

CLINICAL STUDY OF EFFICACY OF YASHTIMADHU GHRITA KARNAPOORAN IN THE MANAGEMENT OF PITTAJA KARNASHOOLA W.S.R.TO OTITIS EXTERNA

Dr. Mahesh Kore¹,

¹ PG student“Department of Shalyakya Tantra, ADAMC,ASHTA

ABSTRACT

Kasa is very common disease of respiratory system. Vataj kasa is very common in locality .This needs the analysis in scientific background as explained in the Ayurveda classics. The human body is continuously under the attack from environmental changes. Quality of life on earth is deteriorating day by day due to pollution and urbanization. The quality of air, water, food ingested does not always have a beneficial effect and its purity determines the health of the body. Tropical pulmonary eosinophilia is found commonly specially in rainy season and affects general health badly. Instead of treating with any chemical based medicine. It can be easily treated with simple and easily available Ayurveda drugs in a cost effective way. Though Kasa is a swatantra vyadhi it is found in many other diseases as lakshana; If ignored it may lead to serious diseased condition; so it should be studied and treated in a proper and scientific manner

Key words : kasa, Vataj kasa,

INTRODUCTION

Ayurveda- the Great Healer Science of ancient as well as modern era, maintained its relationship with the Nature and survived a long period of 5000 years, making itself the oldest medical science of present world.It is holistic clinical science as well as art of daily living that encourages the maintenance and restoration of health through proper diet, life style and attitude, as well as use of traditional ayurvedic herbs and rejuvenating therapies. Respiratory disease will afflict

every human being at some time in their lives. Whether it is a cough associated with common cold or respiratory distress with allergies or asthma. Respiratory challenges are the constant source of irritation and misery for the patient. Here we are going to discuss about pranavaha strotasa from Ayurveda classics. In west, coughs are understood to be the result of either irritation to bronchial tree or infection. On the other hand side; as per the Ayurveda, Kasa occurs when apana vata is obstructed resulting in an increase in upward motion. Vitiation of udana vayu propels the air upwards and out of the body. Vata may however lodge in chest, back or head resulting in pain and repeated coughing attacks. Kayachikitsa is the pradhan branch of Ayurveda in that kasa vyadhi is widely explained. Kasa is a disease of pranavaha strotas. Kasa is word derived from Sanskrit dhatu –kas. This dhatu indicates gati that is it gativachak dhatu. The disease in which vayu is found to be propelled out from kantha with a considerable speed called as KASA.

Uchawasa and nishwasa or to say breathing out and breathing in are the phenomenon of life. to and fro movement of air through the pranavaha strotas is the vital sign of life, the normalcy of which suggest health. The abnormality in respiration indicates disease, and its cessation marks death. This unique sign of life affected in the disease kasa. Classically there are 5 types of kasa– Vataj, Pittaj, Kaphaj, Kshayaj and Kshataj. Among them Vataj is found most commonly as in today's life. We regularly do the hetusevana such as ruksha, sheeta and kashayapradhana food, very low food intake, eating again and again or eating nothing for whole day, mala-mutra vegavidharana, and always being so much stressed out etc. Especially in vataj kasa – uroshoola, shirshoola, kasavega, swarbheda, daurbalya etc sign and symptoms are present. The swarbheda is a prime and unique symptom of vataj kasa. So for relieving these symptoms I choose the badaripatrakadi kalka, this yoga has a potency to cure vataj kasa. Kasa can be correlated with Tropical pulmonary eosinophilia.

OBJECTIVES OF THE STUDY

1. To evaluate the efficacy of Badaripatrakadi Kalka in vataj kasa.
2. To prepare Badaripatrakadi Kalka.

MATERIALS AND METHODS

Table No.1

Sample Size	80
Sampling Method	Simple Random Method
Data Type- Primary Data	Observation
Secondary Data	Samhita ,Website,Article and Research Journals.
Sample Area	Dhanwantari Rugnalaya OPD and IPD
Duration	15 Days

Clinical Study:

In this study patients were assigned in to single group consisting of 80 patients in group.patients from these group are having vataj kasa as a disease in which they are treated with badaripatrakadi kalka. Patient will assessed on day 0 and further treatment will continue for 15 days.In this study follow up wiil be taken on day 15 and after that efficacy of treatment will be evaluate.Result are discussed on the basis of obeservations.

Criteria of selection of patients:

a) Inclusive Criteria:

- 1.Irrespective of sex, occupation and religion patients were selected.
2. Only those patients with signs and symptoms of vataj kasa were included.

Age limit—10 to 70 years.

b) Exclusive Criteria:

- a) Pregnant women.
- b) Lacteting women.
- c) Any systemic disorder.
- d) Age limit- below 10 years and above 70 years.

Selection of Drug :

- a) Raw drugs collected from standard Ayurvedic store ,Ayurvedic farmacy and Herbal garden.
- b) Raw drugs were authenticated and standerdization done at GMP approved laboratory before clinical trial on patients.

