

## A COMPARATIVE CLINICAL STUDY TO EVALUATE THE EFFICACY OF KASANTAKA CHOORNA AND SITOPALADI CHOORNA IN THE MANAGEMENT OF VATAJA KASA (TROPICAL PULMONARY EOSINOPHILIA)

Nitin Kumar<sup>1</sup>, Raghvendra Y<sup>2</sup>, Ratnesh Dubey<sup>3</sup>

<sup>1</sup>BAMS, Final Year P.G Scholar Dhanvantari Ayurveda College Hospital & Research Centre Siddapur (U.K), Karnataka, India

<sup>2</sup>Associate Professor Department of PG Studies in Kayachikitsa Dhanvantari Ayurveda College Hospital & Research Centre Siddapur (U.K) Karnataka. – 581355, India

<sup>3</sup>3<sup>rd</sup> Year P.G Scholar Dhanvantari Ayurveda College Hospital & Research Centre Siddapur (U.K), Karnataka, India

Corresponding Author: [dr.ndy24@gmail.com](mailto:dr.ndy24@gmail.com)

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### ABSTRACT

In this study, *VatajaKasa* is compared to Tropical Pulmonary Eosinophilia, which is having symptoms *ShushkaKasa*, *PrasktaVega*, *ParshwaShula*, *ShiraShoola*, *Urashula*, *SwaraBheda* and *Kanthakandu* similar to that in T.P.E. hence taken for the study. The present study was undertaken to evaluate the efficacy of *Kasantakachoorna* and *Sitopaladichoorna* in the management of *VatajaKasa* w.s.r.t. T.P.E. The symptoms which are expressed in Tropical Pulmonary Eosinophilia, are very nearer to the symptoms of *vatajakasa*. Evaluate the effect of *KasantakaChoorna* in *Vatajakasa* (T.P.E). Evaluate the effect of *Sitopaldi Choorna* in *Vatajakasa* (T.P. E). To compare the efficacy of *Kasantaka Choorna* and *Sitopaladi Choorna* in the management of *Vatajakasa* (T.P.E). Sample size – 40 patients of *Vatajakasa* were selected and divided into 2 groups, comprising 20 patients in each group. ***Kasantaka Choorna***: This is more effective on *ShushkaKasa*, *HrutShoola*, *Prasakta Vega* *Kantha Kandu* because *Kasantaka Choorna* ingredients contains *Snigdha*, *Rasayana* and *Kaphavatahara* properties.

***Sitopaladi Choorna***: ingredients include *Ela*, *Twaka*, *Pippali*, *Vamsalochana* etc. These herbs promote various medical properties that help in improving the immune system and its having *Kaphashamaka*, *Vatanulomaka*,

Pittashamaka and Antitussive properties. Sitopaladi Choorna acts more effective on Shira Shool, Parshwashool and SwaraBheda.

**Keywords:** Kasantaka Choorna, Sitopaladichoorna, Vatajakasa Tropical pulmonary Eosinophilia,

## INTRODUCTION

Kasa is a very common disease of the respiratory system. India being one tropical country prevalence of VatajaKasa vis-à-vis Tropical Pulmonary Eosinophilia is remarked. In 1943 Weingarten used the term tropical eosinophilia when describing a syndrome characterized by severe spasmodic bronchitis, eosinophilic, leucocytosis and disseminated mottling of both lungs. The syndrome is particularly endemic in India, Sri Lanka, Southeast Asia and Africa and has been reported from filarial epidemic areas worldwide.

<sup>1</sup>According to a survey conducted in 1986, it was observed that the incidence & prevalence rate of TPE in India is 12.6/1000%. According to the journal of epidemiology & community health 1993 by Dr Ray the incidence & prevalence rate is 12.7/1000%<sup>2</sup>. The Male & female ratio of TPE is 4:1<sup>3</sup>.

According to *Tarka Samgraha*, *vayu* which moves in the body is named prana, the word prana is formed by adding the suffix, 'pra' to the dhatu an. *Sharangadhara* says, *Pranavayu* acts as *Amruta* to nourish the body<sup>(4)</sup> Among the varieties, *VatajaKasa* is very common in locality. This needs analysis in the scientific background as explained in the Ayurvedic classics. The human body is continuously under 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.

One of the unique criteria of living activity is breathing. One of the basic activities of *Pranavaha Srotas* is an exchange of gases, the rate of exchanges of gases is to tune 16 times per minute making it one of the most vulnerable sites for diseases. This problem has been compounded by our modern lifestyle, for industrialization and population explosion. As a result of Raja and Dumas the main cause of

*Pranavahasrotasdusti* has become unavoidable, making *Kasa* the most common disease, where *ShuskaKasa* is a prominent symptom. *Vataja Kasa* is taken as a special reference to Tropical Pulmonary Eosinophilia because of similarities of signs and symptoms.

*Kasa* seems to be a very simple disease, if not controlled and treated properly it may lead to disease with the poor prognostic condition. So, we are in demand of a quick-acting medicine with higher effectiveness, a search of such a medicine end up with *Kasantakachoorna*.

