

ORIGINAL RESEARCH

Benefits Of NBUVB In Chronic Urticaria

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ABSTRACT

Introduction: Urticaria is a term used to describe recurrent whealing of the skin and can also be defined as a disease in which clinical presentation is determined by depth of swelling. The condition is called chronic when it occurs for more than 6 weeks. Mast cell degranulation is the primary event in urticaria. Many patients don't respond to the first line treatment like antihistamine, so NBUVB was tried in patients on which still the research is less. Aim of the study was to study the clinical profile chronic urticaria patients and the role of NBUVB in patients of chronic urticarial.

Materials and Methods: 50 consecutive patients with ASST positive in whom no treatment was given were selected between august 13 to July 14 for NBUVB and treatment was studied in them, patients in whom eye disease or with H/o phototoxic rxn or with H/O cancer in family were excluded from the study.

Results: Majority of the patients gave a successful response, when they were followed up for a period of 3 month period, 13 male patients and 30 female patients out of 17 male and 33 female gave a reduction in UAS score.

Conclusion: This is to summarize the topic, and to conclude with the result that NBUVB is a safe and effective modality in treatment of chronic urticaria patients who are ASST positive, but probably has to be studied in more detail, before making it a treatment modality which can be introduced to all, but with our small study, we could make an analysis about effectiveness of NBUVB and it's growing list of functions and number of diseases in which it can be used.

Keywords: Chronic Urticaria, NBUVB.

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INTRODUCTION

Urticaria is a term used to describe recurrent whealing of the skin and can also be defined as a disease in which clinical presentation is determined by depth of swelling. The condition is called chronic when it occurs for more than 6 weeks. Mast cell degranulation is the primary event in urticaria. There is conflicting evidence on the number of mast cells, but there is agreement that there may be more chances of degranulation in response to certain stimuli. Mast cell degranulation occurs when the IgG autoantibodies binds to IgE receptors and hence leads to release of histamine resulting in extravasation of plasma into the dermis which then leads to formation of wheals, which are usually pruritic. Patients who demonstrate IgG autoantibodies against epitope against IgE receptor, are autoimmune urticaria and this type of urticaria is comparatively more pruritic, have a higher itch score and more in number whealing.^{1,2} Autologous serum skin test (ASST) is used in our study for correlating with various urticaria etiologies. The ASST has a sensitivity of 70% and a specificity of 80% for *in vitro* basophil histamine release, termed positive when the serum injected hand shows 1.5 mm more bulge than saline injected hand.^{3,4} In spite of the fact that ASST has not proved full safety profile, ASST is being used for the diagnosis of clinically suspected cases of autoimmune urticarial.⁵ We performed ASST in chronic urticaria patients to see if NBUVB is helpful in patients with autoimmune urticaria, as if the role of NBUVB is helpful or proved to have a positive effect then this would go a long way for the

benefit of the patients as the patient would be saved from various sedative antihistamines and various immunosuppressive.

MATERIALS AND METHODS

Fifty consecutive patients (excluding pregnant/lactating females and children aged ≤ 12 years) of chronic urticaria who were ASST positive and who have not taken any treatment (defined as recurrent urticaria occurring at least twice a week for a minimum of 6 weeks) attending the Outpatient Dermatology Department were enrolled between August 2013 and July 2014 for NBUVB therapy. Patients having acute urticaria, urticarial vasculitis, physical urticaria (diagnosed on the basis of history/provocation tests) or other systemic diseases known to cause urticaria were also excluded. An ASST was performed only after the patients were not taking any treatment for 3 days.³⁻⁵ The test was not performed over the areas involved by wheals in the last 24hr. The patients were randomly distributed into two groups, first group was given only antihistaminic and second group was given NBUVB and antihistaminic. The ASST was considered positive when the average diameter of the autologous serum-induced wheal was >1.5 mm of the saline-induced wheal and the redness of the autologous serum-induced wheal matched that of the histamine-induced wheal. Symptoms and signs were graded on the basis of the modified urticaria activity score.⁶

STATISTICAL ANALYSIS

The Chi Square and Fischer's exact tests were used for categorical variables and the Mann-Whitney non-parametric test was used for the other variables that were not distributed normally. $P < 0.05$, calculated at the 5% level (95% confidence limit), was considered to be statistically significant.

RESULTS

There were 17 males and 33 females aged between 14 and 63 (mean, 32.69 ± 13) years. The overall duration of disease was 6-240 (mean, 40 ± 40.93) months and the age at onset of symptoms/

signs was 2-63 (mean, 30.07 ± 13) years. An urticaria activity score (UAS) of ≥ 5 was observed in 44 (96%), while it was < 5 in 6 patients. Angioedema was present in 12 patients. Multiple symptoms were associated in 15 patients. The gastrointestinal symptoms like abdominal pain, diarrhea, indigestion (13 patients), general malaise, headache, loss of concentration, lassitude (6 patients) and joint pains (two patients). Six patients in group and 27 patients in group reported to respective therapy and hence we concluded that NBUVB was effective in ASST positive patients to control chronic urticaria.

DISCUSSION

The mean age at onset of urticaria in our study was 22 years. The females outnumbered the males (M:F, 1:2.07).⁷⁻¹⁵ The ASST positivity was reported significantly more in females than in males, as also seen in previous studies.¹⁶ The age and sex profile of patients in both the groups was statistically similar.^{10-14,17} The study had no statistical significance, but the median duration of urticaria was a longer in ASST-positive patients, than in patients in whom ASST was reported negative which corroborates with similar other studies.¹⁸ The number of body sites involved in ASST positive cases was significantly higher than ASST negative cases in our study. We reported a positive co-relation in UAS being higher in ASST positive groups than in negative groups. However not all studies could demonstrate this.^{12,19} We did not observe any difference in number of cases or severity of angioedema in ASST positive group with ASST negative groups. Patients with ASST positivity had 50% more association of systemic symptom abnormality than patients with ASST negative group as observed in our study and similar results were seen in older studies. Autoimmune urticaria accounts for majority of the cases of urticaria (40-50%) and these patients give positive reaction to intra-dermally injected serum. These patients demonstrated, histamine-releasing IgG autoantibodies against the high affinity IgE receptor $F_{c}\epsilon R_{1}\alpha$ (35-40%) on mast cells and basophils and to IgE itself (5-10). ASST test is helpful in demonstrating basophil and mast cell degranulation, the autoantibodies are present in

all individuals, but the positive result is only if the IgE receptors are free. The result of ASST helped us to find autoimmune urticaria, which was the baseline investigation in our study and on whom NBUVB was studied. When the disease is disabling, immunosuppressive therapy is warranted. Although these therapies should bring dramatic effect to this disorder of autoimmune pathogenesis, only selected patients are found to be responsive. The drugs which have been tried for this purpose include cyclosporine, methotrexate, azathioprine and mycophenolate mofetil. In our study we studied the role of NBUVB as we all know it also suppresses T cell, so the therapy was tried in a starting dose of 2-2.5 j/Cm² and gradually increments with 20 % were given and slowly antihistamines were removed and the therapy was given thrice a week for about 3-4 months and therapy did respond with mean reduction of UAS to less than 2 week in 13 males and 30 females, 3 females did not respond one male did not respond even after continuing it for three months and 2 male patients left the study after 2 months.

CONCLUSION

This is to summarize the topic, and to conclude with the result that NBUVB is a safe and effective modality in treatment of chronic urticarial patients who are ASST positive, but probably has to be studied in more detail, before making it a treatment modality which can be introduced to all, but with our small study, we could make an analysis about effectiveness of NBUVB and it's growing list of functions and number of diseases in which it can be used.

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