Treatment of Chronic Idiopathic Urticaria with Fexofenadine and Hydroxyzine Hcl in Libyan Patients

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Original ResearchArticle

ABSTRACT

Chronic Idiopathic Urticaria (CIU) is characterised by short-lived circumscribed erythematous, edematous and itchy wheals usually lasting for few hours to few days. It may last for a period of at least six weeks or more without an identifiable causes and negative influence on the quality of life. It's a disabling affliction that considerably limits patients' daily activities. Fexofenadine hydrochloride is a carboxylated metabolic derivative of Terfenadineand third generation selective histamine H1-receptor antagonist with non-sedative effects. Hydroxyzine Hcl (Atarax) is a antihistamine H1 blocker with anticholinergic and sedative properties that relieve the symptoms of allergy.
Aim: The present study aims at assessing the efficacy and safety of combined administration of the Fexofenadine and Hydroxyzine Hcl for the treatment of CIU.
Methodology: The study was conducted on 48 Libyan patients (22 females and 26 males), with a mean age of 37 years (21-65 year olds). All patients were diagnosed withCIU. The study was done

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during January 2016 to December 2016. The average duration of the disease was 6 months (4-10months). All patients were examined to rule out any triggers. Patients were treated with 120 mg of fexofenadine in the day time and 25 mg of hydroxazine at the night, for a period of 3 weeks, with a follow up at zero, two and three weeks for treatment response.
Results: The combination of Fexofinadine and Hydroxyzine was found to be effective against Urticariasymptoms in the 48 patients with CIU. A good response was observed in 16 patients (33%) and a very good response was found in 18 patients (37.5 %) whereas, a satisfactory response was seen in 8 patients (17%). In 6 patients (12.5 %) an unsatisfactory response was noted. Moreover a good tolerance against the combination of Fexofinadine and Hydroxyzine in the patient sample was reported.
Conclusion: The combination of Fexofenadine and Hydroxazineappears was found to be an effective and safe treatment for CIU, as it was found to improve Urticaria symptoms and the quality of life. Additionally it might also benefit patients who do not respond to single anti-allergic drug.

Keywords: Fexofenadine; hydroxyzine; chronic idiopathic urticaria; quality of life.

1. INTRODUCTION

Chronic Idiopathic Urticaria (CIU) is characterised by short-lived circumscribed erythematous, edematous and itchy wheals usually lasting for a few hours to few days. It continues for a period of at least six weeks or more; without an identifiable causes and its negative influence on the quality of life[1],It's a disabling affliction that considerably limits patients' daily activities[2].
Limited data are available comparing the effects of fexofenadine with other antihistamines in CIU[3 and 4].

Fexofenadine hydrochloride, the major active metabolite of terfenadine, is an antihistamine with selective H1-receptor antagonistic character [5], Both enantiomers of Fexofenadine hydrochloride displayed approximately equipotent antihistaminic effects. Fexofenadine hydrochloride inhibited antigen-induced bronchospasm in sensitized guinea pigs and histamine released from peritoneal mast cells in rats [6]. The clinical significance of these findings is unknown. In laboratory animals, no anticholinergic or alpha1-adrenergic blocking effects were observed. Moreover, no sedative effect or other central nervous system effects were observed. Fexofenadine did not cross the blood-brain barrier [7].

Fexofenadine hydrochloride is a carboxylated metabolic derivative of Terfenadine and third generation selective histamine H1-receptor antagonist with antihistaminic and non-sedative effects. Fexofenadine competitively binds peripheral H1-receptors, thereby stabilizes an inactive conformation of the receptors[8]. Fexofenadine hydrochloride is not a long-acting sedative having antihistamine with highly selective peripheral H1 receptor antagonist activity and a single 120 mg daily dose showed optimum effects in Chronic Urticaria[9].

Hydroxyzine Hcl (Atarax) is an antihistamine with anticholinergic and has sedative property that relieves the symptoms of allergy by blocking histamine receptors, thereby stops the actions of histamine[10 and 11].

This study aims to evaluate the efficacy and safety of combined administration of the Fexofenadine and Hydroxyzine Hcl for the treatment of CIU.

2. PATIENTS AND METHODS

This study was conducted on 48 Libyan patients (22 females and 26 males) (Fig. 1) with a mean age of 37 (21-65 year olds) (Fig. 2). All patients were diagnosed withChronic Idiopathic Urticaria. The study was done during January 2016 to December 2016. The average duration of the disease was 6 months (4-10months) (Fig. 3). All patients were examined to rule out any triggers. Patients were treated with 120 mg of fexofenadine in the daytime and 25 mg of hydroxazine in the nighttime, for a period of 3 weeks, with a follow up at zero, two and three weeks for treatment response.

Patients who participated in this study were selected based on having normal standard routine investigations of CIU. Pregnant women, lactating mothers and patients with abnormal laboratory findings were excluded. Patients, who were included in this study, only suffered from CIU not any other illness or abnormal laboratory results.

