

CLINICAL STUDY TO EVALUATE THE EFFICACY OF *DRAKSHADILEHA* IN *KASA*Dr. Gopal Teotia<sup>1\*</sup>, Dr. Prof. Keerti Verma<sup>2</sup>, Dr. Prof. Reena Pandey<sup>3</sup> and Dr. Vipin Kumar<sup>4</sup><sup>1</sup>P.G Scholar, Dept. of Kaumarbhritya, Rishikul Campus, UAU, Haridwar.<sup>2</sup>Professor & HOD, Dept. of Kaumarbhritya, Rishikul Campus, UAU, Haridwar.<sup>3</sup>Professor, Dept. of Kaumarbhritya, Rishikul Campus, UAU, Haridwar.<sup>4</sup>Associate Professor, Dept. of Maulik Evam Sidhanta, Gurukul Campus, UAU, Haridwar, Uttarakhand.**\*Corresponding Author: Dr. Gopal Teotia**

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**ABSTRACT**

Respiration is the apparent component of life which is done by *Prana Vayu*. This sole indication of life is influenced in this infection *Kasa*, making an impediment to the respiratory function. *Kasa* word demonstrates both physiological and pathological state of respiration. Disease *kasa* can be related with the disease of cough based on its highlights and etiopathogenesis. *Kasa* is an exceptionally basic clinical condition, *Kasa* (cough) is one among them progressively common now days, requesting more note worthy worry over it. Cough happens on account of disturbance of respiratory mucosa. Cough is a significant safeguard component of respiratory framework and help to draw out the contaminated discharge from windpipe and bronchi. Cough has expansive range etiology, which goes from allergens to disease. Cough happens in relationship with acute upper respiratory disease, acute pharyngitis, acute bronchitis and sinusitis, all of which rank among the best ten purposes behind visiting to pediatrician. The study of life – *Ayurveda* is the most ideal approach to viably and securely deal with the condition without inciting any medication reliance where different *Shodhana* and *Shaman* methods and utilization of inward drug detoxifies the body as well as gives nourishment and builds the versatility of lung tissue and creates normal invulnerability of the body along these lines diminishing rambling repeat of the sickness and giving long haul help to the patient. Present investigation features different etiological elements, pathogenesis, and manifestations of *kasa*, Principles of the board have likewise identified.

**KEYWORDS:** *Prana Vayu, Kasa, Shodhana, Shaman, Ayurveda.***INTRODUCTION**

Ayurveda deals with preventive as well as curative aspects. Ayurveda is the ancient experimental life science. It's having its own fundamentals and concepts regarding etiopathogenesis of diseases and its management whose efficacy is time tested and time to time well established by our Acharyas.

Ayurveda has a vision of *Hetuviparita, Doshaviparita* and *Vyadhiviparita Chikitsa*. It is the basic understanding of the *Nidana Panchaka* of certain condition in the body which is more important to understand than to name that particular condition. Though it has given importance to naming of the various diseased conditions, as in *Trishothiya*,<sup>[1]</sup> *Asthodariya*<sup>[2]</sup> and *Maharogadhya*<sup>[3]</sup> etc, still, it has kept a big scope for the physician for naming a diseased condition by accepting that it may not to be practical to name or remember the name to all the diseased condition in the body.<sup>[4]</sup> At the same time, it has explained how a diseased condition can be treated without bothering about names to that condition. The un

surpassed benefit of the naming of a certain condition is that the whole details of the diseased condition (*NidanPanchaka*) can be conveyed from one physician to other by just mentioning the name which is universally accepted. This is good for those conditions where the *Vyadhiviparita Chikitsa* can directly be applied. As what happens in the contemporary medical science – this is the diagnosis and this is the treatment for this diagnosis. But this approach has its limitations. On the other side, the “Management” is the better word that that describes the word “*Chikitsa*” in Ayurveda.<sup>[5]</sup> It is a broader term that includes the *Hetuviparita, Doshaviparita* and *Vyadhiviparita* aspects of the *Chikitsa*. This term has the meaning of managing the patient with taking into consideration the various factors having during treatment of a particular diseased condition.<sup>[6,7]</sup>

Ayurveda, the indigenous medical system of India, has integrated the concept of inter connect into its understanding of health and disease, it considers the human body as a whole individual with a network of interrelated functions, mind and consciousness, where in

a disturbance in one part will have repercussions in other parts as well. The key to health is for these factors to maintain harmony since diseases seen as a perturbation in this network. Ayurvedic treatment aims not only at removal of disease, but also at the restoration of the equilibrium of body function. The social impact of ill health is on the rise, with some diseases affecting not only the health of individuals but also that of a nation's economy with their increasing healthcare costs.