Plan of Work :

-Drug administration details-

- a) Kalpana:kalka
- b) Dose: 10 gm (1 tola)
- c) Kaal: Three times in day.
- d) Duration:15days
- e) Route of administration: Oral
- f) Follow up: each 5 days

Assessment Criteria:

Subjective Criteria:

Table No.2

Symptoms	0	1	2	3
Shushkaura Kanthavaktratam	Normal	Mild	Moderate	Severe
Urashoola	Normal	Mild	Moderate	Severe
Shirashoola	Normal	Mild	Moderate	Severe
Swarabheda	Normal	Mild	Moderate	Severe
Kasa vega	Normal	Mild	Moderate	Severe
Daurbalya	Normal	Mild	Moderate	Severe

(Source:Primary Data)

B.Objective Criteria:

- a) CBC
- b) Auscultation
- c) Absolute Eosinophilic Count(normal range- 40-440/cu mm)
- d) X-ray chest PA view (if required)

Withdrawal of Patients:

- a) patient unable to tolerate the treatment.
- b) any adverse drug reaction of treatment on patient.
- c) patient fails to report for follow up or irregular medication.

OBSERVATIONS AND RESULTS:

Observations:

On the basis of clinical study, occurrence of various incidents are presented in the form of charts, tables and graphs. The following observation is important in the aspect,

Distribution of Age:

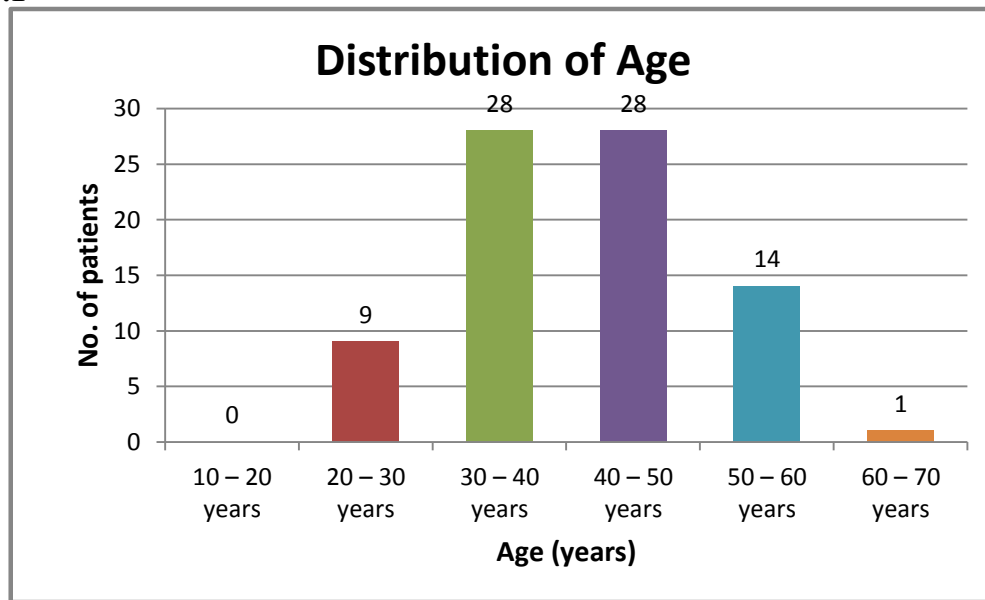
Table No.3

Sr. No.	Age (in years)	Count	%
1	10 – 20 years	0	0.00%
2	20 – 30 years	9	11.25%
3	30 – 40 years	28	35.00%
4	40 – 50 years	28	35.00%
5	50 – 60 years	14	17.50%
6	60 – 70 years	1	1.25%

(Source:Primary Data)

Out of 80 patients, 9 patients (11%) were having age between 20 – 30 years, 28 patients (35%) were from age group 30 – 40 years, 28 patients (35%) were observed with age between 40 – 50 years, 14 patients (18%) were from age group 50 – 60 years while 1 patient (1%) was with age between 60 – 70 years.

Graph No.1



(Source:Primary Data)

2.Distribution of Sex :

Table No.4

Sr. No	Sex	Count	%
1	Male	23	28.75%
2	Female	57	71.25%
Total		80	100.00%

(Source:Primary Data)

Out of 80 patients, 23 patients (29%) were male while 57 patients (71%) were female.

3.Distribution of Religion :

Table No.5

Sr. No	Religion	Count	%
1	hindu	80	100.00%
2	Other	0	0.00%
Total		80	100.00%

(Source:Primary Data)

All 80 patients were Hindu.

