



## A Review on Urticaria

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### ABSTRACT

Skin diseases are most common form of infections occurring in people of all ages. There are >2000 recognised skin diseases; everyone will develop at least 1 at some point of their life these range from trivial cosmetic problem to acute +chronic diseases which may be disfiguring ,itchy, painful and may even rapidly fatal. Urticaria is one of the skin disorder common in pathology. It is characterized by itchy wheals surrounded by a red halo or flare. Sometimes swelling of skin also take place i.e. edema.

Urticaria and angioedema with persistent symptoms have a significant effect on quality of life and activity. Approximately 20% of the population will develop urticaria (hives) at some point in their lifetime Urticaria of any type is estimated to have a lifetime prevalence of 8.8%, whereas CU has an annual prevalence of 0.5% to 5.0% and a lifetime prevalence rate of 1.8%.

Urticaria treatment is not easy and when angioedema associated therapeutic measures should be complex. Etiological treatment is the most desirable option for physician and patient, but in many cases the cause cannot be identified. Non-sedating H1-antihistamines are considered first-line treatment of urticaria. In some cases other drugs such as corticosteroids, anti-inflammatory, leukotriene receptor antagonist may use.

### INTRODUCTION

Skin diseases are most common form of infections occurring in people. Skin infection produced in all ages. There are so many type of skin diseases. skin infection characterized by inflammation, redness, itching, pain.

Urticaria is one of the skin disorder in which there is erythramatous swelling in skin occurs.<sup>[1,2]</sup> This lesion is due to vasodilation of small venules and capillaries as well as exudation of fluid into superficial dermis.<sup>[1]</sup> Urticaria is characterized by sudden appearance of pruritic wheals .<sup>[3,4]</sup> Urticaria mainly divided into two types .<sup>[5]</sup>

- (i). **Acute urticaria** (symptoms present less than six week )
- (ii). **Chronic urticaria** (symptoms present longer time ,more than six week)

Due to allergic reaction of food & drug ,contact with chemicals, physical stimuli infection of urticaria occurs.<sup>[5]</sup> It is an inflammatory disease characterized by itchy, redness of skin ,edema also produced

,increase in blood flow causes warmth .<sup>[5,6]</sup> The mast cell is the major affected cell in urticaria.<sup>[3,6,7]</sup> Antihistamines are most preferably for patient with urticaria.<sup>[1,3,4,6]</sup> H1-antihistamins are first line drug therapy . Short term corticosteroid therapy may reduce urticaria, leukotriene receptor antagonist are also used in treatment of urticaria.<sup>[1,3,8]</sup>

**Fig.1** Urticaria



**DEFINITION:-**

Urticaria is a skin disorder that pathologically produce itchy wheals, surrounded by a red halo or flare. Urticaria also defined by swelling of skin i.e. edema. Deep and localized edema which may appear by itself or together with superficial wheals are called as angioedema.<sup>[4,6,9]</sup> Angioedema causes severe swelling usually in the face, lips, eyelids and genitalia. Sometime the tongue and laryngopharynx are also affected, which is dangerous because it can block passage of air into lungs<sup>[3]</sup>

**Fig. 2** Edema Formation On Eyelid Wheals consist of three different features:-



- A center swelling of variable size, almost invariably surrounded by a reflex erythema.
- Associated itching or sometimes burning sensation.
- A fleeting nature, along with the skin returning to its normal appearance within 1-24 hrs.



**Fig.3** Urticaria wheals formation.

Angioedema is characterized by:-

- Sudden pronounced swelling of lower dermis and subcutis.
- Sometimes pain rather than itching.
- Frequent involvement of mucous membrane.
- Resolution that is slower than wheals and can up to 72 hrs.<sup>[10]</sup>

**ETIOLOGY:-**

Many etiological factor related with onset of chronic urticaria but most cases are idiopathic.<sup>[4]</sup> Rate of identification of causes varies from 20-50% in patient with chronic urticaria.<sup>[3,4]</sup> Almost identified causes are inducible urticaria, which cholinergic, symptomatic dermatographism, cold, and pressure urticaria are most common forms.<sup>[4]</sup> However causes of chronic urticaria is unknown in 80- 95 % of patient.<sup>[1,6]</sup>

