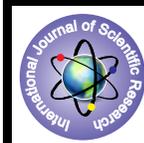


Urticaria Like Lesions in Childhood- an Observational Prospective Study in A Tertiary Care Teaching Hospital



Paediatrics

KEYWORDS :Urticaria, Papular urticaria, Urticarial vasculitis, Mastocytosis

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ABSTRACT

Childhood urticaria is not so uncommon in children, though the acute form of urticaria is more common than the chronic one. There are many conditions which can mimic urticaria like lesions in children which initially may point towards the diagnosis of simple urticaria, but those are really a different one. In this prospective study we are highlighting those mimickers which have got more clinical significance in children. Not much of studies about the incidences and prevalence of these types of skin conditions had done in recent years.

Urticaria is a common childhood disorder clinically characterized by transient erythematous wheals appearing spontaneously and lasting for less than 24 hours. It may again reappear and can be associated with angioedema and mild itching. Acute urticaria lasting for less than 6 weeks is a self-limiting condition and is commonly related to infection, food and drugs. R3. Chronic urticaria is rare in pediatric age group and lasts for more than 6 weeks.

There are many dermatological diseases occurring in children that are mimickers of urticaria and can manifest like wheal like skin lesions. These are termed as urticarial syndromes and includes insect bite hypersensitivity reaction, cutaneous mastocytosis, Drug reactions, Contact urticaria, Urticaria multiforme, Urticarial vasculitis, Cryopyrin associated periodic syndromes, Cutaneous vasculitis, Autoimmune blistering diseases in childhood etc. R1, R2.

The wheals in urticarial syndromes are persistent for more than 24 hours, have symmetric distribution, may be tender and associated with some primary and secondary lesions like papules, vesicles, crusts, scaling, purpura, necrosis and heals with post inflammatory hypo or hyper-pigmentation. Systemic signs like headache, fever, malaise, arthralgia, pain abdomen; neurological, cardiovascular or respiratory finding may be associated. R1. Angioedema are rarely seen in urticarial syndrome.

With the objective to study the differential diagnosis of childhood urticaria, we conducted this study on the pediatric patients presenting with urticarial like wheals.

Materials and Methods:

A prospective observational study was carried out in the pediatric OPD in collaboration with the department of dermatology in our hospital which is a tertiary care teaching hospital in Eastern India.

Study Duration- One year from August 2015- July 2016

Inclusion Criteria:

Patients in the pediatric OPD between the age group of 2-14 years presenting with urticarial like wheal and having associated features of urticarial syndromes lasting for more than 24 hours are included in our study. 128 children were enrolled in the study were subjected to detailed history taking and clinical examination. Relevant laboratory investigations were done where indicated.

Results:

Table 1: Age and Sex wise distribution of all urticarial syndromes

Diagnosis	2 to 5 years		6 to 10 years		11 to 14 years		Total
	Male	Female	Male	Female	Male	Female	
Papular urticaria	20	12	15	13	05	03	68
Cutaneous Vasculitis(HSP)	03	05	06	08	02	03	27
Mastocytosis(Urticaria pigmentosa)	03	03	05	03	02	00	16
Urticarial vasculitis	00	01	02	03	01	01	08
Urticarial drug reaction	00	00	01	01	01	01	04
Contact urticaria	00	00	00	01	01	01	03
Autoimmune blistering disease(DH, Bullous pemphigoid, CBDC)	00	00	01	00	01	00	02