4.Distribution of patients according to Occupation :

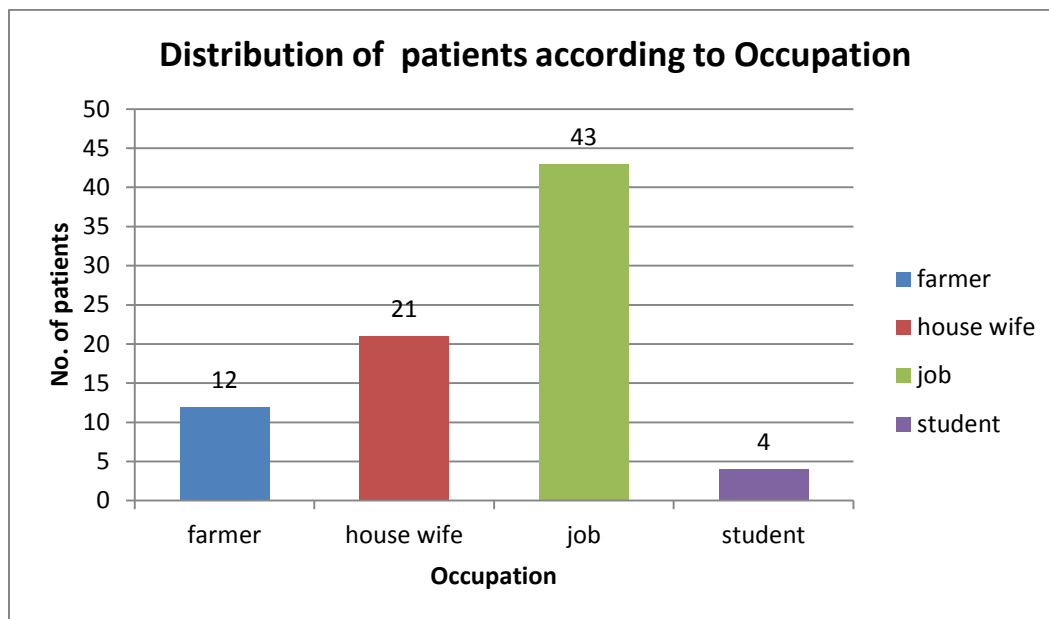
Table No.6

Sr. No	Occupation	Count	%
1	Farmer	12	15.00%
2	House wife	21	26.25%
3	Job	43	53.75%
4	Student	4	5.00%
Total		80	100.00%

(Source:Primary Data)

Out of 80 patients, 12 patients (15%) were farmer, 21 patients (26%) were housewife, 43 patients (54%) were in service while 4 patients (5%) were student.

Graph No.4



(Source:Primary Data)

5.Distribution of patients according to Diet

Table No.7

Sr. No	Diet	Count	%
1	Mixed	57	71.25%
2	Vegetarian	23	28.75%
Total		80	100.00%

(Source:Primary Data)

57 patients (71%) were having mixed diet while 23 patients (29%) were vegetarian.

6.Incidence of Prakruti :

Table No.8

Sr. No.	Prakruti	No. of patients	
		Count	%
1.	Kaphaj	24	30.00%
2.	Pittaj	2	2.50%
3.	Vataj	54	67.50%

(Source:Primary Data)

Out of 80 patients, 24 patients (30%) were with kaphaj prakruti, 2 patients (2%) were with pittaj prakruti while 54 patients (68%) were with vataj prakruti.

7. Incidence of Agni :

Table No.9

Sr. No.	Agni	No. of patients	
		Count	%
1.	Manda	24	30.00%
2.	Tikshna	1	1.25%
3.	Visham	55	68.75%

(Source:Primary Data)

Out of 80 patients, 24 patients (30%) were with Manda agni, 1 patient (1%) was with tikshna agni while 55 patients (68%) were with Visham agni.

Statistical analysis of different parameters:-

Data is qualitative in nature and thus one cannot use parametric test e.g. paired t test. Therefore non-parametric tests are used to test significance of therapy.

As grading used for signs and symptoms were ordinal in nature, "Wilcoxon Signed Rank test" is used for intra-group comparison.(i.e. before and after treatment of a group).

Findings are presented along with appropriate summary statistics and graphs/diagrams and result is interpreted accordingly. The level of significance is kept at 0.05.

1. Shushkaurkanthavaktratam

Table No.10

Shushkaurkantha vaktratam	Mean score	Median score	Median difference	n	Wicoxon signed rank test (T ⁺)	P-Value
Before treatment	2.28	2	2.00	79	3160	< 0.001
After treatment	0.1	0				

(Source:Primary Data)

Using one tailed Wilcoxon signed rank test, to test the hypothesis –

H₀ : Median reduction in Shushkaurkanthavaktratam after treatment is zero.

H₁ : Median reduction in Shushkaurkanthavaktratam after treatment is greater than zero.

The mean reduction in Shushkaurkanthavaktratam score was 2.18 and median reduction was 2 which happens to be significant (P-value < 0.001) at 5% level of significance as suggested by Wilcoxon signed rank test. **i.e. it can be said that there is significant reduction in Shushkaurkanthavaktratam.**

Table No.11

follow up	summary	0	1	2	3
B.T.	Count	1	7	43	29
	Percent	1.25%	8.75%	53.75%	36.25%
A.T.	Count	72	8	0	0
	Percent	90.00%	10.00%	0.00%	0.00%

(Source:Primary Data)

2. Urashool

Table No.12

Urashool	Mean score	Median score	Median difference	n	Wicoxon signed rank test (T ⁺)	P- Value
Before treatment	2.28	2	2.00	79	3160.00	< 0.001
After treatment	0.10	0.00				

(Source:Primary Data)

Using one tailed Wilcoxon signed rank test, to test the hypothesis –

H₀ : Median reduction in Urashool after treatment is zero.