The human body is continuously under the influence of environmental changes, quality of life on whole earth is deteriorating day by day due to pollution and urbanization. The quality of air, water and food ingested does not have always a beneficial effect and its purity determines the health of a person, all these variables have a taxing effect on the basic immune system of human body and fundamental health of the body.

Respiratory complaints are well defined clinical conditions in the contemporary medical science. They are classified under the broader heading of Respiratory Tract Disorders, which is a group of different symptoms and diseases. In developing and developed countries, pediatric outdoor patient department(OPD) have more than 50% of patients having respiratory tract complaints.<sup>[8,9]</sup> As cough is the most frequent symptom of respiratory diseases. In which majority patients having recurrent cough as the manifestation of recurrent respiratory disease.<sup>[10]</sup> In classics, description of disease *Kasa* clearly correlate with cough and its pathophysiology exactly correlates with the mechanism of cough reflex.<sup>[11]</sup>

The disease *Kasa* is as old as life and references to this 'Prana'. The word *Prana* is formed by adding the suffix 'Pra' to the *Dhatu*. An *Sharangadhara* says *Pranavayu* acts as *Amrutha* to nourish the body.<sup>[12]</sup> So it is most vital for the substance of life from the first breathe to the last breathe.

*Kasa* seems to be a very simple disease, if neglected or miss – managed; it may result in disease with poor prognostic condition. In Ayurveda *kasa* is taken as an independent disease unlike in modern science, also it may occur as a symptoms or an *Updrava* in other diseases.

Respiratory illness is one of the most important and challenging area of general practice. Disease *Kasa* is found all over the globe and in all age groups. Although both adult and children are equally affected by respiratory uneasiness, running nose and stuffed chest, children are more vulnerable to *Kasa*. In children, *Kasa* is the most common cause of school absence, affecting children's educational potential and adversely affecting a child.

Poor housing, fire –wood, cooking in open, sanitary condition are causes the for respiratory infections in rural

india while in urban area pollution from industry, vehicles, tobacco smoke, exposures to air ,exposure to allergens have been correlated with airway hyperactivity. In which cough is preventable condition but there is, till date, no cure for it in the contemporary medical science.

Non judicious use of antibiotics and corticosteroids.<sup>[13]</sup> in contemporary system of medicines during present era has lead to iatrogenic suppression of immunity and birth of multi drug resistant trait of pathogens.<sup>[14]</sup> This phenomenon in turn results in the recurrence of Respiratory Tract Infection (RTI). In modern system of medicine, antibiotics, anti –histamines, bronchodilators, expectorants etc are commonly used for the management of RTI.<sup>[15]</sup> Although they all are effective in reducing the severity of the RTI and suppressing the symptoms, yet none of these modalities of treatment provide a permanent cure, and have limitations owing to their effects.

Though, to achieve the best result out of this holistic approach it is essential to understand completely the basic fundamentals and also, the approach of that system towards the pathophysiology, diagnosis and treatment of a disease; still, it is acknowledgeable to begin with the trial of some medicine of one system with the diagnosis from the other under the light of few similarities commonly observed during the practice in medicine field. "*Drakshadileha*" as per "*Bhaisjaya Ratanwali*"<sup>[16]</sup> These poly herbal Ayurvedic compound has been in use since ages, and has been found to be useful in treating respiratory disorders and promoting health.

## MATERIAL AND METHODS

### ❖ Aim and Objectives of the study

- To evaluate the efficacy of "*Drakshadi leha*" in the management of *Kasa*.
- To establish a cost effective and safe drug in the management of *Kasa*.

### ❖ Source of data

A group of 42 children with symptoms of *Kasa* attending OPD or admitted to IPD Department of Kaumarbhritya of Rishikul Campus Haridwar, Uttarakhand Ayurved University.

