

Oral versus intranasal steroids in allergic rhinitis- A comparative study

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Abstract

Abstract: Aim of the study was to compare symptomatic relief from acute symptoms of allergic rhinitis by administration of oral steroids versus intranasal steroids in two groups of ten patients over a period of ten days. **Methods:** Two groups of ten patients of clinically diagnosed allergic rhinitis were included in the study. One group was given oral steroid deflazocort 6mg with an antihistaminic Olopatadine hydrochloride 5mg. The other group was treated with intranasal steroid Fluticasone furoate along with an oral antihistaminic Olopatadine hydrochloride 5 mg and results were compared. **Conclusion:** All the patients treated with oral form of steroid with antihistaminic showed excellent results with early control and reduction in severity of symptoms whereas with intranasal steroids and an antihistaminic, reduction in symptoms was late and incomplete.

Keywords: Allergic rhinitis, deflazocort, Fluticasone furoate, olopatadine.

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INTRODUCTION

Allergic rhinitis is one of the commonly encountered clinical conditions in ENT practice. As there is no definitive treatment it is always treated empirically to control the symptoms. But if neglected, it can lead to chronic nasal sinus diseases or bronchial asthma so it is very important to control it at the earliest. AR is an inflammatory condition, mediated by IgE antibodies leading to sneezing, rhinorrhea, nasal, pharyngeal, ocular and ear itching associated with watering of eyes, nasal obstruction and dry cough. Patient is usually allergic to one or more allergens like dust, mite, smoke, pollens, changes in weather conditions etc. Broadly AR is classified into 1. Seasonal AR and 2. Perennial AR. Symptoms of AR can be mild to very severe and debilitating. There can be co-morbid conditions

associated with AR such as atopic dermatitis, asthma, conjunctivitis, otitis media, and chronic rhinosinusitis with its sequelae such as nasal polyps etc. Many treatment options are available but all of them are mostly empirical.

MATERIALS AND METHODS

Twenty cases of allergic rhinitis were selected on the basis of history and clinical examination between the 20 to 40 years of age. They were divided into two groups of ten each. Systemic diseases such as hypertension, diabetes mellitus, ischemic heart disease etc were ruled out. All the patients were advised to do complete haemogram, random blood sugar levels and x-ray paranasal sinuses. One group was treated with an oral deflazocort 6 mg for ten days in tapering doses. Deflazocort was combined with non-sedating antihistaminic T. olopatadine 5 mg given once a day for ten days. They were followed up after ten days. The other group was treated with intranasal Fluticasone furoate nasal spray with T. olopatadine 5 mg once a day for ten days.

Deflazocort

This is a glucocorticoid used as an anti-inflammatory and immunosuppressant. Deflazocort is an inactive prodrug which is rapidly metabolized to its active form 21-deacetyldeflazocort. It is 70-90% more potent than prednisolone. Side effects are same as other steroids such as nausea, vomiting, hypersensitivity, pancreatitis. Long

term use is contraindicated in HT, DM, IHD, Renal diseases. Chronic use can cause glaucoma, cataract, weight gain, muscle wasting etc. But these side effects are uncommon and the incidence is 1:1000.

Fluticasone furoate

It is a glucocorticoid available in spray form. It is used in perennial as well as in seasonal allergic rhinitis. It causes decongestion of nose and also relieves symptoms such as itching, rhinorrhea, sneezing. It is relatively safe as compared to systemic steroids as it basically acts on nasal mucosa and systemic absorption is negligible. Side effects include nose bleed, excoriations, irritation in the nose, bad taste in mouth, headache, nausea, shortness of breath etc. It is contraindicated in HT, DM, IHD, pregnancy, children below 2 years.

Olopatadine hydrochloride

It is an antihistaminic H-1 antagonist. It stabilizes mast cells. It is effective in allergic rhinitis and used in 5mg ones a day dosage. It is mildly sedative, causes dryness of mouth, insomnia etc.

OBSERVATIONS AND RESULTS

The collected data was analyzed as follows.

Table 1

Symptoms	Group-I	Group-II
Nasal obstruction	08	07
Sneezing	10	10
Rhinorrhea	09	10
Ocular symptoms	04	03
Nasal polypi	02	01
Comorbid conditions	03	04

Group I was treated by prescribing T. Deflazocort 6mg in tapering doses with T. olopatadine 5mg ones a day orally and followed up after ten days. After ten days following observations were made regarding symptomatic relief in the group I

Table 2

Symptoms	Complete Relief	Partial Relief	No Relief
Nasal obstruction	08	02	--
Sneezing	09	01	--
Rhinorrhea	09	01	--
Ocular symptoms	08	01	01
Nasal polypi	Marked reduction	--	--
Comorbid conditions	05	02	03

Almost 80% patients showed complete relief. 14% patients had incomplete relief whereas only 6% patients had no relief at all Group II was prescribed Fluticasone furoate intranasal spray to be used twice a day for ten

days along with T. Olopatadine 5mg ones a day for ten days and reviewed after 10 days.

Observations after ten days showed following results.

Table 3

Symptoms	Complete Relief	Partial Relief	No Relief
Nasal Obstruction	04	03	03
Sneezing	05	03	02
Rhinorrhea	04	01	05
Ocular Symptoms	07	02	01
Nasal polypi	No significant change	--	--
Comorbid conditions	03	03	04

46% of the patients had complete relief. 24% patients had partial relief, whereas 30% had no relief at all.

DISCUSSION

Allergic rhinitis is one of the most difficult conditions in ENT practice to treat as there is no definitive one time treatment available. Moreover the prevalence is ever increasing day by day due to the changing weather conditions, pollution, changing lifestyle and eating habits etc. Various treatment modalities have been tried but all including immunotherapy and surgical management have proved to be empirical. In this study of 20 patients of AR we have tried to study the effectivity of oral versus intranasal steroids. One group was being treated with oral deflazocort whereas the other group was treated with intranasal Fluticasone furoate. Olopatadine hydrochloride is an antihistaminic and was administered to all the patients in both the groups. Group I showed significant reduction of all the symptoms. Almost 90% patients had complete relief from sneezing and rhinorrhea. Whereas 80% patients showed complete reduction in nasal obstruction and ocular symptoms. In the case of nasal polyp, there was marked reduction in the size relieving nasal obstruction to great extent. 50% patients had relief from Comorbid conditions. Group II showed late response to the intranasal Fluticasone spray. Only 40-50% patients had complete relief from rhinorrhea and sneezing. 40% patients had relief from nasal obstruction. But surprisingly 70% patients got relief from ocular symptoms. But there was no significant change in the size of nasal polypi and so nasal obstruction was present in these two cases. Only 30% patients of comorbid conditions had relief probably it was a response to Olopatadine tablet.

CONCLUSION

From the above study and the results it can be concluded that oral deflazocort is more effective in AR, especially in controlling acute symptoms of sneezing, rhinorrhea and

nasal obstruction. Whereas nasal Fluticasone furoate even though effective in controlling AR symptoms to some extent, lacked early control and that too was incomplete. In our opinion acute symptoms of AR can be controlled with oral steroids and then patient can be switched over to intranasal therapy to keep him symptom free.

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