H₁ : Median reduction in Urashool after treatment is greater than zero.

The mean reduction in Urashool score was 2.18 and median reduction was 2 which happens to be significant (P-value < 0.001) at 5% level of significance as suggested by Wilcoxon signed rank test. **i.e. it can be said that there is significant reduction in Urashool.**

Table No.13

follow up	summary	0	1	2	3
B.T.	Count	1	7	43	29
	Percent	1.25%	8.75%	53.75%	36.25%
A.T.	Count	72	8	0	0
	Percent	90.00%	10.00%	0.00%	0.00%

(Source:Primary Data)

3. Shirashool

Table No.14

Shirashool	Mean score	Median score	Median difference	n	Wicoxon signed rank test (T ⁺)	P- Value
Before treatment	2.19	2.00	2.00	77	3003.00	< 0.001
After treatment	0.05	0.00				

(Source:Primary Data)

Using one tailed Wilcoxon signed rank test, to test the hypothesis –

H_0 : Median reduction in Shirashool after treatment is zero.

H_1 : Median reduction in Shirashool after treatment is greater than zero.

The mean reduction in Shirashool score was 2.18 and median reduction was 2 which happens to be significant (P-value < 0.001) at 5% level of significance as suggested by Wilcoxon signed rank test.

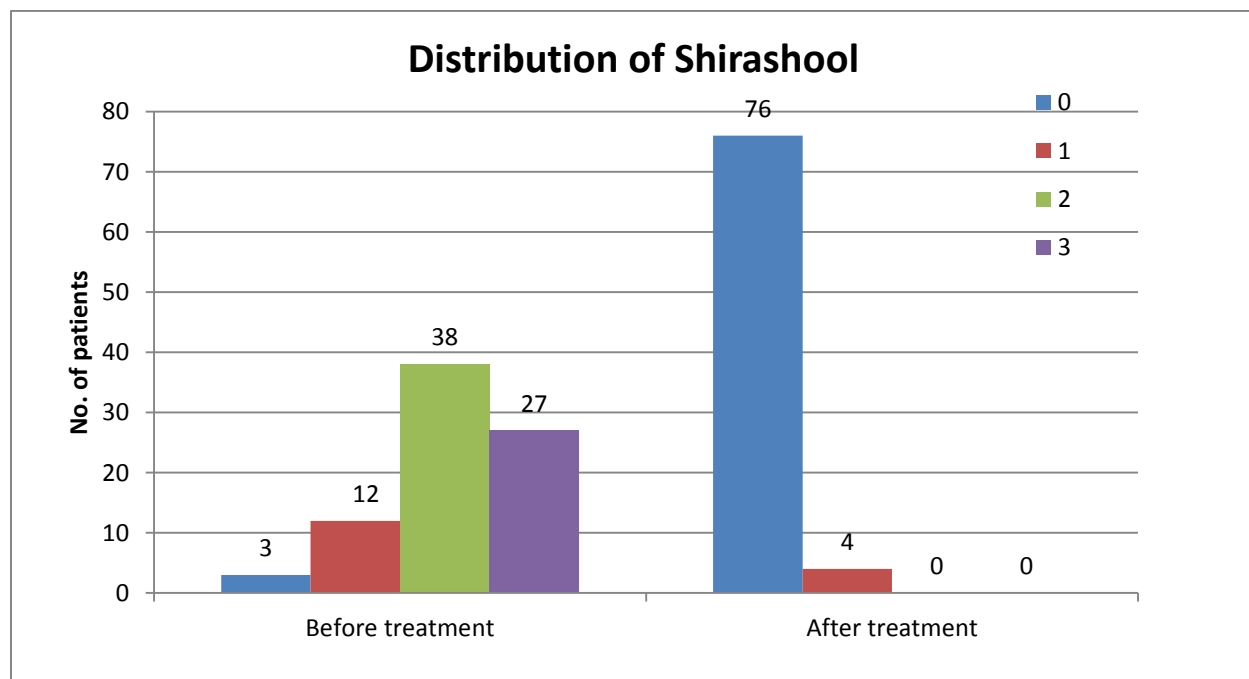
i.e. it can be said that there is significant reduction in Shirashool.

Table No.15

follow up	Summary	0	1	2	3
B.T.	Count	3	12	38	27
	Percent	3.75%	15.00%	47.50%	33.75%
A.T.	Count	76	4	0	0
	Percent	95.00%	5.00%	0.00%	0.00%

(Source:Primary Data)

Graph No.10



(Source:Primary Data)

4. Swarbheda

Table No.16

Swarbheda	Mean score	Median score	Median difference	n	Wicoxon signed rank test (T ⁺)	P- Value
Before treatment	1.97	2.00	2.00	71	2556.00	< 0.001
After treatment	0.14	0.00				

(Source:Primary Data)

Using one tailed Wilcoxon signed rank test, to test the hypothesis –

H₀ : Median reduction in Swarbheda after treatment is zero.

