye was performed followed by right eye after 3 months. vision was restored to 6/9 in both eyes and on regular follow up every 3 months.
III. Discussion

Cataract formation is a common complication of prolonged oral corticosteroid therapy with a prevalence rate of 13.6%. The route of administration of steroid may influence the response of aqueous dynamics. Oppelt and colleagues found that intravenous hydrocortisone produced a minimal effect on aqueous humor formation and outflow, while topically hydrocortisone or dexamethasone produced a marked decrease in outflow. Other studies indicated that systemic administration of corticosteroids is likely to produce an increase in aqueous production. Corticosteroids given orally, intravenously, or topically have been associated with increased risks of cataract formation and glaucoma development.

The biphasic effect of corticosteroids may explain these conflicting results. An increase in circulating corticosteroid may cause an increase in aqueous production. In the present case, it was taken by the patient, continuously for five years in a dose of 20mg/day for some minor skin allergy. This untoward medical occurrence could have been avoided, if the patient would have consulted his dermatologist once again. His symptoms could have been managed by antihistamines as and when required. This type of adverse drug reaction can be categorized as Type C ADR. There was no family history of DM or HTN. There was no other systemic disease or no other ophthalmological cause that could have contributed to this ADR. Patients undergoing steroid therapy should undergo regular ophthalmic checkup for slit lamp bio microscopy and dilated fundus evaluation. The ophthalmologist should check the contour and color of the optic disc, any asymmetry or elongation of the cup, thinning of neuroretinal rim and measure IOP.

Reference