### ❖ Patients & data collection

This prospective study was carried out in Rishikul Campus Haridwar, Uttarakhand ayurved University between the March 2020 to the end January 2021. Data was collected by using pre-tested proforma meeting the objective of study. The purpose and technique of the study was carefully explained to subjects. About 42 cases were selected. The children involved in this study were both sexes whom age ranged between 6 -15 years detailed clinical history, through clinical examination was taken.

❖ **Inclusion Criteria**

- Age group between 6 – 15 years.
- Patients having 1-2 episodes of cough in a month.
- Cough without Sputum.

❖ **Exclusion Criteria**

- Children below 6 years of age.
- Cough associated with known case of Bronchial asthma, Tuberculosis, Pulmonary Eosinophilia,

Loeffler syndrome, Whooping cough, acute or chronic systemic disorders.

- Cough associated with severe malnutrition.
- Cough associated with neurological disorders.

❖ **Assessment criteria**

The study that lasted 8 weeks for each case according to assessment of symptoms and severity was done in grading in the following parameters.

**Table 1.1: On the basis of subjective parameter.**

Parameter	Grade 3	Grade 2	Grade 1	Grade 0
Character of cough	Hacking cough with No sputum expectorated and associated with dryness of mouth, throat and chest.	cough with difficulty in expulsion of sputum.	cough with small quantity of sputum expectorated at the end of a bout.	No cough at all
Character of bouts	Bouts of cough with flushed face & vomiting	Bouts of cough with flushed face	Normal bouts with no flushing.	No bouts
Frequency of bouts	More than 10 bouts.	About 6-10 bouts	About 1-5 bouts.	No bouts.
Chest pain	Persistent chest pain.	Pain during entire bouts of cough	Occasional chest pain.	Absent
Headache	Severe constant headache.	Frequent headache but not severe.	Occasional headache at the time of cough	No headache.
Hoarseness of voice	can't make sound due to hoarseness of voice.	Hoarseness of voice present but no difficulty in speech.	Hoarseness of voice only at the time of cough.	No hoarseness of voice.
Sore throat	Sore throat with pain which interfere the intake of food along with water.	Sore throat with pain and difficulty in food intake.	Sore throat with pain but no difficulty in food intake.	No sore throat.
Sleep disturbance	Cough always disturbs sleep.	Gets cough before sleeping and early in morning.	Cough occasionally disturbs sleep.	Cough don't interfering the sleep.
Watery Nasal Discharge	Profuse watery nasal discharge	Moderate Watery nasal discharge	Scanty watery nasal discharge	Absent
Aruchi	Associated with significant weight loss	Oral impaired with weight loss	Oral impaired without weight loss	Normal Appetite
Jwar	Continuous fever	Intermittent fever 2-3 episodes/24 hrs	Occasional fever ½ episodes /24 hrs	Absent
Ghan Kapha	Thick viscid sputum	Thick sputum	Thin sputum	Absent

**Objective Parameters**

- Hb %, TLC, DLC, ESR
- Absolute Eosinophil count.

- Stool routine and microscopy if required.
- X-ray chest if required.

**Table 1.2: Method of Study – Grouping.**

Groups	No of patients	Formulation	Route	Dose	Time	Duration
Single	42	Drakshadileha	Oral	Acc to age	Thrice a day after food	30 days

**Allocation of study patients**

The 42 patients whom diagnosed as having *kasa* were randomly allocated to receive medications under clinical evaluation for 8 weeks as follows.

**Group A:** Patients who received “*Drakshadileha*” included 42 patients as orally. Dose was given according to an ancient scholar named sharangdhar, i.e One *masha* increases every year with age. Hence for those children aged 5- 10 years, five to ten *masha*(gms) leha in three divided doses was given and for those children aged 11- 15 years, eleven to fifteen *masha* (gms) leha in three divided doses was given throughout period of 4 weeks. *Leha* is instructed to be taken with honey.

**Statistical Analysis**

Data were analyzed using the Graph pad instant version 3.1

- To obtain the efficacy of the drug on objective parameters proper statistical analysis will be carried out of available data by applying following statistical tests:
- For comparison of subjective criteria before and after treatment ‘**Wilcoxon**’ test will be applied.
- For comparison of objective criteria before and after treatment Student’s ‘**t**’ Test will be applied.