Figure 1: Disease wise distribution of Urticarial syndromes

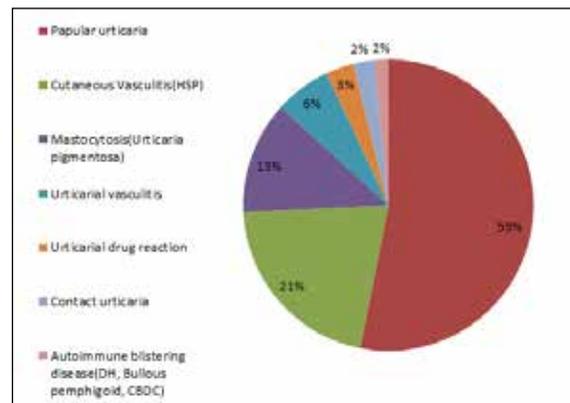


Figure 2: Sex wise distribution of common urticarial syndrome

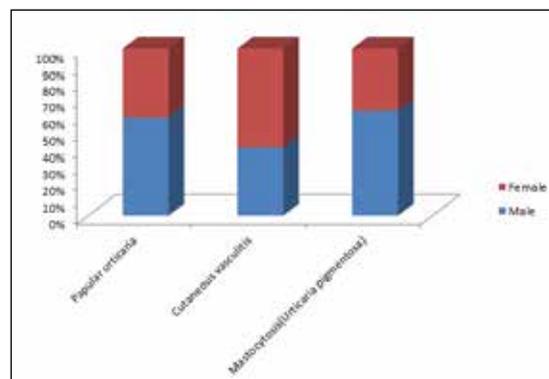
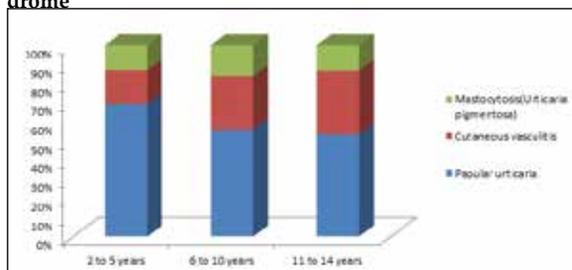


Figure 3: Age wise distribution of common urticarial syndrome**Figure 4: Different childhood urticarial syndrome****Discussion:**

Spontaneous appearance of wheals, transient in nature resolving within 24 hours again reappearing on same site or different site defines urticaria. [1]. The close differential diagnosis of childhood urticaria which poses a diagnostic challenge may range from benign cutaneous forms to systemic condition with multi-system inflammatory affection. [2] Some of the commonest mimickers of childhood urticaria include papular urticaria, Urticaria multiforme, mastocytosis, Henoch's schonlein purpura, contact urticaria, urticarial vasculitis and serum sickness like reactions.

Papular urticaria, also known as insect bite hypersensitivity reactions, usually appear on the extensor aspect and exposed areas of skin in the form of extensive multiple papules and wheals but persistent in nature associated with excoriation and vesiculations.[1]. In our study these were the commonest skin lesions seen in around 53% cases, and the common age group of presentation was 2-5 years.

Cutaneous mastocytosis, otherwise known as urticaria pigmentosa found in around 12-15% cases in our study and was almost equally distributed in all the age groups. It manifests as deep brown to erythematous macules and papules over trunk, face and extremities. Healing occurs with residual hyperpigmentation. A positive Darrier's Sign could be elicited on stroking the skin. The lesions were aggravated by heat and sun exposure. [4]. Small vessel vasculitis presented with non thrombocytopenic palpable purpura otherwise known as Henoch-Schonlein Purpura(HSP) were the second commonest entity in our study with a female :male ratio of 1.7:1 where as in study done by Bayrakci et.al the male children were more commonly affected. [5]We found HSP in almost 20-22% cases in our study, out of which more than 50% cases were presented with abdominal pain as the systemic finding associated with rash. The most common age group for HSP was 6-10 years in our study, where as in other literature it was found to be around 14 years of age.[5]

Urticarial vasculitis is a type III hypersensitivity reaction with small vessel vasculitis and systemic association. It is manifested by generalized urticarial wheals persisting for more than 24 hours. The skin lesions were non itchy associated with pain and burning sensation, purpuric or necrotic changes and resolved with residual hyperpigmentation. Fever, arthralgia, abdominal pain, chest pain, hepatitis, nephritis, uveitis, connective tissue diseases were commonly associated. It is rarely seen in pediatric patients.[6]. We found around 8 % cases of urticarial vasculitis in our study all of which were presented with abdominal pain as systemic finding.

Serum sickness like reactions was characterized by giant urticarial plaque with dusky to ecchymotic centre distributed over face, trunk and extremities with distinctive acral oedema, joint tenderness and fever. Serum sickness like reaction is often seen secondary to any medications or infections. The rash has often a delayed onset course following antigenic exposure. The commonest drugs are beta lactams, anticonvulsants, biologic agents etc.[7,8]

We found drug rashes in 4 patients mostly caused by the beta lactams groups.

Conclusion:

There are very few studies in literature about the urticarial syndrome in children, but there is no comparative study data of these clinical spectrum in children. Our study defines each urticarial syndrome according to the characteristic appearance and overall comparison are done as per their incidences in our region. Many a times in children we found some systemic findings associated with these urticarial lesions, out of which abdominal pain is the commonest. Laboratory investigations and histopathological correlation are often required to establish the diagnosis. Treatment and approach of these vary from spontaneous urticaria. Differentiation between common urticaria and urticarial syndromes represents a diagnostic challenge. Persistent urticarial wheals associated with other skin lesions and systemic symptoms should be further evaluated and referred to a dermatologist for an expert opinion.

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