### Material and Methods:

#### Source of Data:

##### A. Subjection of clinical participants:

Patients will be diagnosed and selected from the Kaya Chikitsha OPD and IPD of PG studies in Kayachikitsa of Dhanvantari Ayurveda medical college and hospital, medical camps and other referrals.

#### Drugs Procurement:

The trial drugs will be collected from local areas and markets after being properly identified. *Kasantaka Choorna*<sup>5</sup> and *Sitopaladi choorna*<sup>6</sup> will be used for the study to be prepared in the Teaching Pharmacy of the institution.

#### Methodology: Preparation of Sitopaladi & Kasantak Choorna

##### Choorna Kalpana:

*Choorna* is extensively described in all *Samhitas* for almost all diseases. The *Kalka* has been narrated with prime importance under *Panchvidha Kashaya Kalpana*. Considering the totality of drugs *Kalka* and *Churna Kalpanas* are similar, which are frequently mentioned by *Charaka* in various ailments. *Acharya Susruta* has also given prime importance to the *Choorna Kalpana*, all over the treatment aspects, in *Astanga Samgrah* and *Astanga Hridaya* there are abundant uses of *Choornakalpana* in almost all the

conditions of disease. It may be noticed that the use of *Choornakalpana* is getting increased along with the advancing period.

#### **Perceptive Outlook of Choorna Kalpana: -**

The term *Choorna* stands is for the power of a single drug or a mixture of two or more drugs, powdered separately, before mixing homogeneously. According to the Ayurvedic formulary of India *Choorna* is a fine powder of drug or mixture of drugs. *Sitopaladi & Kasantak Choorna*: - Take all single herb powder in mentioned quantity mix it well in one pot. Pack it in an airtight bottle. Showing ingredients of Kasanataka choorna (Table no 1) Showing ingredients of Sitopaladi choorna (Table no 2)

#### **Method of collection of Data:**

**a. Study Design:** Simple random sampling technique  
Sample size – 40 patients of *vatajakasa* were selected and divided into 2 groups, comprising 20 patients in each group.

Group A (Control)- Patients of this group were given *Sitopaladi Choorna*- 2 gram thrice a day before food with *Sukhoshnajala*. Group B (Trial) – Patients of this group were given *Kasantaka Choorna* 2 gram thrice a day before food with *madhu*.

#### **b. Diagnostic criteria**

1. Diagnosis is made on the basis of classical symptomology and laboratory findings.
2. Presence of prominent feature of *Vatajakasa*.
3. Increased in A.E.C. of peripheral blood smear i.e., > 440/UL.

#### **c. Inclusion criteria:**

1. Patients of classical *VatajaKasa* symptoms irrespective of gender, caste, occupation and economic status.
2. Ages between 15 to 60 yrs.
3. Patients having increased A.E.C. (Absolute Eosinophilic Count) in peripheral blood smear were selected.

#### **d. Exclusion criteria:**

1. All other varieties of *Kasa* except *VatajaKasa*.
2. *VatajaKasa* is associated with any other medical emergencies.
3. Patients with the complication of *Kasa* i.e. *Rajayakshma*, carcinoma of bronchus, pulmonary

tuberculosis, pleurisy, pneumonia is excluded.

4. Patients below the age of 15 yrs and above 60 yrs.
5. *VatajaKasa* patients along with metabolic diseases such as diabetes and HTN are excluded.
6. Secondary chronic pulmonary Eosinophilia with asthma.
7. Pregnant and lactating women are excluded.

#### **CRITERIA FOR ASSESSMENT: SUBJECTIVE PARAMETERS:**

1. *SuskaKasa* (Table no 4)
2. *Shira shoola* (Table no 5)
3. *Parshwashoola* (Table no 6)
4. *Hrutshoola* (Table no 7)
5. *Swarabheda* (Table no 8)
6. *Prasktavega* (Table no 9)
7. *Kanthkandu* (Table no 10)

**Objective Parameter:** 1) Differential Eosinophilic count (Table No 12). 2) E.S.R (Table No 13). 3) A.E.C (Table No 14)

#### **OVERALL ASSESSMENT OF CLINICAL RESPONSE**

The overall effect of the clinical trial was assessed by considering all the parameters of assessment before and after treatment as follows.

Completely relieved	100 % relief
Marked response	More than 60% relief
Moderate response	40 to 60 % relief
Mild response	20-40 % relief
No change	Below 20 % relief

**Study duration:** 30 days study

**Follow up:** Patients will be observed on 1<sup>st</sup> the 7<sup>th</sup> and 15<sup>th</sup>, 30th days to assess the progress of the condition.

**Statistics Analysis:** For the statistical analysis wilcoxon sign rank method Mann whitney method and “t” testis applied to assess the significance within the group and between the group.