H₁ : Median reduction in Swarbheda after treatment is greater than zero.

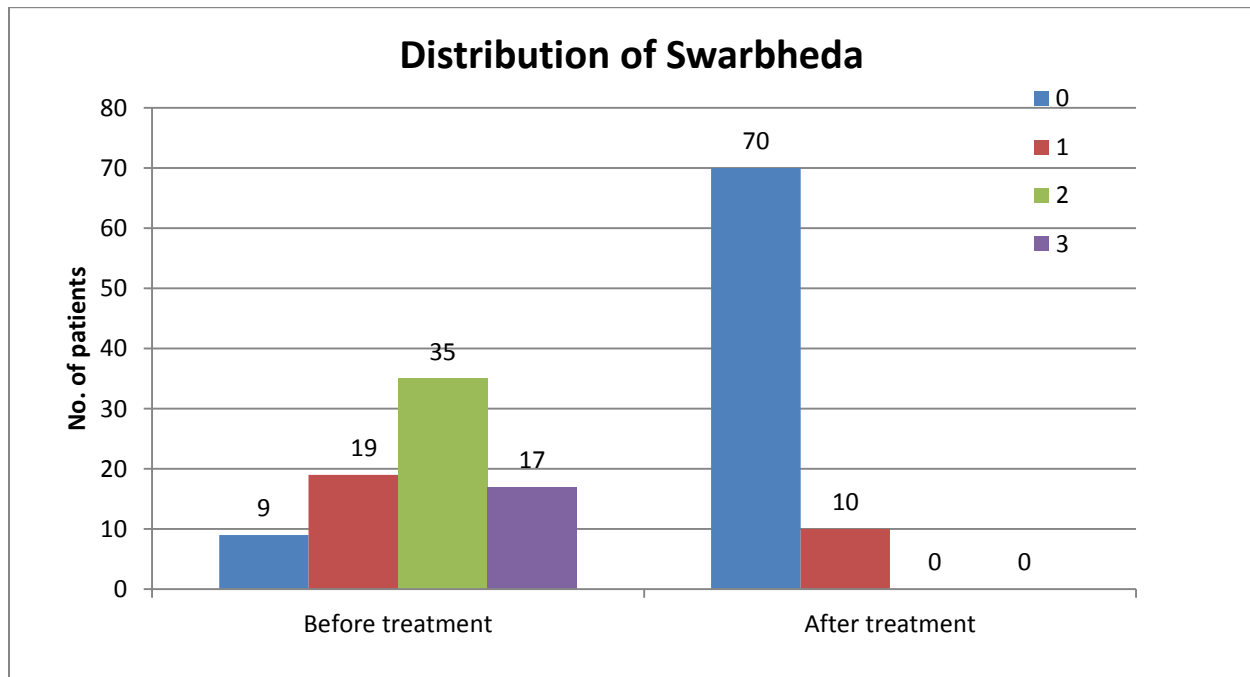
The mean reduction in Swarbheda score was 1.83 and median reduction was 2 which happens to be significant (P-value < 0.001) at 5% level of significance as suggested by Wilcoxon signed rank test. **i.e. it can be said that there is significant reduction in Swarbheda.**

Table No.17

follow up	Summary	0	1	2	3
B.T.	Count	9	19	35	17
	Percent	11.25%	23.75%	43.75%	21.25%
A.T.	Count	70	10	0	0
	Percent	87.50%	12.50%	0.00%	0.00%

(Source:Primary Data)

Graph No.11



(Source:Primary Data)

5. Kasavega

Table No.18

Kasavega	Mean score	Median score	Median difference	n	Wicoxon signed rank test (T ⁺)	P- Value
Before treatment	1.17	1.00	1.00	41	861.00	< 0.001
After treatment	0.00	0.00				

(Source:Primary Data)

Using one tailed Wilcoxon signed rank test, to test the hypothesis –

H₀ : Median reduction in Kasavega after treatment is zero.

H₁ : Median reduction in Kasavega after treatment is greater than zero.

