

A novel injection for chronic urticaria by autologous serum derived whole blood

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Abstract

Background: Chronic urticaria (CU) is the most challenging in medicine and patients suffer from irritable itch and weal's and need to use a huge antihistamine pill burden. Therefore, there is a need for more effective modalities to reduce pill burden. evaluation of the effectiveness of autologous serum therapy (AST) performs for CU patients.

Materials and Methods: Two patients were selected for this treatment. whole blood samples were obtained from the patients by 5 ml syringes and processed to prepare serum for injection. It was repeated 8 times every 7 days. They were evaluated for 24 weeks after the last injection by a dermatologist.

Results: our results by Follow-up visits during treatment showed that AST can be used as a new modality in Chronic urticaria (CU) patients with high efficiency and no recurrence of the disease.

Conclusion: a promising treatment for CU is AST without side effects and limitations.

Keywords: autologous serum therapy, Chronic urticaria, whole blood

Introduction

Chronic urticaria (CU) is the most common skin disease that occurs with extensive itchy wheals angioedema or both for the duration of 6 or more weeks. [1] There is a main challenge for this disease in the light of etiology, investigations, and management. [2] Chronic urticaria disease occurs unpredictably with an exceedingly difficult period as they suffer from irritable itch and weals and tolerance to high use of antihistamines pill. Some studies have evaluated the effectiveness of various second-generation antihistamines as the first-line treatment for chronic urticaria. [3-6] Due to the limited effectiveness of antihistamines, new treatments are needed for extending relief and reducing pill burden. Autoreactive mechanisms occurred in 30-50 % of all CU patients. Injection of their serum is caused an immediate hypersensitivity-type skin reaction in them. At this event, the expression of autoantibodies directed against the high-

affinity receptor for IgE (anti-Fc_εRI) of mast cells or IgE (anti-IgE) acts as the main factor. Autohemotherapy has been known as a different type of treatment for autoreactive CU patients Of course with repeated injections of autologous serum. However, in Indian medicine, this treatment has been used for many years in an extensive range of diseases such as osteoarthritis, atopic dermatitis, chronic inflammation, allergies, immunodeficiency, vascular diseases, and various other skin disorders. [7,8]

Auto-chemotherapy is able that relieve or stimulate the sensitivity of arCU patients to the proinflammatory signals expressed in their circulation. Auto-chemotherapy can consider as an effective technique in autologous serum skin test (ASST)-positive CU. [9] This study aimed to evaluate the response of AST for CU patients to control the use of antihistamines and reduce patient costs.

Study design:

Tow patients were selected for AST according to a dermatologist Screening visit. They have autologous serum skin test (ASST) (+) with CU. This study has been approved by the ethics committee. The treatment process is as follows:1. Patient profile: age: 21 and 48 years; duration of the disease: 5 months to 1 year. (Respectively)2. It

is done in 8 repetitions every 7 days.3. In each session of treatment, 5 ml of blood is collected in Vacutainer plastic tubes and centrifuged at 3500 r.p.m. for 10 min. The sera are then separated with 5 cm³ syringes. 2.5 ml of the serum is injected intramuscularly into the gluteus muscle in each session of treatment.

Results: During the 24 weeks of patient follow-up, they had excellent improvement and significant changes in the symptoms of

the disease. Their improvement was confirmed by a dermatologist during follow-up. **(Figure 1)**

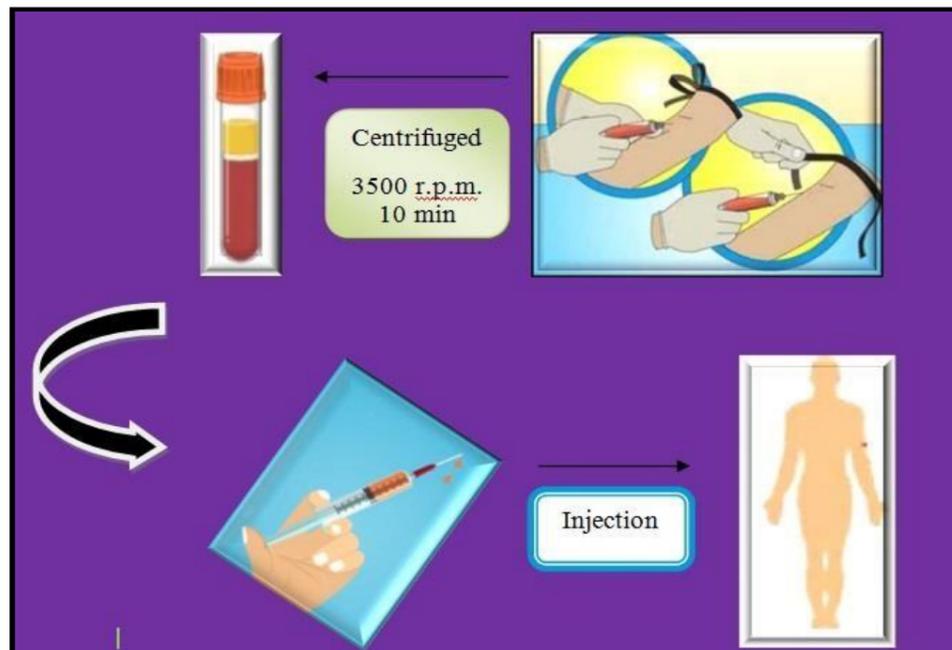


Figure 1: the process of autologous serum isolation from patients.

Discussion

From, the time of Heberden until now, urticaria has been affected patients' quality of life in the aspect of emotion, functioning, and symptoms. [10,11]

one of the problems for physicians is CU treatment. Antihistamines are the most prescribed treatment, and of course, in some patients, there is drug resistance, and the dermatologist is forced to use systemic steroids or other immunosuppressive drugs on a regular. The use of these drugs causes patients to complain.

Our findings show that AST is a new method in ASST-positive CSU patients with useful clinical effects due to autoantibodies changes. it

Conclusion

A new method in chronic urticaria is AST which can reduce the pill burden and improve the quality of life. Weekly injections can do easily done in a short time and cause patient satisfaction

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