**Table 1.3: The obtained results were interpreted as.**

S.NO	P- Value	SIGNIFICANCE
1.	>0.05	Not Significant
2.	<0.05	Significant
3.	<0.01	Highly Significant

- **Marked improved:** 76-99% relief
- **Moderate improved:** 51- 75% relief
- **Mild improved:** 26-50% relief
- **Unchanged:** Unchanged

❖ **Overall Assessment Scale**

- **Complete improved:** 100% relief

**Table 1.4: Distribution of Children According to Age.**

S.N.	Age	No. of Patients	Total %
1.	6-10	28	66.66
2.	10-15	14	33.33
<b>Total</b>		<b>42</b>	<b>100</b>

Observation shows that maximum number of patients in the clinical study were in the age group 6-10 patient

years i.e. 28 (66.66%), and 10 -15 years old age group patient i.e 14 (33.33%)

**Table 1.5: Distribution of Children According to Sex.**

S.N	Sex	No. of patients	Total %
1.	Male Child	28	66
2.	Female Child	14	34
<b>Total</b>		<b>42</b>	<b>100</b>

In this clinical study observation shows that maximum number of patients were male i.e. 28 (66%) and 14

(34%) were female.

**Table 1.6: Distribution of Children According to Socio-economic Status.**

S.N.	Socio-economic Status	No. of Patients	Total %
1.	Upper Middle class	08	19.04
2.	Middle Class	24	57.14
3.	Lower Middle Class	10	2.38
<b>Total</b>		<b>42</b>	<b>100</b>

Observation shows that maximum number of patients were 24 (57.14%) belongs to middle class followed by 8

(19.04%) belongs to upper middle class and 10 (2.38%) were belongs to lower middle class.

**Effect of Trial Drug on The Basis of Subjective Parameters**

**Table No 1.7: Effect On Character of Cough (BT-AT).**

Group	No. of Patients	Mean Score			Change in %	SD ±	SE ±	t-value	p-value	Result
		BT	AT	Diff.						
A	42	2.04	0.57	1.47	78.18	0.6803	0.1050	903.00	<.0001	HS

**Effect of Therapy on Character of Cough**

The mean of Character of Cough before treatment was

2.04 which reduced to 0.57 after treatment showing 78.18 % relief which is statistically **highly significant**.

**Table No 1.8: Effect On Character Of Bouts (BT-AT).**

Group	No. of Patients	Mean Score			Change in %	SD ±	SE ±	t-value	p-value	Result
		BT	AT	Diff.						
A	42	2.54	0.78	1.76	69.15	0.5763	0.0889	903.00	<.0001	HS

**Effect of Therapy on Character of bouts**

The mean of Character of bouts before treatment was 2.54 which reduced to 0.78 after treatment showing 69.15 % relief which is statistically **highly significant**.

Table No 1.9: Effect on Frequency of Bouts (BT-AT)

Group	No. of Patients	Mean Score			Change in %	SD ±	SE ±	t-value	p-value	Result
		BT	AT	Diff.						
A	42	2.54	0.57	1.97	77.15	0.5763	0.0889	903.00	<.0001	HS

**Effect of Therapy on Frequency of Bouts**

The mean of Frequency of bouts before treatment was

2.54 which reduced to 0.78 after treatment showing 77.15% relief which is statistically **highly significant**.

Table No 1.10: Effect on Chest Pain (BT-AT).

Group	No. of Patients	Mean Score			Change in %	SD ±	SE ±	t-value	p-value	Result
		BT	AT	Diff.						
A	34	1.41	0.735	0.67	47.91	0.4749	0.0814	276.00	<.0001	S

**Effect of Therapy on Chest Pain**

The mean of Chest pain before treatment was 1.41.

which reduced to 0.73 after treatment showing 47.91% relief which is statistically **significant**.

Table No 1.11: Effect On Headache (BT-AT)

Group	No. of Patients	Mean Score			Change in %	SD ±	SE ±	t-value	p-value	Result
		BT	AT	Diff.						
A	33	1.30	0.696	0.60	46.50	0.4885	0.0850	231.00	<.0001	S

**Effect of Therapy On Headache**

The mean of Headache before treatment was 1.30. which

reduced to 0.69 after treatment showing 46.50% relief which is statistically **significant**.