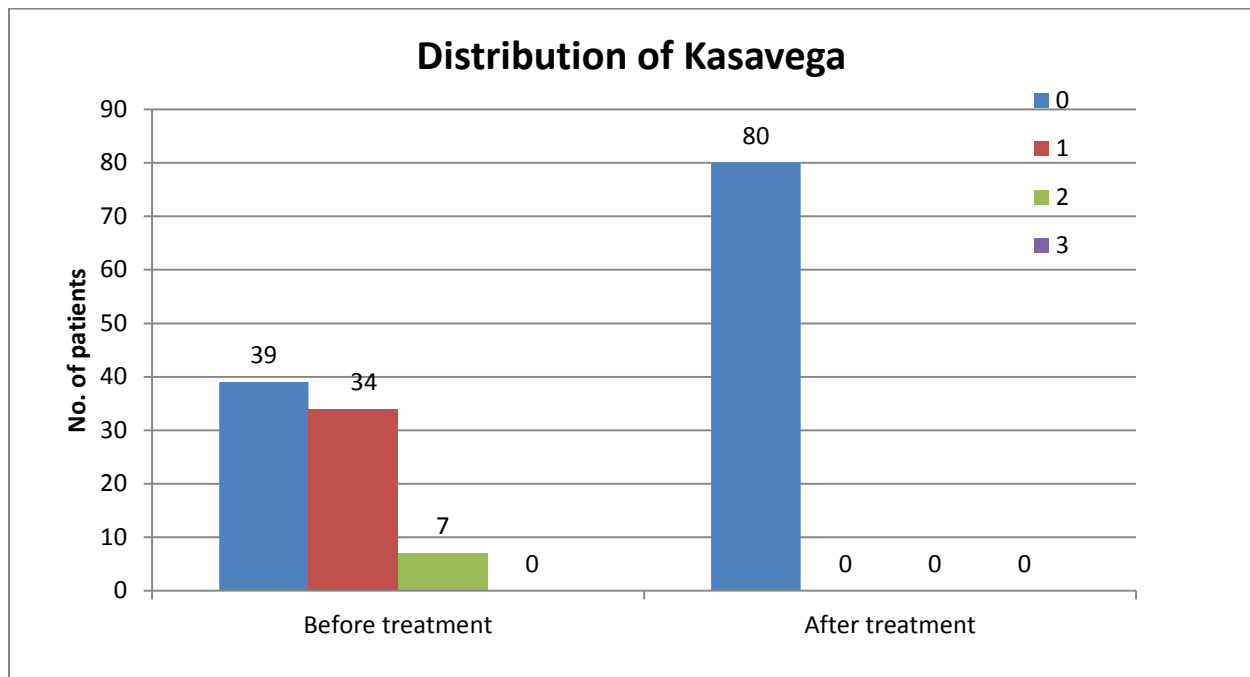
The mean reduction in Kasavega score was 1.18 and median reduction was 1 which happens to be significant (P-value < 0.001) at 5% level of significance as suggested by Wilcoxon signed rank test. **i.e. it can be said that there is significant reduction in Kasavega.**

Table No.19

follow up	summary	0	1	2	3
B.T.	Count	39	34	7	0
	Percent	48.75%	42.50%	8.75%	0.00%
A.T.	Count	80	0	0	0
	Percent	100.00%	0.00%	0.00%	0.00%

(Source:Primary Data)

Graph No.12



(Source:Primary Data)

6. Daurbalya

Table No.20

Daurbalya	Mean score	Median score	Median difference	n	Wilcoxon signed rank test (T ⁺)	P-Value
Before treatment	1.17	1.00	1.00	41	861.00	< 0.001
After treatment	0.00	0.00				

(Source:Primary Data)

Using one tailed Wilcoxon signed rank test, to test the hypothesis –

H_0 : Median reduction in Daurbalya after treatment is zero.

H_1 : Median reduction in Daurbalya after treatment is greater than zero.

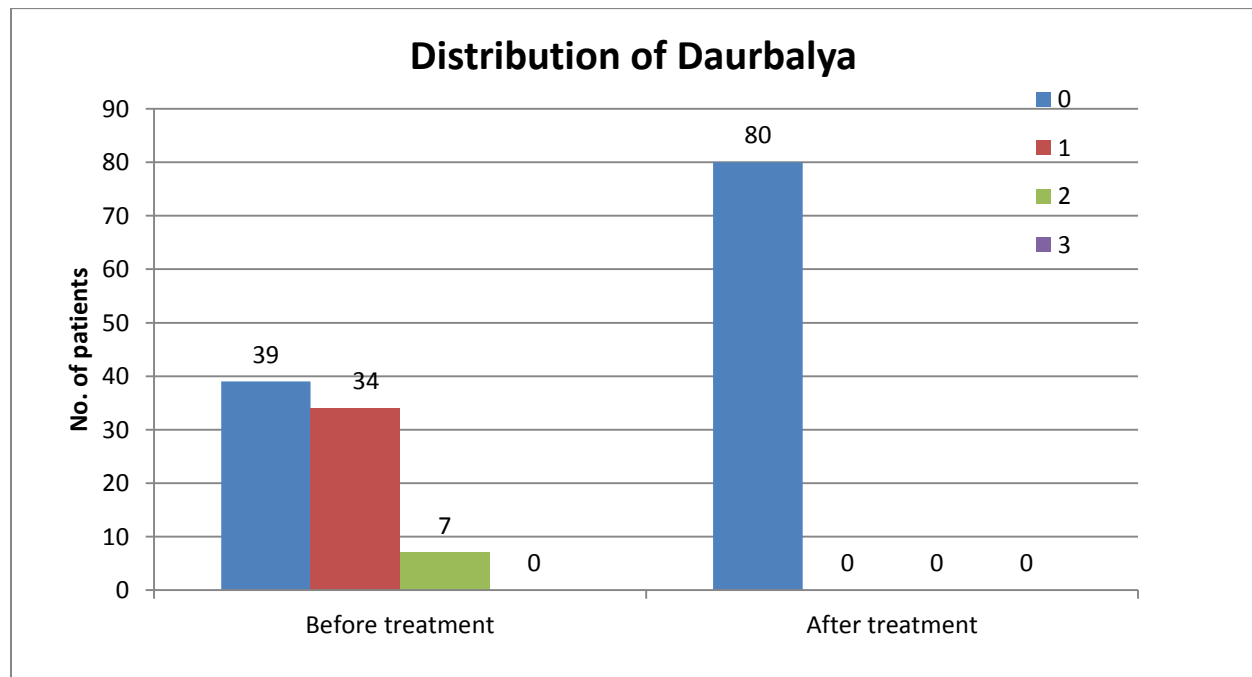
The mean reduction in Daurbalya score was 1.18 and median reduction was 1 which happens to be significant (P-value < 0.001) at 5% level of significance as suggested by Wilcoxon signed rank test. **i.e. it can be said that there is significant reduction in Daurbalya.**