Following pathogenic condition should be considered for chronic urticaria cases,

- (i). Infection's

- (ii). Food and food additives
- (iii). Drug
- (iv). Insect
- (v). Autoimmune disorder
- (vi). Physical urticaria
- (vii). *Infections:-*

Infection plays some role in causing urticaria .Infections are identified in more than half of acute urticaria cases.<sup>[4]</sup> In infectious category viral infection such as infectious hepatitis ,infectious mononucleosis and variety of other .<sup>[1]</sup> Infection with hepatitis B virus is about 20% to 30% of cases with respect to bacterial infection 15% of urticaria patient have increase anti- staphylolysis titer. chronic infections (e.g. tonsils, teeth, sinuses, gallbladder) are found in some cases of urticaria

Reason for acute urticaria is viral infection in upper respiratory tract, usually few day before appearance of wheals.<sup>[6]</sup> Fungal infection and parasitic infections such as ascaris, ancylostoma, strongyloides, filaria, echinococcus, schistosoma, trichinella, toxocara and fasciola also have been implicated but rarely cause urticaria even in endemic area.<sup>[1]</sup>

**(i). Food and food additives :-**

Some food product may also responsible for causing reaction (IgE mediated) are shellfish, fish, eggs, peanuts, nuts and fruits in adult and eggs, milk (cow milk) and peanuts in children.<sup>[1,3,6]</sup> Food additives are probably not IgE mediated and they include tartrazine, sulfites,benzoates and, perhaps, natural salicylates. And finally, inhalant and contactant allergens may be IgE mediated. All theusual inhalant allergens are capable of inducing urticaria through IgE pathway.<sup>[1,6]</sup>

**(ii). Drug's :-**

Different types of drugs responsible for inducing urticaria .antibiotics such as penicillin , cephalosporin, macrolide's, vanomycin are responsible for urticaria with or without angioedema.<sup>[1,4]</sup> Sulfonamides and other agent of that group including sulfonyleurea oral hypoglycemia agents, thiazide diuretics, furosemide, carbonic anhydrase inhibitors and procaine-type local anesthetics have been known to cause urticaria.<sup>[1]</sup> Aspirin and other non-steroidal anti-inflammatory drugs (NSAID) may play important role in precipitating urticaria.<sup>[1,3,6]</sup> Person sensitive to aspirin have an increased urticarial reaction rate .<sup>[6]</sup>

**(iii). Insect's :-**

Insect bite and stings can cause urticaria .the most popular out of them are hymenoptera sting from wasps , yellow jackets ,hornets ,bees and fire ants .<sup>[1,3]</sup> Urticaria result from flea bites, swimmers and possibly mosquito bites and may confused with hives. <sup>[1]</sup>

**(iv). Autoimmune disease :-**

Autoimmune disease including systemic lupus erythematosus, serum sickness, cutaneous Vasculitis rheumatiods arthritis, which may have urticaria like symptoms.<sup>[1,3]</sup> Malignancies rarely induce urticaria .endocrine disease both hyper and hypothyroidism and hyperparathyroidism can result in urticaria .<sup>[1]</sup>

**(v). Physical urticaria :-**

Physical urticaria involves idiopathic cold urticaria with development of hives at local site of cold contact.<sup>[3]</sup> Physical stimuli include cold, heat, scratchy, pressure, vibration .<sup>[1]</sup> Cold urticaria associated with cold agglutinins, cryoglobulins and cryfibrinogen. Cholinergic urticaria is associated with small punctate wheals with large flares induced by exercise. Hot showers, sweating anxiety as well as it may be associated with fall in lung fun.<sup>[1]</sup> Dermatographism is most common form of physical urticaria .<sup>[3,6]</sup> it is precipitated by gentle stroking of the skin. Which result in a large wheals and flare within 5 min heat urticaria is vary rate disorder characterized by wheal formation a circumscribed stimulis within temp range 45<sup>0</sup>c to 50<sup>0</sup>c .<sup>[6]</sup>

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## Conclusion

Urticaria is skin disorder has a profound impact on the quality of life and causes immense distress to patients. This review includes definition, causes, diagnosis, and treatment of urticaria. Approach to manage urticaria is identification and elimination of underlying causes and eliciting triggers while second is treatment aimed at providing symptomatic relief. And use of second generation non-sedative H1 antihistamines as first line treatment. In some cases other drugs such as corticosteroids, anti-inflammatory, leukotriene receptor antagonist may use.