Table No 1.12: Effect On Hoarseness Of Voice (BT-AT)

Group	No. of Patients	Mean Score			Change in %	SD ±	SE ±	t-value	p-value	Result
		BT	AT	Diff.						
A	37	2.00	0.56	1.44	71.62	0.6053	0.0995	703.00	<.0001	HS

**Effect of Therapy On Hoarseness of Voice**

The mean of Hoarseness of voice before treatment was

2.0. which reduced to 0.56 after treatment showing 71.62% relief which is statistically **highly significant**.

Table No 1.13: Effect On Sore Throat (BT-AT)

Group	No. of Patients	Mean Score			Change in %	SD ±	SE ±	t-value	p-value	Result
		BT	AT	Diff.						
A	35	1.54	0.80	0.74	48.14	0.4434	0.0743	351.00	<.0001	S

**Effect of therapy on Sore Throat**

The mean of Sore Throat before treatment was 1.54.

which reduced to 0.74 after treatment showing 48.14% relief which is statistically **significant**.

Table No 1.14: Effect On Sleep Disturbance (BT-AT)

Group	No. of Patients	Mean Score			Change in %	SD ±	SE ±	t-value	p-value	Result
		BT	AT	Diff.						
A	32	2.31	0.15	2.16	93.24	0.6773	0.1197	528.00	<.0001	HS

**Effect of therapy on Sleep Disturbance**

The mean of Sleep disturbance before treatment was

2.31. which reduced to 2.16 after treatment showing 93.24% relief which is statistically **highly significant**.

Table No 1.15: Effect On Watery Nasal Discharge (BT-AT)

Group	No. of Patients	Mean Score			Change in %	SD ±	SE ±	t-value	p-value	Result
		BT	AT	Diff.						
A	38	2.21	0.63	1.58	71.42	0.6423	0.1042	741.00	<.0001	HS

**Effect of therapy on Watery Nasal Discharge**

The mean of Watery nasal discharge before treatment

was 2.21. which reduced to 0.63 after treatment showing 71.42% relief which is statistically **highly significant**.

Table No 1.16: Effect On Aruchi (BT-AT)

Group	No. of Patients	Mean Score			Change in %	SD ±	SE ±	t-value	p-value	Result
		BT	AT	Diff.						
A	32	1.75	0.28	1.47	83.92	0.5070	0.08963	528.00	<.0001	HS

**Effect of therapy on Aruchi**

The mean of *Aruchi* before treatment was 1.75 which

reduced to 0.28 after treatment showing 83.92% relief which is statistically **highly significant**.

Table No 1.17: Effect On Jwar (BT-AT)

Group	No. of Patients	Mean Score			Change in %	SD ±	SE ±	t-value	p-value	Result
		BT	AT	Diff.						
A	32	1.218	0.03	1.18	97.43	0.3966	0.0701	528.00	<.0001	HS

**Effect of therapy on Jwar**

The mean of *Jwar* before treatment was 1.21 which

reduced to 0.03 after treatment showing 97.43% relief which is statistically **highly significant**.

Table No 1.18: Effect On Ghan Kapha (BT-AT)

Group	No. of Patients	Mean Score			Change in %	SD ±	SE ±	t-value	p-value	Result
		BT	AT	Diff.						
A	34	2.29	0.67	1.62	70.57	0.6520	0.1118	595.00	<.0001	HS

**Effect of therapy On Ghan Kapha**

The mean of *Ghan Kapha* before treatment was 2.29 which reduced to 0.67 after treatment showing 70.57% relief which is statistically **highly significant**.

**2) Improvement In Objective Parameters**

The various laboratory investigations were assessed statistically before and after the treatment. According to that, results have been made.

Table No 1.19: Effect On Hemoglobin In gm% (BT-AT)

Group	No. of Patients	Mean Score			Change in %	SD ±	SE ±	t-value	p-value	Result
		BT	AT	Diff.						
A	42	12.13	12.22	-0.0065	1.16	12.268	1.893	11.358	<0.0001	HS

**Effect of therapy on Hemoglobin In gm%**

The mean of Hemoglobin before treatment was 12.13

which increased 12.22 to after treatment showing 1.16% relief which is statistically **highly significant**.

