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Serological Testing Of Patients To Provide A Roadmap For Management Of Chronic Urticaria

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Abstract
Urticaria is characterized by the sudden appearance of wheals and/or angioedema, defining wheals as a cutaneous swelling of variable size, almost invariably surrounded by a reflex erythema, with associated itching or, sometimes, a burning sensation, and of transient nature, with the skin returning to its normal appearance in usually 1 to 24 hours.
Angioedema can be defined as a sudden and pronounced swelling of the deep dermis and subcutaneous tissue or mucous membranes, with a painful rather than an itching sensation and a slower resolution than for wheals that can take up to 72 hours.
Acute Urticaria is characterized by the occurrence of hives and/or angioedema for less than 6 weeks duration, whereas episodes lasting longer than 6 weeks are regarded as Chronic Urticaria. This somewhat arbitrary distinction of 6 weeks becomes important in regard to potential mechanisms, approaches to evaluation, and options for treatment.
Keyword: *Acute Urticaria is characterized by the occurrenceUrticaria, diagnosis, management.*

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I. Introduction:

Urticaria is a rash that appears suddenly and is characterized by a variable size cutaneous swelling that is almost always surrounded by Reflex erythema. It can be accompanied by itching or, in some cases, burning sensation. The skin usually returns to normal within 1-24 hours. Angioedema, on the other hand, is a sudden and severe swelling of the deeper dermis and/or subcutaneous tissue/mucous membranes that is painful rather than itching and resolves more slowly than wheals (up to 72 hours). Acute Urticaria occurs when the rash lasts less than 6 weeks, while episodes that last more than 6 weeks are considered chronic. This somewhat arbitrary difference of 6 weeks is important to consider in terms of possible mechanisms, approach to evaluation, and treatment options.

Prevalence:
Lifetime prevalence of acute Urticaria- 20% of the population
Lifetime prevalence of chronic Urticaria-12%

Significance of the study:

A systematic approach in the accurate diagnosis and relevant treatment in patients with Urticaria will help improve quality of life of these patients, enable institution of early and specific therapy as indicated and make treatment and referral easier for the treating physician. This is because there are many causes of Urticaria and relevant tests, if done early on, can rule out or rule in important diagnoses, thereby making treatment effective and tailor-made for that individual.

Objectives:
1. To describe the clinical epidemiology of Urticaria based on the pathophysiology of in Indian settings.
2. To understand the pathophysiology abd its pathogenecity beyond the release of histamine.
3. To generate an algorithm and protocol for management based on the pathophysiological classification
4. To detect the association of HLA DR and Suballele HLA DQ to Urticaria.

Proposed laboratory tests:
- Total IgE level
- Anti-nuclear antibody

- Complement C3 and C4
- Thyroid Stimulating Hormone (TSH)

Significance of the above laboratory tests in Urticaria management:

The above mentioned test results will provide clarity and determine the possible etiology for the Urticaria as there are a variety of causes and each type has its own mode of treatment.

Laboratory tests needed for the comprehensive diagnosis of Urticaria:

- Complete blood count with ESR
- Urine for routine examination
- Stool for Ova and parasites- 3 consecutive early morning fresh samples
- Total IgE level
- Anti-nuclear antibody
- Complement C3 and C4
- Thyroid Stimulating Hormone (TSH)
- Antithyroid antibodies level

II. Results

The test results will indicate whether Atopy / Autoimmune Thyroid / Vasculitis parasitic infestation could be the possible cause of the condition.

Result

160 Patients with symptoms of allergy in the skin were collected and tested for antinuclear antibody test (ANA), C3, C4, TSH and IGE. 84 out of 160 samples were found to have Urticaria.

84 Patients out of 160 samples

S.NO	TEST		%
01	Erythrocyte sedimentation rate (ESR)	47 PATIENT ABOVE 30 MM/HRS	39
02	Eosinophils	36 PATIENT ABOVE 15%	30
03	Anti-nuclear antibody (ANA)	12 PATIENT ABOVE 1:80	11
04	Thyroid Stimulating Hormone (TSH)	17 PATIENT ABOVE > 4.1 mU/L	15
05	Total IgE level	29 PATIENT ABOVE >100IU/mL	24.36
06	Complement C3	14PATIENT ABOVE > 178 (mg/dl).	11.76
07	ComplementC4	19 PATIENTABOVE 48(mg/dl).	15.96
08	Erythrocyte sedimentation rate (ESR) ,Thyroid Stimulating Hormone (TSH and Total IgE level	9 PATIENTABOVE 48(mg/dl).	

Patients with symptoms of Urticaria- 160 samples were collected (116 females and 54 males),and tested Erythrocyte sedimentation rate (ESR),Eosinophils count, Anti-nuclear antibody (ANA), Thyroid Stimulating Hormone (TSH), , Complement C3, ComplementC4 and Total IgE level . 84 Patients out of 160 samples adults of age group between 13- 58 (53 females and 31 males),

The normal ESR in adults of age group between 13- 58 is 47 patients above 30mm/hrs out of 84 patients. This is a phagonomic sign for the occurrence of urticarial and could be one of the diagnostic criteria.