

A CLINICAL STUDY ON ETIOPATHOGENESIS OF SHEETAPITTA, UDARDA AND KOTA WITH SPECIAL REFERENCE TO URTICARIA

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ABSTRACT

Urticaria is an allergic condition which can manifest as *Sheetapitta, Udarda and Kota*. In this study an attempt is made to study etiopathogenesis of Urticaria with its subtypes, as well as *Sheetapitta, Udarda and Kota* which would help in understanding pathogenesis and management of these diseases. Further, an attempt is made to study *Nidana* and *Lakshana* (signs and symptoms) of *Sheetapitta, Udarda and Kota* with relation to urticaria and relevance to its subtypes Cold urticaria, Pressure urticaria and Solar Urticaria. This article consists of manifestations of *Sheetapitta, Udarda and Kota* seen in 60 patients of Urticaria.

Key words: *Sheetapitta, Udarda, Kota*, Urticaria.

INTRODUCTION

The description of *Sheetapitta, Udarda and Kota* simulates with description of etiology and clinical features of Urticaria. Skin disorders like Urticaria create physical as well as mental stress to an individual. Most of the acute cases of Urticaria are related to food, drugs, inhalants or infections. Until exact bio mechanism of Urticaria is clearly known, treating this disease remains a challenge. Urticaria is a troublesome disease that manifests as wheals which are edematous pink or red, intensively itchy at their onset surrounded by a bright red flare. It generally occurs between the ages of 20 to 40 years¹. About 20-30% of individuals have at least one attack of Acute Urticaria in their life time². Acute and Chronic types of Urticaria have a wide variety of allergic etiologies. The common physical Urticarias include Cold Urticaria, Solar Urticaria, Pressure Urticaria, Dermographism and Cholinergic Urticaria. Angioedema occurs alone

or in combination with Urticaria, including Urticular vasculitis and physical Urticaria.³ Urticaria is one of the disease described under allergies according to modern concepts abides equivalent clinical pictures of *Sheetapitta, Udarda and Kota*. *Sheetapitta, Udarda and Kota* follows immediately after *Kushta* in *Madhava nidana* and *Yogaratnakara*^{4,5} as this entire manifest in skin and are caused by *three Doshas*. *Sheeta pitta* is diagnosed clinically based on symptoms like *Varateedastavat Shotha, Kandu, Raga* being caused or aggravated by exposure to cold or even moist wind. Presentation of *Udarda* also includes (*Swayathu*) swelling resulted from *Kapha*, caused by contact with cold water (*Sheeta paneeya samsparsha*) particularly during cold season (*Shishirartha*)⁶. *Hemadri* also mentions *Vakshoabhishtyanda* (discomfort in the chest region), *Sheethavepathu* (shivering from cold), *Sheetapaneeya samsparsha* (swelling caused

by contact with cold water), *Raga* (accompanied by redness) and *Kandu* (itching) as Lakshana of *Udarda*. *Kota* presents with almost similar symptom but only difference is the etiological factor *Asamyak vama* or *Chardi vegavorodha*⁷ (*improper emesis / suppression of the urge for vomiting*). Similar features are mentioned as symptomatology of Urticaria in modern medical science. Common symptoms of Urticaria comprise intense itching, erythematous intra dermal vascular reaction manifesting as wheals or hives associated with burning sensation, fever and vomiting. Usually only symptomatic treatment is received by patients in primary setup leading to symptomatic relief, but the underlying actual pathology is not properly treated resulting in relapse. But it can be effectively managed by *Ayurveda* system of medicine. Therefore through this study an effort has been made to analyze etiology and pathogenesis of various types of Urticaria in scientific grounds and classify them under the headings of *Sheetapitta*, *Udarda* and *Kota*, and understand the etiopathogenesis, which would be contributory for initiating preventive steps and effective management.

Materials and methods

Objective: A clinical study to compare etiology, types, signs and symptoms of Urticaria with *Sheetapitta*, *Udarda* and *Kota*.

Sampling frame: Patients selected from outpatient department and inpatient department of SDM College of Ayurveda and Hospital Hassan and other referrals were included in present study.