Table No.21

follow up	summary	0	1	2	3
B.T.	Count	39	34	7	0
	Percent	48.75%	42.50%	8.75%	0.00%
A.T.	Count	80	0	0	0
	Percent	100.00%	0.00%	0.00%	0.00%

(Source:Primary Data)

Graph No.13



(Source:Primary Data)

Final assessment of results:-

For assessment of final result, following criteria was used.

Table No.22

Remark	criteria
Cured	100% Relief
Marked improvement	More than 50% Relief
Moderate improvement	25 – 50% Relief
Unchanged	Up to 25% Relief

(Source:Primary Data)

Distribution of patients according to relief:

Table No.23

Final assessment (patient wise)	No. of patients	
	Count	%
Cured	59	73.75%
Marked improvement	20	25.00%
Moderate improvement	1	1.25%
Unchanged	0	0.00%

(Source:Primary Data)

Out of 80 patients, 59 patients (74%) were cured, 20 patients (25%) were with marked improvement while 1 patient (1%) was with moderate improvement.

DISCUSSION

1)According AGE :-

Out of 80 patients, 9 patients (11%) were having age between 20 – 30 years, 28 patients (35%) were from age group 30 – 40 years, 28 patients (35%) were observed with age between 40 – 50 years, 14 patients (18%) were from age group 50 – 60 years while 1 patient (1%) was with age between 60 – 70 years. From above data it is clear that maximum patients were from middle age group may be because improper dietary habits due to busy work schedule,late night sleep, stress, some addiction like tobaccochewing, alcohol consumption, divaswap, Expose to pollution or

extreme environmental condition. Due to above mentioned causes vitiation of Vata dosha which lead to vataj kasa .

2)According to SEX :-

Out of 80 patients,23 patients (29%) were male while 57 patients (71%) were female. Because of their busy work schedule,improper dietary habits, late night sleep stress,some addiction like tobacco - chewing, divaswap,vegadharan. Due to above mentioned causes vitiation of Vata dosha which lead to vataj kasa .

3)According to Riligion-

All 80 patients were Hindu,that is 100%. We had select patients irrespective of their religion.This reflects the geographical predominance of Hindus in this area.

4)According to Occupation:-

Out of 80 patients, 12 patients (15%) were farmer, 21 patients (26%) were housewife, 43 patients (54%) were in service while 4 patients (5%) were student . From above data it is clear that maximum patients have jobs.may be because improper dietary habits due to busy work schedule,late night sleep, stress, work at air condition rooms,divaswap, Expose to pollution or extreme environmental condition. Due to above mentioned causes vitiation of Vata dosha which lead to vataj kasa .

5) According to DIET :-

57 patients (71%) were having mixed diet while 23 patients (29%) were vegetarian but this observation does not seem to have any important role. As far as Vataj kasa is concerned ruksha.sheeta kashaya aahara sevana as well as eating junk food,disturbed timings of meal play more important role than veg or non veg sorts of diet.so no any considerable information and conclusion is achieved form this point of view.

6)According to Prakruti-

Out of 80 patients, 24 patients (30%) were with kaphaj prakruti, 2 patients (2%) were with pittaj prakruti while 54 patients (68%) were with vataj prakruti. From above data it is clear that maximum patients having Vataj prakruti .It indicates that vataj prakruti people are more prone to vataj kasa.

7) According to AGNI :-

Out of 80 patients, 24 patients (30%) were with Manda agni, 1 patient (1%) was with tikshna agni while 55 patients (68%) were with Visham agni. As we all know the samprapti of vataj kasa

there is no significance of agni in it hence no conclusion is withdrawn from the data related to agni.