Table No 1.20: Effect On TLC (BT-AT)

Group	No. of Patients	Mean Score			Change in %	SD ±	SE ±	t-value	p-value	Result
		BT	AT	Diff.						
A	42	6316.16	5652.38	663.78	10.51	629.57	97.145	5.956	<0.0001	HS

**Effect of therapy on Total Leucocytes Count**

The mean of TLC before treatment was 6316.16 which reduced 5652.38 to after treatment showing 10.51% relief which is statistically **highly significant**.

Table No 1.21: Effect On DLC- N (BT-AT)

Group	No. of Patients	Mean Score			Change in %	SD ±	SE ±	t-value	p-value	Result
		BT	AT	Diff.						
A	42	72.02	67.16	4.84	1.63	6.714	0.9671	6.943	<0.0001	HS

**Effect of therapy on DLC- Neutrophil**

The mean of DLC- Neutrophil before treatment was

72.02 which reduced 67.16 to after treatment showing 1.63% relief which is statistically **highly significant**.

Table No 1.22: Effect On DLC- L (BT-AT)

Group	No. of Patients	Mean Score			Change in %	SD ±	SE ±	t-value	p-value	Result
		BT	AT	Diff.						
A	42	25.61	25.28	0.33	1.70	6.142	0.9477	5.477	<0.0001	HS

**Effect of therapy on DLC- Lymphocyte**

The mean of DLC- Lymphocyte before treatment was

25.61 which reduced 25.28 to after treatment showing 1.70% relief which is statistically **highly significant**.

**Table No 1.23: Effect On DLC- M (BT-AT)**

Group	No. of Patients	Mean Score			Change in %	SD ±	SE ±	t-value	p-value	Result
		BT	AT	Diff.						
A	42	2.40	4.97	- 2.57	33.81	2.963	0.4572	6.458	<0.0001	HS

**Effect of therapy on DLC- Lymphocyte**

The mean of DLC- Monoocyte before treatment was

2.40 which increased 4.97 to after treatment showing 33.81% relief which is statistically **highly significant**.

**Table No 1.24: Effect On DLC- E (BT-AT)**

Group	No. of Patients	Mean Score			Change in %	SD ±	SE ±	t-value	p-value	Result
		BT	AT	Diff.						
A	42	1.26	1.64	- 0.38	8.0	1.125	0.1736	7.954	<0.0001	HS

**Effect of therapy on DLC- Eosinophil**

The mean of DLC- Eosinophil before treatment was 1.26

which increased 1.64 to after treatment showing 8.0% relief which is statistically **highly significant**.

**Table No 1.25: Effect On DLC- B (BT-AT)**

Group	No. of Patients	Mean Score			Change in %	SD ±	SE ±	t-value	p-value	Result
		BT	AT	Diff.						
A	42	0.023	0.261	-0.238	7.99	0.5078	0.07835	3.647	<0.0004	HS

**Effect of therapy on DLC- Basophil**

The mean of DLC- Basophil before treatment was 0.023

which increased 0.262 to after treatment showing 7.99% relief which is statistically **highly significant**.

**Table No 1.26: Effect On ESR (BT-AT)**

Group	No. of Patients	Mean Score			Change in %	SD ±	SE ±	t-value	p-value	Result
		BT	AT	Diff.						
A	42	17.523	16.38	1.143	7.99	2.728	0.4209	11.370	<0.0001	HS

**Effect of therapy on ESR**

The mean of ESR before treatment was 17.52 which reduced 16.38 to after treatment showing 7.99% relief which is statistically **highly significant**.

**Table No 1.27: Effect On AEC (BT-AT)**

Group	No. of Patients	Mean Score			Change in %	SD ±	SE ±	t-value	p-value	Result
		BT	AT	Diff.						
A	42	275.33	273.66	1.67	0.629	16.13	2.489	10.330	<0.0001	HS

**Effect of therapy on AEC**

The mean of AEC before treatment was 275.33 which reduced 273.66 to after treatment showing 0.629% relief which is statistically **highly significant**.