Study Design: Clinical observational study

Diagnostic criteria: Patients presenting with dermal swellings known as wheals associated with itching. Each episode of individual lesions which appear and disappear within 24 hrs. or persists more than 24 hrs. with or without arthralgia and myalgia.

Inclusion Criteria: Patients aged between 16 to 60 years of either sex fulfilling diagnostic criteria.

Exclusion Criteria: Patients suffering from other skin diseases such as Eczema, Psoriasis and any other major systemic disorder that may interfere in the course of study.

Collection, Tabulation and Statistical Tests:

60 Patient fulfilling diagnostic criteria and inclusion criteria were categorized in to following 3 sub-groups as Group A- Cold Urticaria, Group B - Pressure Urticaria, Group C - Solar Urticaria and subjected to physical examination, lab investigation followed by detailed history recording with the help of questionnaire related to etiopathogenesis of Urticaria, *Sheetapitta*, *Udarda* and *Kota*. Later an effort was made to compare sign and symptoms of *Sheeta pitta Udarda* and *Kota* with different types of urticaria and find etiology, thereby study etiopathogenesis. Statistical analysis was carried through SSPS software. The outcome was assessed with relevant statistical tests like Chi Square Goodness of fit to elicit the etiological factors. $P=0.01- 0.001$ is considered as statistically highly significant, $P=0.01-0.05$ is considered as statistically significant and $P> 0.05$ is considered as non-significant.

Observation and results

In the present study 100 patients presenting with Urticaria were screened, among them 60 patients who fulfilled the diagnostic and inclusion criteria were registered, out of which 54 patients had *Sheetapitta* and 6 patients had *Udarda*, but none of the patient suffered from *Kota* in the present study. Among total 60 patients of Urticaria, considering subtypes of Urticaria 45 patients presented with Cold Urticaria, 10 patients with Pressure Urticaria and 5 patients had Solar Urticaria. Based on case Performa and specially designed questionnaire, patients were observed and analyzed as follows.

Table -1 Signs and symptoms of Sheetapitta, Udarda and Kota

Sheetapitta lakshana N=54		%	Udarda lakshana N=6		%	Kota lakshana N=0	
Varateedashtavat shotha	54	100	Varateedashtavat shotha	6	100	Varateedashtavat shotha	0
Kandu	54	100	Kandu	6	100	Ati kandu	0
Raga	54	100	Raga	6	100	Raga	0
Toda	16	29.6	Uroabishyanda	2	33.33	Bahumandala	0
Chardi	3	5.55	Sheethavepathu	4	66.66	Kshanikotpada vinasha lesions	0
Daha	24	44.44					
Jwara	17	31.48					

Table -2 Distribution based on Age

Age group In Years	Sheetapitta N=54		Udarda N=6		Total N=	Cold urtica- ria N= 45		Pressure Ur- ticaria N= 10		Solar Urti- caria N= 5		Total N=
	N	%	N	%		N	%	N	%	N	%	
10-20	7	12.96	0	0	60	4	8.88	2	20	1	20	60
21-30	21	38.88	3	50		17	37.77	4	40	3	60	
31-40	9	16.66	0	0		9	15	0	0	0	0	
41-50	8	14.81	1	16.66		8	17.77	1	10	0	0	
51-60	9	16.66	2	33.33		7	15.55	3	30	1	20	

Table -3 Distribution based on Gender N=60

Gender	Sheeta pit- ta N= 54		Udarda N= 6		Total	%	Cold Urti- caria N= 45		Pressure Urticaria N= 10		Solar Urticaria N= 5		Total	%
	N	%	N	%			N	%	N	%	N	%		
Male	19	35.18	3	50	22	36.66	15	33.33	3	30	4	80	22	36.66
Female	35	64.81	3	50	38	63.33	30	66.66	7	70	1	20	38	63.33
Total					60	100							60	100

Table -4 Distribution of chief complaints and associated complaints in Cold Urticaria, Pressure Urticaria, Solar Urticaria