MODE OF ACTION :

While the pathology of vataj kasa is considered to cure it, the drug have to act on the moolsthanas of pranavaha strotasa that is hridayam and mahastrotasam.when we see the formation if badaripatrakadi kalka its contents are snigdha ,guru,yogavahi,vatapittaghna, tridosahara having vatanulomak properties which is required for samprapti bhanga of vataj kasa.also they altogether show kaphavilayak guna,leading to reduce rukshata of strotasa and increased relief to patient. Saindhav acts as yogavahi dravya that takes other dravyas in this yoga upto deeper level in strotasa. Due to snigdha guna reduces ruksha and shushka guna of vayu.It is vrishya-dipana-rochana and pachana.It also helps to relieve chest congestion due to sputum accumulation as it is having kaphavilayana and chedana properties.by the above information it can be concluded that herbs act in different ways for samprapti bhanga,some by their snighda guna some by guru, mrudu guna.some don't have direct action though they can reduce lung congestion just by apana anulomana and agnivardhana. Hence after completion of treatment with badaripatrakadi kalka,it is noticed that signs and symptoms of vataj kasa are minimized.

DISCUSSION ON PARAMETERS-

1.Shushkaurakanthavaktratam-

The mean reduction in Shushkaurakanthavaktratam score was 2.18 and median reduction was 2 which happens to be significant (P-value < 0.001) at 5% level of significance as suggested by Wilcoxon signed rank test. The significant change in shushkaurakanthavaktratam may be due to the snigdha guna of ghrita and guru,snigdha guna of badaripatra.as well as vatshamak properties of drugs.These properties of drugs having opposite gunakarma of these symptoms and they are getting decreased.

2.Urashoola:

Mean The reduction in Urashool score was 2.18 and median reduction was 2 which happens to be significant (P-value < 0.001) at 5% level of significance as suggested by Wilcoxon signed rank test. i.e. it can be said that there is significant reduction in Urashool. Urashoola symptom produced by prakupit vata in vataj kasa. The significant changes in urashoola may be due to badaripatra and ghrita .Badariptra have madhur –amla ras and its mukhya guna are

guru,snigdha.ghrita is snigdha in mukhya guna ,madhur rasa and madhur vipaka.These properties of drugs having opposite gunakarma of these symptoms they are getting decreased.

3)Shirashool:

The mean reduction in Shirashool score was 2.18 and median reduction was 2 which happens to be significant (P-value < 0.001) at 5% level of significance as suggested by Wilcoxon signed rank test. i.e. it can be said that there is significant reduction in Shirashool. shirashool symptom produced by prakupit vata in vataj kasa. The significant changes in shirashool may be due to badaripatra and ghrita .badariptra have madhur –amla ras and its mukhya guna are guru,snigdha.Ghrita is snigdha in mukhya guna ,madhur rasa and madhur vipaka.These properties of drugs having opposite gunakarma of these symptoms they are getting decreased.

4)Swarbheda:

The mean reduction in Swarbheda score was 1.83 and median reduction was 2 which happens to be significant (P-value < 0.001) at 5% level of significance as suggested by Wilcoxon signed rank test. The significant change in swarbheda may be due to vatashamak action of badaripatra and saindhav, snigdha guna and madhur rasa of ghrita.These properties of drugs reduce swarbheda in vataj kasa.

5)kasavega:

The mean reduction in Kasavega score was 1.18 and median reduction was 1 which happens to be significant (P-value < 0.001) at 5% level of significance as suggested by Wilcoxon signed rank test. i.e. it can be said that there is significant reduction in Kasavega. The significant change in kasavega may be due to guru,snigdha guna and madhur vipaka of badaripatra and ghrita as well as tridosahara action of saindhav. They subside the prakupit vata in kasa and there symptom like kasavega.

6)Daurbalya:

The mean reduction in Daurbalya score was 1.18 and median reduction was 1 which happens to be significant (P-value < 0.001) at 5% level of significance as suggested by Wilcoxon signed rank test. i.e. it can be said that there is significant reduction in Daurbalya. The significant change in dourbalya may be due to badaripatra,ghrita and saindhav having vata

shamak properties and snigdha,balyakar guna of ghrita. These properties which reduce daurbalya.

CONCLUSION

The drug badaripatrakadi kalka is more effective in the management of Vataj kasa.

In this study Out of 80 patients, 59 patients (74%) were cured, 20 patients (25%) were with marked improvement while 1patient(1%)was with moderate improvment.

In the present study occurrence of vataj kasa is significant in middle aged group,job accupation, vishamagni and mixed diet patients but due to small sample size we are unable to get any definite conclusion.

From the all above mentioned symptoms of Vataj kasa, symptoms like Shushkorakanthavaktratam, Urashoola, Shirashoola daurbalya, Swarabheda, Kasavega.....show significant relief.Signs and Symptoms of Vataj kasa are similar to Tropical pulmonary Eosinophillia.The Badaripatrakadi kalka is very low cost, easy to prepare, easy to take and palatable to patients.No side effects are seen.

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