**DISCUSSION**

Patient who received “*Drakshadileha*” included 42 patients as orally. Dose was given according to ancient scholar *Sharangdhar*, i.e One *masha* increases every year with age. Hence for those children aged 5-10 years, five to ten *masha*(gms) *leha* in the three divided dose was given and for those children aged 11-15 years, eleven to fifteen *masha*(gms) *leha* with honey in the three divided dose was given throughout period of 4

weeks.

**DISCUSSION OF THE OBSERVATION****❖ AGE**

42 Patients of *Kasa* were studied and it is observed that maximum number of the patients 59.52% is in the age group of 5-8 years and 23.80% of patients were in the age group 9-12 years.

This substantiates the fact that *Kasa* is more common during childhood in the age group 5 to 8 years maximum number of patients observed. In this age group the increase incidence may be due to less immunity and

unable to cope up with the mental stress, effect of environment.

#### ❖ Sex

The predominance of boys over girls in this study was significant with boys & girls were 66% and 34% respectively, which has been attributed to difference in the structure & function relationship of the lung & airways, where girls have airways that are more proportionate to the size of their lung & airways of boys are proportionately smaller, compared to lung size.

#### ❖ Religion

Here we have observed that maximum number of patients belonged to Hindu community 90.47% and 7.14% are from Muslim community and 6% are of some other religion.

This may be due to geographical predominance of Hindus in Haridwar district.

#### ❖ Education

Here we have observed that maximum number of patient i.e 95.23% were going to school while 4.76% were not going to school.

The increased incidence of *kasa* [cough] in school going children may be due to irregular dietary habits, habit of day and night sleep etc. which causes *Aama* formation.

#### ❖ Socio economic Status

Here we have observed that maximum patients belonged to middle class 57.14% and 19.04% of the patients are from Upper and 2.38% are from lower middle class. Possible explanation may be due to less expenditure on their maintenance of health, good quality food & unhygienic living standards.

#### ❖ Habitat

In this 71.42 % of the patients are from urban background and 28.57% were belonged to rural areas. Here there is high risk of environmental pollution (like dust, pollen, industrial). Unhealthy living conditions which are densely populated & constant stress to face the rapid growth of urban areas.

#### ❖ Ahara

It is seen from that 66.66% of patients belong to mixed *ahara*. Thus vegetarian diet increases the *pitta* & *kapha dosha* & this diet disturbs the *doshik* homeostasis at body level.

In terms of *abhyavaran shakti* and *jarran shakti*, 28.57% of the patients are having *Pravar abhyavaran shakti*, and 21.42% having *pravar jaran shakti*. It means that majority of patients are having good capacity to take *aahar* but they are not to able to digest the *aahar*.

#### ❖ Prakriti

Here the 61.90% of the patients are *Vata-kapha* and

23.84% are *Pitta – kapha* and 19.04% patients were *Vata-Pitta* are found to be suffering more from *Kasa*. This data possibly reveals the predominant role of *kapha* & *Vata dosha* in genesis of *Kasa*. As the *nidana sevana* in this type of *prakriti* leads to easy aggravation because of similarity in *dosha and dushya*.

#### ❖ Saara & Samhanan

Here 64.28% of the patients are *madhyama saara*, 19.04% are *avara saara*. We observed that *madhyam saara* people are more prone to *Kasa Roga*.

Similarly 61.90% of the patients are *madhyam samhanana* and 9.52% are of *avara Samhanan*. Here also *madhyama samhanan* patients are major sufferers.

#### ❖ Satva-Satmya

Here we observed, 57.14% of the patients are of *madhyam satva* and 16.66% are *avara satva* secondly 52.38% of the patients are *madhyam satmya* and 30.95% are *avara*.

*Madhyama satva* peoples are having high risk for *kasa Roga*. They easily get effected by physical, mental, stress, which are the precipitating factors and so are the people of *madhyam satmya*.

#### ❖ Kostha & Agni

Here 52.38% of the patients are *Madhyama kostha*. In *madhyama kostha* there is predominance of *Kapha* and 38.09% of patients are having *mandagni*.

This is because of the fact that *Agnimandya* is the root cause of *kapha* and *vata* are the two *dosha* which have predominant role in the pathogenesis of disease.

#### ❖ Bowel habit

52.38% of the patients are having Regular bowel habits while 19.04% patients are suffering from constipation. This is one of the major causes of the disease which leads to *pratiloma gati* of *vayu* & thus plays an important role in the pathology of *Kasa Roga*.