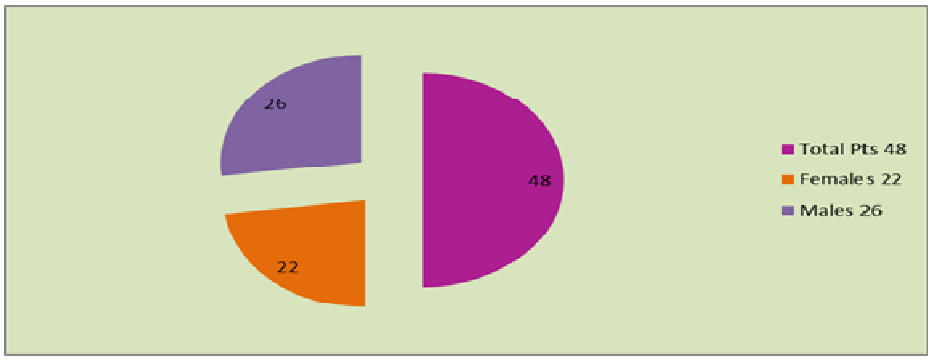

Fig. 1. Total Patients: 48 patients. (22 female patients and 26 male patients)

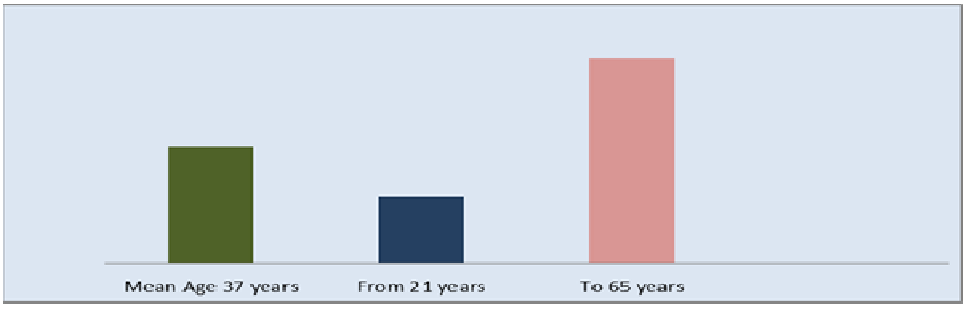

Fig. 2. Patient age (Mean age 37 years, from 21 to 65 years old)

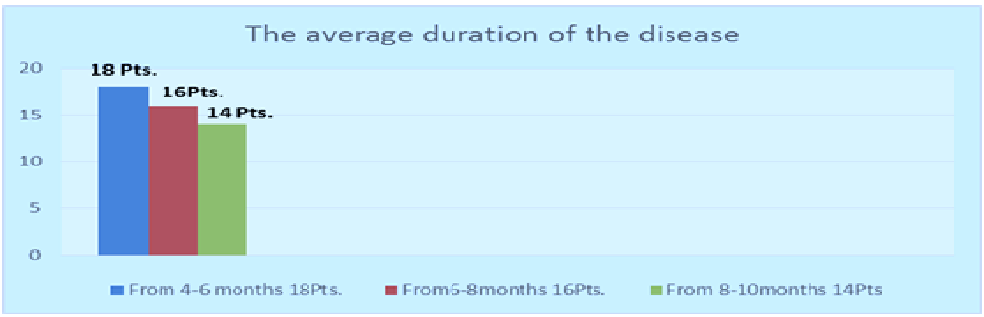

Fig. 3. Disease duration vs. number of patients

A general and systemic examination was conducted and their consents were obtained at the initial visit.

(The average duration of the disease was 6 months, 4-6 months (18 Pts), 6-8 months(16 Pts) and 8-10 months (14 Pts).

3. RESULTS

Combined administration of Fexofinadine and Hydroxyzine Hcl was found to be effective in 48 patients with CIU.Good response was observed in 16 patients (33%) and a very good response was recorded in 18 patients (37.5%). A satisfactory response was noted in 8 patients (17%) and an unsatisfactory response was seen in 6 patients (12.5%) (Fig.4). Overall a good tolerance of the combination of fexofinadine and Hydroxyzine was reported in the patient samples.

Adverse effect that was mild and transient was observed in 14 patients (sleepiness in 14 patients (29%)) and these cases did not require the drugs withdrawal (Fig.5). Thus combined administration of fexofinadine and Hydroxyzine could be recommended for CIU and in wide application for the treatment of allergic diseases.

