Pharmacotherapy of Adult Patient with Chronic Urticaria Associated with Gastritis

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ABSTRACT

Chronic urticaria is a challenge both for the patient and the physician. It may seem as a trivial disease, but significantly undermines the patients' quality of life. Due to the constant or constantly relapsing tormenting itch and changes in the appearance, it has a negative impact on the social life and mental state of the patients that limit their working lives. The aim of treatment is to achieve complete symptom relief. However, it can take quite a long time to achieve complete remission. Treating the cause is the most desirable option, but it is, unfortunately, not applicable in the majority of patients, in which urticaria is idiopathic. In all cases, unless contraindicated, symptomatic relief should be offered while searching for the underlying cause. Symptomatic treatment is currently the most frequent form of management. Health related quality of life is increasingly being recognized as a primary outcome in clinical trials, population studies and public health. In treatment the patient's well-being should be a central focus as CU can persist over an extended duration from six weeks to over twenty years.

Keywords: Chronic urticaria, Helicobacter pylori, pharmacotherapy, gastritis

1. INTRODUCTION

Chronic urticaria (CU) is defined as a skin disease with central induration (wheal) and erythema formation around it (flare) that appears at least twice a week and remains at least for 6 weeks continually [1]. Establishing the cause of CU is difficult and at times almost impossible. This renders cause specific management difficult and frustration on part of the patient and the treating physician [2]. When the cause is not detected after intensive clinical and laboratory investigation, it is considered to be as chronic idiopathic urticaria (CIU) [3]. CU has worldwide prevalence ranging from 0.1% to 0.5% while CIU constitutes up to 70% of cases [4,5]. Both children and adults can develop CU, although it is more common in adults. Women are affected twice as often as men, and the condition typically begins in the third to fifth decade of life [5].

Helicobacter pylori is a frequent gastro-intestinal infectious agent having worldwide distribution. Helicobacter pylori has been linked to gastroduodenal diseases such as gastritis, peptic ulcer disease, low-grade gastric lymphoma arising from mucosa-associated lymphoid tissue, and gastric adenocarcinoma [6]. Moreover, several studies associated H.
pylori to chronic urticaria. Proposed mechanisms in the pathophysiology were IgE mediated immune response, release of auto-antibodies induced by the immunogenic bacterial cell wall and release of cytotoxic proteins by H. pylori activation of eosinophils which triggers the systemic immune response [7].

The ultimate goal of CU therapy is the complete remission of the disease as it destabilizes the patient’s quality of life. However, challenges in the management of the disease both in the diagnosis and pharmacotherapy requires personalized approach based on the experience and expertise of the physician.

2. CASE REPORT

A 61-year-old woman presented at a dermatology clinic with a one year and four months history of remitting and relapsing occurrence of edematous pruritic pink wheals of variable size and shape extended at trunk and limbs with accompanying angioedema. The patient complained burning sensations and urticaria at the time of consultation without difficulty of breathing and swallowing. Cutaneous manifestations were not related to a specific inducing factor and were associated sometimes with mild abdominal pain. Past medical history included high cholesterol, chronic gastritis, UTI and urticaria. Medication history included irregular omeprazole therapy for the past 10 years, 6 month irregular medication on simvastatin and ciprofloxacin for recurrent UTI. She denied any past history of allergies to inhalants, food, insects puncture nor of drug adverse reaction. No family history of allergies were present.

![Erythematous wheals associated with chronic urticaria](image)

Figure 1: Erythematous wheals associated with chronic urticaria

The patient was consulting several physicians with her urticaria for the past one year and four months. The first physician she consulted prescribed cetirizine 10 mg OD in the morning and hydroxyzine 10 mg OD in the evening for 1 month to relieve the symptoms of urticaria. For the first 3 days of antihistamine therapy the symptoms slightly improved. However, the symptoms return the following day. Upon dermatological consultation, dexamethasone 6 mg was given intramuscularly. Along with the antihistamine therapy, ketoconazole 200 mg tab once daily for 7 days and hydrocortisone cream for topical application were prescribed. However, the hives started to re-appear after 7 days of therapy. The patient also consulted an allergist and underwent skin prick tests (SPT) for a broad range of aero and food allergens but no reaction was noted. She was prescribed with combination of 250 mcg betamethasone and 2 mg dexchlorphenamine maleate tablet TID for one week along with ranitidine 150 mg tablet BID.

