

Common Drugs Used in Iran for Allergy Treatment

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Abstract- Allergy is abnormal condition related to overworking of immune system in response to allergens. Allergy is prevalent in Iran and it is growing in Iran vastly. There are various types of allergy drugs used in different communities based on situation and patient condition. In Iran also there are different types of allergy drugs used for allergy treatment. Common drugs used in Iran for allergy treatment include: antihistamines, decongestants, combination drugs and corticosteroids. However, there are complications related to allergy drugs intake. In this study we introduce common drugs used for allergy treatment in Iran and the most important side effects of these drugs.

Index Terms- *Allergy, Common Drugs, Iran*

I. INTRODUCTION

The prevalence of allergic disorders has increased markedly throughout the world over the past three decades. Allergies are an abnormal response of the immune system. People who have allergies have an immune system that reacts to a usually harmless substance in the environment. This substance (pollen, mold and animal dander, for example) is called an allergen [1]. First, a person is exposed to an allergen by inhaling it, swallowing it, or getting it on their skin. After a person is exposed to the allergen, a series of events create the allergic reaction:

1 – The body starts to produce a specific type of antibody, called IgE, to bind the allergen.

2 – The antibodies attach to a form of blood cell called a mast cell. Mast cells can be found in the airways, in the intestines, and elsewhere. The presence of mast cells in the airways and GI tract makes these areas more susceptible to allergen exposure.

3 – The allergen binds to the IgE, which is attached to the mast cell. This causes the mast cells to release a variety of chemicals in to the blood. Histamine, the main chemical, causes most of the symptoms of an allergic reaction [2].

Common symptoms of allergic reaction to inhaled or skin allergen include [3]:

- Itchy, watery eyes
- Sneezing

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- Itchy, runny nose
- Rashes
- Feeling tired or ill
- Hives (a rash with raised red patches)

In general, there is no cure for allergies, but there are several type of medications available, both over the counter and prescription. These allergy drugs include: antihistamines , decongestants , combination drugs , corticosteroids and the others [4], [5]. In this study we introduce common drugs used in Iran for allergies treatment.

II. MATERIAL AND METHODS

This is a cross-sectional descriptive study carried out during Spring 2015 in Tehran (Capital Iran) to investigate the common drugs used for allergy treatment. For this purpose we prepared a questionnaire including questions on the drugs prescribed by medical doctors for allergy treatment. Referring to pharmacies and based on prescriptions we collected the data. We also used interview to obtain information by interviewing with GPs and physicians.

III. RESULTS

There different drugs used for allergy treatment in Iran. The most common drugs are:

Cetirizine (tablet-syrup)
Loratadine (tablet-syrup)
Hydroxyzine (tablet-capsule)
Fexofenadine (tablet)
Cyproheptadine (tablet)
Chlorphenamine (tablet-syrup-injection)
Promethazine (tablet-syrup-injection)
Zaditen(Ketotifen) (tablet-syrup-drop)

On the other hand, steroid drugs used for allergy treatment include:

Beclomethazone (nasal spray)
Fluticasone (drop-ointment)
Rhinocort (nasal spray)
Betamethazone (ointment – eye drop)
Dexamethazone (eye drop)
Fluoromethelone
Naphazoline
Prednisone (oral steroids: tablet – eye drop)
Methyl prednisolone (oral steroids: shot)

Loratadine , Zaditen and Cetirizine are the most common drugs used in Iran for allergy (Figure I, II and III).



Figure I. Loratadine



Figure II. Zaditen



Figure III. Cetrizine

IV. DISCUSSION

Loratadine is a tricyclic antihistamine, which acts as a selective inverse agonist of peripheral histamine H₁ receptors. Histamine is responsible for many features of allergic reactions [6].

As a "nonsedating" antihistamine, loratadine causes less (but still significant, in some cases) sedation and psychomotor retardation than the older antihistamines because it penetrates the blood/brain barrier to a smaller extent. Although drowsiness is rare at the common 10-mg dose, patients should, nevertheless, be advised that it can occur and may affect performance of skilled tasks (e.g., driving). Patients who do experience drowsiness while taking loratadine should avoid the use of alcohol, as it can cause excessive drowsiness. Other possible side effects include headache and antimuscarinic effects such as urinary retention, dry mouth, blurred vision, and gastrointestinal disturbances [7].

Cetirizine crosses the blood-brain barrier only slightly, reducing the sedative side-effect common with older antihistamines. It has also been shown to inhibit eosinophil

chemotaxis and LTB₄ release. At a dosage of 20 mg, Boone et al., found that it inhibited the expression of VCAM-1 in patients with atopic dermatitis. Unlike many other antihistamines, Cetirizine does not exhibit anticholinergic properties [8].

Commonly reported side effects of cetirizine include dryness of the mouth, nose, and throat, drowsiness, urinary retention, blurred vision, and headaches. Stomach aches are usually rare, but mostly present in patients with lactose intolerance. Cetirizine does not block the action of the muscarinic acetylcholine receptors, even though these side effects can occur in some patients [9].

Zaditen (Ketotifen) is a histamine H₁-receptor antagonist. In vivo and in vitro ketotifen inhibits the release of mediators (e.g. histamine, leukotrienes and prostaglandins, and PAF) from cells involved in immediate type I allergic reactions (mast cells, eosinophils, basophils and neutrophils). Ketotifen also decreases chemotaxis, activation and degranulation of eosinophils. Increased cAMP levels by phosphodiesterase inhibition may contribute to the cell stabilising effect of ketotifen [10]. Side effects include drowsiness, weight gain, dry mouth, irritability, and increased nosebleeds [11].

V. CONCLUSION

We have shown that different drugs are used in Iran for allergy treatment but Loratadin, Cetirizine and Zaditen are commonly used drugs.

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