Fig. 4. Response to the treatment

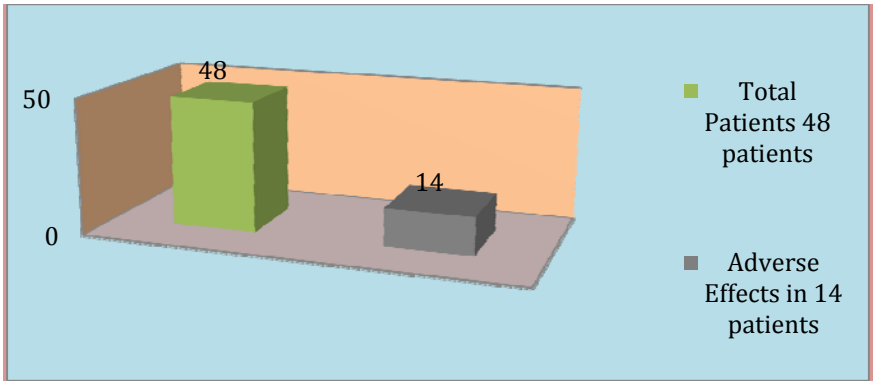

Fig. 5. Adverse effect (Sleepiness was seen in 14 patients)

4. DISCUSSION

CIU is characterised by almost daily presence of urticaria for at least six weeks without an identifiable cause. Additionally, Urticaria is a cutaneous syndrome characterised by dermal edema (wheal) and erythema that blanches with pressure. The lesions typically last for less than 24 hours and are usually pruritic. In 1983, Christensen and Maibachsummarised the theory behind the use of histamine H1 receptor antagonists (antihistamines) in clinical dermatology. These agents had been remained the mainstay of treatment for urticaria. Limited data are available comparing the effects of fexofenadine with other antihistamines in CIU[12].

A single anti-allergic study, with a randomized, double-blind, placebo-controlled, parallel, multicenter research showed that the hydroxazine 25mg taken once per day at nighttime, was an effective treatment for CIU. The result was characterised not only by a rapid and sustained response, but also by an important improvement in quality of life [13].

Similarly 120 mg of fexofenadine taken once a day was found to be well tolerated and was statistically superior to placebo in reducing signs and symptoms ofCIU and in ameliorating interference with sleep and daily activities due to Urticaria[14],However, the results of the present study are in accordance with some previous single anti-allergic therapy study.[15].Day et al. demonstrated that fexofenadine HC1 at a single daily oral dose of 120 mg could be utilized as an effective non-sedating antihistamine for the treatment of CIU and was found to be devoid of any significant adverse effect including Cardiotoxicity [16].

So far limited published data are available on 120 mg fexofenadine molecule. Most of the studies addressed the efficacy and safety parameters of fexofenadine in seasonal allergic rhinitis and asthma. In this study majority of the patients were between 25 to 55 years of age and the males outnumbered the females, which is in corroboration with the earlier observations that CIU mostly affects adults and males [17and 18].
On the other hand, these study findings depicted that the combination of sedating and non-

sedating H1 receptor antagonists was more effective in controlling the pruritus than the wheals [19],[20].

The literature review revealed that few studies documented the efficacy of the first and second-generation antihistamines in the treatment of urticaria, a biologic entity that usually resolves within 3-4 weeks. However, no controlled studies were found that suggested superiority of any antihistamine in the treatment of urticarial[21],The present study revealed that the drug combination was able to control the pruritus and wheals, effectively at the end of the third week of treatment. A decrease in urticarial lesions activity was observed at 87.5%, with a good response in 16 patients (33%), and a very good response in18 patients(37.5%). A satisfactory response was found in 8 patients (17%). Combined administration of Fexofenadine and Atarax for the treatment of CIU was found to considerably decrease the activity of urticarial lesions and symptoms, though all patients continued to receive treatment till the third week of treatment. This result is in corroboration with the study by Paul et al.[22].

Adverse effects were analysed; which were mild and transient and did not require the drugs withdrawal (sleepiness in 14 patients (29%) In fact, the present study revealed that the combination of fexofenadine and hydroxazine was superior to mono-therapy at the end of the third week of treatment. There are no studies, which examined the combination of fexofenadine and hydroxazine for the treatment of CIU. Thus, further studies are required to confirm these findings.

5. CONCLUSION

It can be concluded from the present study that the combination of fexofenadine and hydroxazine (Atarax) appeared to be an effective and safe treatment to treat CIU, as it was found to improve urticarial symptoms and the general quality of life. Additionally it could also benefit patients who do not respond to single anti-allergic drug. However, Antihistamines are the mainstay of urticaria therapy. This evidence-based review suggests that there are efficacy differences between newer, non-sedating antihistamines and older agents in some forms of the disorder. Therefore, further well-controlled clinical trials with larger numbers of patients are needed to clarify the role of these agents in the treatment of urticaria.

DISCLAIMER

This paper is based on preliminary dataset. Readers are requested to consider this paper as preliminary research article, as authors wanted to publish the initial data as early as possible. Authors are aware that detailed statistical analysis is required to get a scientifically established conclusion. Readers are requested to use the conclusion of this paper judiciously as statistical analysis is absent. Authors also recommend detailed statistical analysis for similar future studies.

CONSENT

As per international standard or university standard, patient's written consent has been collected and preserved by the authors.

ETHICAL APPROVAL

As per international standard or university standard written ethical permission was collected and preserved by the authors.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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