During the current time of observation, the patient was assuming a therapy with antihistamine drugs with low dose of steroid without any benefit. Physical examination confirmed the presence of the typical erythematous wheals over the body accompanied by itching and with angioedema on the face.

To investigate the etiopathogenesis of urticaria, the patient was submitted to laboratory testing. Laboratory tests included normal blood cell counts and leukocytes, erythrocyte sedimentation rate, C-reactive...
protein, serum electrophoresis, urinalysis and urine culture. The role of food and additives was excluded on the basis of negative SPT result test. Finally urea breath test disclosed the presence of H. pylori. The patient was treated with omeprazole 20 mg BID and roxithromycin 150 mg for 7 days followed by another 7 days of omeprazole 20 mg once daily. Cutaneous manifestations of urticaria disappeared one week after starting treatment and the patient remained free of itching and red wheals. The mild abdominal disturbance also stopped in a few days of treatment.

3. DISCUSSION

This case suggests a causal relationship between the eradication of H. pylori and the disappearance of CU after effective therapy. In accordance with other studies, H. pylori eradication was associated with remission of urticaria symptoms, suggesting a possible role of H. pylori in the pathogenesis of CU. This was clearly demonstrated in a study among 36 chronic idiopathic urticaria patients infected with H. pylori, in which 33 (91.67%) were successfully treated with omeprazole, amoxicillin, bismuth subcitrate, and clarithromycin for 14 days. Clinical follow-up of 33 successfully treated patients 3 months later revealed complete remission of urticaria in 54.5%, partial remission in 18.2%, and remained unchanged in 27.3%.

Several studies found a link between H. pylori infection and CU [5,8,9]. It has been proposed that infection with H. pylori increases gastric mucosal permeability causing greater exposure to allergens in the gastro-intestinal tract. Moreover, release of histamine in the skin can be stimulated as an immune response to H. pylori infection [10]. It has been suggested that the IgE-containing cells in gastric and duodenal mucosa [11], IgG and IgA antibodies to 19-kDa H. pylori-associated lipoprotein [12] play a role in the pathogenesis of CU.

On the other hand, in the meta-analysis conducted by Gu and associates suggests that H. pylori infection is significantly, though weakly, associated with an increased risk of chronic urticarial [13]. In spite of the controversial evidence from several studies, it has been observed in this case that the remission and improvement of symptoms in the patient with CU nearly doubled when treated for H. pylori infection compared when symptomatically treated with antihistamines and low doses of steroids. In this case, it can be argued that manifestations of chronic urticaria is associated with H. pylori.

Several literatures stated that H. pylori eradication seems to be difficult to achieve that it requires the concurrent administration of two or more drugs. Though the standard treatment to eradicate the H. pylori consists of a triple regimen of medications (a proton pump inhibitor, amoxicillin and clarithromycin, from 7 to 14 days), with eradication rates ranging from 50 to 70% [13], the symptoms of the patient noticeably alleviated after a week of roxithromycin and omeprazole medication. Relapses can occur following the treatment, mainly in developing countries in comparison with developed countries, with relapse rates of 12 and 1.5% respectively [7]. When recurrence develops one year or more, it seems to be related to a new infection rather than the reactivation of a prior infection. Several studies have shown partial or complete remission in urticaria in patients who have successfully eradicated H. pylori, compared to patients whose the infection have not been eradicated [14]. It should be therefore, recommended to this case the addition of another antibiotic to the patient to complete the standard triple therapy in order to prevent recurrence of the disease.

4. CONCLUSION

This case report of CU in a female adult suggests that there is a strong causal association by H. pylori infection, which was confirmed in the improvement of the symptoms after treatment. Because CU is a condition that can have a significant impact on quality of life, testing for H. pylori and eradicating the infection is a worthwhile exercise to patients with no response to habitual treatment for CU especially those that have history of chronic gastritis. For the diagnosis of H. pylori infection, one should consider the costs and accessibility of the population to the urea breath test. However, more studies are required to clarify such proposed causal links.

REFERENCES