Chief complaints	Cold Urticaria N= 45		Pressure Urticaria N= 10		Solar Urticaria N= 5	
	N	%	N	%	N	%
Wheal	45	100	10	100	5	100
Itching	45	100	10	100	5	100
Erythema	45	100	10	100	5	100

Associated complaints-						
Vomiting	1	2.22	0	0	1	20
Pricking sensation	16	35.55	4	40	3	60
Burning sensation	19	42.22	6	100	3	60
Fever and joint pain	12	44.44	0	0	2	40

Table -5: Distribution of Sheeta pitta, Udarda and Kota in cold urticaria, pressure urticaria, solar Urticaria

	Sheeta pitta		Udarda		Kota	
	N=54	%	N=6	%	N=0	%
Cold urticaria N=45	41	91.11	4	8.88	0	0
Pressure urticaria N=10	8	80	2	20	0	0
Solar urticaria N=5	5	100	0	0	0	0

Table -6 Distribution based on time of manifestation of wheal, itching, erythema

Time of manifestation of wheal, itching and erythema	Number of Patients	%
During the day	18	30
In the evening	8	13.33
During the night	19	31.66
In the morning	15	25
Total	60	100

Table -7 Distribution based on seasonal variation

Seasonal variation	Number of patients	%
Rainy	15	25
Autumn	10	16.66
Summer	11	18.33
Winter	24	40

Table -8 Distribution based on duration of manifestation of wheals

Duration of wheals	Number of patients	%
Up to 30 min	14	23.33
30 min to 1 hr.	17	28.3
1 hr. to 12 hr.	14	23.3
More than 24 hr.	15	25

Table -9 Distribution of wheals

Distribution of wheals	Number of patients	%
Localized	15	25
Generalized	45	75

Table -10 Distribution of location of wheal

Location	Number of patients	%
Arms or legs	26	43.3
Whole body covered	27	45
Pressure site	6	10
Others	1	1.7

Table -11 Nidanas of Urticaria- subtype Cold Urticaria manifesting as Sheeta Pitta

Nidana	Statistical significance
Cold water after hot drinks, Milk and curd together, <i>Pishtanna</i> (fermented foods) ,Oily food, <i>Dadhi</i> (curd), Chapatti, Excess <i>lavana</i> (salty), Excess <i>amla</i> (sour), <i>Navanna</i> (freshly harvested grains) , <i>Masha</i> (blackgram), <i>Sarshapa</i> (mustard), Dal, Peanut , Ragi ,Exposure to cold weather.	Statistically highly significant with p value 0.000
Intake of sour fruits with milk, Curd at night, Fish with milk, Refrigerated food items, Different fruit items like strawberry, jackfruits etc, Horse gram, Non-veg food items like egg, fish, chicken, shellfish, mutton, beef, Alcoholic preparations, Coffee, Tea.	Statistically non-significant with P value >0.05.

Table -12 Nidanas in Urticaria subtype Pressure Urticaria manifesting as Sheeta Pitta

Nidana	Statistical significance
<i>Pishtanna</i> , Chapatti, Banana, <i>Masha</i> , Exposure to cold weather	Statistically significant with p value 0.034.
Bakery, Ragi, Curd at night, Cold water after hot drinks, Milk and curd together, Sour fruits with milk, Maida, Oily foods, Refrigerated food, Excess <i>lavana</i> , Excess <i>amla</i> , Peanut, <i>Dadhi</i> , <i>Vidahi ahara</i> , Fish with milk, Refrigerated food items, Different fruit items like strawberry, jackfruits etc, Horse gram, Non-veg food items like egg, fish, chicken, shellfish, mutton, beef, Alcoholic preparations, Coffee, Tea.	Statistically non-significant with p value >0.05.

Table-13 Nidanas in Urticaria- subtype Solar Urticaria manifesting as Sheeta Pitta

Nidana	Statistical significance
<i>Vidahi Ahara</i> ,Peanut	Statistically highly significant with p value 0.000.