#### ❖ Vyayama

In 47.61% of the patients do no or less *Vyayama*. This may be the reason for not able to efficiently cope with the nature & once the disease manifest it itself limits the *Vyayama shakti* by producing dyspnoea & discomfort & daily activities of life is hampered.

#### ❖ Aggravating season /onset

In 83.33% of the patients season plays an important role and gradual onset of disease is observed in 83.33% of the patients. It seems that environmental factors plays an important role in initiation of the disease & there is slow and gradual onset of the disease which becomes chronic.

#### ❖ Emotional make up

Here it is observed that 52.38% of the patients are tense, 21.42% and 26.14% of the patients are normal

and depressed. Continuous tension is the psychosomatic cause of the disease.

## CONCLUSION

In this, the complete dissertation is summarized and concluded on the basis of extensive and exhaustive data collected is drawn. For this study 42 patients were selected randomly from OPD or admitted to IPD department of *kaumarbhryta* of Rishikyul Campus Haridwar, Uttarakhand Ayurved University, Uttarakhand.

There was single group made for this study :

Patients who received “*DRAKSHIADELEHA*” included 42 patients as orally. Dose was given according to an ancient scholar named *Sharangdhar*, i.e. One *masha* increases every year with age. Hence for those children aged 5-10 years, five to ten *masha*(gms) *leha* in three divided doses was given and for those children aged 11-15 years, eleven to fifteen *masha* (gms) *leha* in the three divide doses morning and evening was given throughout period of 4 weeks. *Leha* is instructed to be taken with honey.

❖ All the observation results are expressed as standarad deviation (S.D.), Standarad Error (S.E) Wilcoxon signed rank test and P value at various levels i.e. 0.05. 0.01.0.05,0.01 are considered as similar while 0.01 as highly significant result.

➤ The conclusions drawn from the above study are as follows.

The observation made on 42 patients of *Kasa* of this series shows that maximum number of the patients (59.52%) is the age group of 5-8 years, mainly boys (66%), Hindu religion (90.47%), were school going (95.23%), socioeconomic status as middle class(57%), belonging to urban area(71.42% ), with having (61.90%) *vata-kapha prakriti*,(66.66) of the patients are of vegetarian diet, (28.57%) of patients are having *pravara abhyavarana shakti*, 21.42(%) are having *pravara jaran shakti*.

Maximum no. of patients (64.28%) *madhyama saara*, (61.90%) are of *madhyam samhanan*, *madhyama satva* (57.14%) and *madhyam satmya* (52.38%) 52.38% maximum of patients are having *Madhyama Kostha* and having (38.09%) of *Mandagni*. According to the bowel habit (52.38%) are having regular bowel habit.

*Vyayam* wise study maximum patients (47.61%) were not doing *vyayama* at all. Maximum of (52.38%) are having tensive emotional makeup.

Cardinal signs and symptoms reported in 42 patients of *Kasa Roga*. Character of cough, character of bouts, and frequency of bouts was in 100% respectively, Headache was in 78.57%, Hoarseness of voice was in 88.09%, Sore throat was in 83.33%, Sleep disturbance was in 76.19%, Watery Nasal discharge was in 90.47%, *Aruchi* was in

76.19%, *Jwar* was seen in 76.19% and *Ghan Kapha* was seen in 80.95% of total number of patients.

- ❖ Treatment with “*Drakshadileha*” offered better results pacifying the cardinal symptoms like in this group highly significant Relief (P<0.01) in cardinal symptoms was achieved in the reduction of symptoms. Character of cough 78.18%, Character of bouts 69.15%, Frequency of bouts 77.15%, Hoarseness of voice 71.62%, Sleep disturbance 93.24%, Watery nasal discharge 71.42%, *Aruchi* 83.92%, *Jwar* 97.43% and *Ghan Kapha* 70.57%
- ❖ Significant result shown in Chest pain 47.91%, 48.14% in Sore throat and 46.50% relief in Headache by “*Drakshadi leha*” treatment.
- ❖ Overall effect shows that in Group –A complete remission was found 4.76% of cases, 33.33% of cases was found Markedly Improvement, 61.90% of cases was found Moderately improvement.

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