<p>Curd at night , Cold water after hot drinks, Milk and curd together, Sour fruits with milk, <i>Pishtanna</i>, Oily food, <i>Dadhi</i>, Dal, Chapatti, Excess <i>lavana</i>, Excess <i>amla</i>, <i>Navanna</i>, <i>Masha</i>, Ragi, Bakery, Cheese, Tea, Coffee ,Exposure to cold weather, <i>Krodha(anger)</i> ,Maida, Fish with milk, Refrigerated food items, Different fruit items like strawberry, jackfruits etc, Horse gram, Non-veg food items like egg, fish, chicken, shellfish, mutton, beef, Alcoholic preparations ,Coffee, Tea.</p>	<p>Statistically non-significant with p value >0.05.</p>
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DISCUSSION

In the present study out of total 60 patients, maximum 23 patients belonged to age group between 20-30 years. This study shows a greater incidence of Urticaria in younger age. According to *Sushruta samhita*, *youvana* is the period of natural aggravation of *Pitta Dosh*. This may lead to *Rakta Dushti* due to indulging in *Nidanas*, leading to *Sthanasamsraya*, causing *Tvak vikaras*. A dominance of female (N=38) more affected than male (N=22_) is seen. The universal data also suggests more prevalence of Urticaria in women supports present observation⁸. All 60 patients presented with all cardinal symptoms of Urticaria like wheal, itching and erythema. Consideration of sub types of urticarial shows, Maximum number of patients i.e., 45 (75%) had cold Urticaria. Pressure Urticaria was found in 10(16.66%) and Solar Urticaria in 5(8.33%). It shows higher incidence of Cold Urticaria compared to other 2 forms of Urticaria. Out of total 60 Urticaria patients 54 (90%) presented as *Sheetapitta* and only 6 (10%) patients presented with *Udarda* and none of the patients suffered from *Kota*. A higher incidence of disease *Sheetapitta* compared to *Udarda* and *Kota* was observed in the present study with special reference to urticaria.

Analysis of *Nidana* of patients suffering from urticaria revealed that, 45 patients suffering from subtype Cold Urticaria, showed excessive indulgence in *aharaja nidanas* like *pish-*

*tanna (Kapha Pitta Prakopa)*⁹, *Dadhi (Kapha Pitta, Rakta Dushaka)*¹⁰, Intake of cold water after hot drinks, milk and curd together (considered as *Virudha* and *Tridosha kara*), Excessive consumption of oily foods, excess *Amla*¹¹, *Masha*¹² (*Pitta, Rakta Prakopaka*), *Chapatti, Navanna*¹³ (*Kapha Vardhaka*), Excess *Lavana* (leads to *Pitta Dushti*)¹⁴, Mustard (*Tridosha-kara*)¹⁵, Intake of dal (cause Urticaria by direct histamine liberation or by allergic sensitivity) and *Viharaja Nidana* exposure to cold weather. The intake of peanut (can produce Urticaria by direct histamine liberation or by allergic sensitivity.¹⁶) among patients of Cold urticaria and Solar urticaria was statistically significant in manifestation of *Sheetapitta*. Analysis of *Nidana* among 8 patients suffering from subtype Pressure Urticaria showed that following *Nidanas* were statistically significant suggesting a definite role of these *Nidanas* in manifestation of *Sheetapitta*. *Pishtanna*, chapatti, banana, black gram and *Viharaja Nidana* include exposure to cold weather. Among the *Aharaja Nidanas* in Urticaria – subtype Solar Urticaria manifesting as *Sheetapitta*, following were statistically significant, intake of fast food and peanut.

Sheeta pitta manifests as skin rash notable as dark red, raised, itchy rashes. In *Ayurveda* it is considered as *Tridoshajanya (Kapha+Pitta+Vata)*, which gradually spreads to the skin (*Twacha*) and the other tissues (*Raktadi Dhatu*). It is diagnosed clinically based upon the symptoms like *Ra-*

ga, Varateedamshtavat Shotha, Kandu and these symptoms are triggered or aggravated by exposure to cold or even moist wind. *Udarda* is a *Kaphaja vikara* and manifests with symptoms like *Vaksho abhishyanda, Sheeta vepathu, Sheetambu sparsajanya sophra, Raga* and *Kandu*. The same has been described in modern symptomatology of Urticaria, most often has an unknown, nonspecific etiology, but can be related to medications, food and similar vascular stimulating agents. The activation of mast cells and their release of mediators is the unifying mechanism of most Urticaria. Histamine release is associated with mast cell degranulation. There is initially erythema at the injection site secondary to vasodilatation, next the edema leads to a hive or edematous plaque. In the final stage there is an erythematous ring surrounding the hive as the axonal reflex produces more vascular changes. The common symptoms are usually intensely itching intradermal vascular reaction (wheals or hives) associated with burning sensation, fever and vomiting. According to *Madhavanidana, Prakupita Vata* and *Kapha (PradushtauKaphamarutau)* due to *Sheetamaruta Samsparshatadi Nidana*, in association with *Pitta (Pittenasahasambhooya)* spreads internally and externally (*Bahir-Antahvisarpatha*) and results in manifestation of *Sheetapitta-Udarda* and *Kota*. Exposure to *Sheethamarutha* leads to *Pradushana* of *Kapha* and *Vata* due to *Samanaguna (Sheethaguna)*. This *Vata* and *Kapha* combine with *pitta* and circulate all over the body. *Bahirvisarpatha* of this combination of *Vikrutha Tridosha* results in *Utsannamandala* over the *Twak*. *Antharvisarpatha* of this combination of *Vikrutha Tridosha*, resides in *Rakthadi dhatus* and produces other symptoms

The clinical manifestation of *Sheetapitta, Udarda* and *Kota* has close resemblance to each other and with Urticaria. General characteristic of nearly all these conditions is *Varati-*

damshtavat shota associated with *Kandu* and *Raga*. Based on the predominant *Doshas* involved in the pathogenesis, these three can be distinguished from one other. This implies that *Kapha-pitta* doshas cause *Udarda* and *Vatapitta* predominant *Doshas* cause *Sheetapitta* and *Kapha pitta Pradhana Rakta Dushti* leads to *Kota*. Hence it can be put forth that in *Sheetapitta pitta Samsrustha Vata* plays a dominant role and in *Udarda, Pitta Samshrustha Kapha* has a significant role. Possible *Samprapthi* (etiopathology) of *Sheetapitta, Udarda* and *Kota* has contributions from both external as well as internal mechanism. *Dosha Dushya Samoorchana* leads to *Dusti* of *Tridoshas* mainly *Brajakapitta* leading to *Agnimandya* which can be considered as release of different mediators by hypersensitivity reactions resulting in different types of urticaria. The eliciting factor voiced for Urticaria especially for Cold Urticaria include cold air/water/ wind/food /objects is similar to the *Nidana* mentioned for *Sheetapitta, Udarda* and *Kota* ie, *Sheetamaruta Samsparsha /Sheeta Paneeya Samsparsha. Prakriti* of a person, *Rithu* (climate variation), *Desha, Dosha* condition, *Agni*, are key factors for these disorders to appear.

CONCLUSION:

The clinical study shows that Indulgence in *Nidanas* like intake of curd at night, intake of cold water after hot drinks, *Pishtanna*, oily foods, curd, chappatti, consumption of excess *Lavana*, intake of excess *Amla, Navanna, Masha, Sarshapa*, dal, peanut has a role in the causation of *Sheetapitta* with special reference to Cold Urticaria. Indulgence in *Nidanas* like intake of *Pishtanna*, chapatti, *banana, Masha, Navanna* and indulgence in exposure to cold weather has a role in causation of *Sheetapitta* with special reference to Pressure Urticaria. Indulgence in *Nidanas* like peanut and *Vidahi Ahara* has a role in causation of

Sheetapitta with special reference to Solar urticaria. Hence it is clear that *Nidan* mentioned in *Ayurveda* like *Sheeta Maruta Samsparsha*, *Sheeta Paneeya Samsparsha* has a role in manifestation of *Sheetapitta*, *Udarda* and *Kota*. Incidence of *Kota* is uncommon. *Sheetapitta* and *Udarda* can manifest as Cold urticaria, as Pressure urticaria and as solar urticaria.

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