**Observation:** The observations made on 40 patients showed results accordingly

*Suskakasa*-P-Value for Group A and Group B is less than 0.05. Hence, we conclude that the effect observed in Group A and Group B is significant. *Shirashoola*: P-Value for Group A and Group B is less than 0.05. Hence, we conclude that the effect observed in Group A and Group B is significant. *Parshwashoola*: P-Value

for Group A and Group B is less than 0.05. Hence, we conclude that the effect observed in Group A and Group B is significant. 4. *Hrutshola*: P-Value for Group A and Group B is less than 0.05. Hence, we conclude that the effect observed in Group A and Group B is significant. *Swarabheda*: P-Value for Group A and Group B is less than 0.05. Hence, we conclude that the effect observed in Group A and Group B is significant. *Prasakatavega*: P-Value for

Group A and Group B is less than 0.05. Hence, we conclude that the effect observed in Group A and Group B is significant. *Kanthmandu*, P-Value for Group A and Group B is less than 0.05. Hence, we conclude that the effect observed in Group A and Group B is significant.

**Table 11:** Shows Comparison between Trial & control group for subjective parameters

	Group	N	Mean Rank	Sum of Ranks	Mann-Whitney U	P-Value
<i>SuskaKasa</i>	Group A	20	18.25	365.00	155.000	0.159
	Group B	20	22.75	455.00		
	Total	40				
<i>Shira shola</i>	Group A	20	24.95	499.00	111.000	0.008
	Group B	20	16.05	321.00		
	Total	40				
<i>Parshwashoola</i>	Group A	20	24.93	498.50	111.500	0.009
	Group B	20	16.08	321.50		
	Total	40				
<i>Hrut shola</i>	Group A	20	19.00	380.00	170.000	0.294
	Group B	20	22.00	440.00		
	Total	40				
<i>Swarabheda</i>	Group A	20	24.50	490.00	120.000	0.002
	Group B	20	16.50	330.00		
	Total	40				
<i>Prasatavega</i>	Group A	20	22.00	440.00	170.000	0.348
	Group B	20	19.00	380.00		
	Total	40				
<i>Kanthkandu</i>	Group A	20	17.30	346.00	136.000	0.067
	Group B	20	23.70	474.00		
	Total	40				

**RESULT:** *Kasantaka Choorna* is more effective on *ShushkaKasa*, *Hrut Shoola*, *Prasakta Vega Kantha Kandu* because *Kasantaka Choorna* ingredients contains *Snigdha*, *Rasayana* and *Kaphavatahara* properties. *Sitopaladi Choorna* ingredients include *Ela*, *Twaka*, *Pippali*, *Vamsalochana* etc. These herbs

promote various medical properties that help in improving the immune system and its having *Kaphashamaka*, *Vatanulomaka*, *Pittashamaka* and Antitussive properties. *Sitopaladi Choorna* acts more effective on *Shira School ParshwaShool* and *SwaraBhada* (table no.3).

## OVERALL EFFECT IN PERCENTAGE AND SIGNIFICANCE

**Table 3:** Subjective Parameter

Symptoms	Control group	Trial group	Significance
Shushkakasa	95.74	96.15	Significant
Shira shola	91.11	87.50	Significant
Parshwashoola	95.92	94.59	Significant
Hrutshola	80.00	87.50	Significant
Swarabheda	100.00	96.97	Significant
Prasaktavega	94.12	93.55	Significant
Kanthe kandu	89.66	92.50	Significant

## DISCUSSION

**Discussion on materials:** *Sitopaladi Choorna*- It is a controlled Drug. *Kasantaka Choorna* - It was selected on the basis of its indication in *Vataj Kasa* and also on the basis of its easy availability. Discussion on Age in Group A, 6 patients belong to age group 21-30 years, 3 patients belong to age group 31-40 years, 2 patients belong to age group 41-50 years, 8 patients belong to age 51-60 years, 1 patient belongs to 61-70 years. In Group B, 7 patients belong to age group 21-30 years, 4 patients belong to age group 31-40 years, 2 patients belong to age group 41-50 years, 7 patients belong to age 51-60 years, 0 patients belong to 61-70 years. 6. *Bala* in Group A, 10 patients were having *Heenabal*, 10 patients were having *Madhyambala*. In Group A, 6 patients were having *Heenabal*, 14 patients were having *madhyambala*. 7. *Prakruti* in A, group 1 Patients having KP Prakuti, 2 patients having KV prakuti, 2 patients *VatajaPrakuti*, 2 patients having VK Prakuti, 13 patients having VP Prakuti. In Group B 2 Patients having KP Prakuti, 2 patients having KV Prakuti, 1 patients *VatajaPrakuti*, 4 patients having VK Prakuti, 8 patients having VP prakuti. From the above data, we can observe that *vatapittjprakruti* patients were more prone to the *vatajkasa*, after that *Vatakaphaj Prakruti* patients were prone in both groups. 8. *Koshtha* – In group A 80% of patients have *Krurakoshtha* while 15 & 5% of patients have *Madhya* & *mrudukoshth* respectively. In group B 60% of patients have *Krurakoshtha*, 35 & 5 % of patients are from *Madhya* & *mrudukoshtha*. From the above data, we can observe that in both groups *krurakoshtha* patients are more prone to the *vatajkasa*. 9. *Agni* in

group A, 1 patient has *Sama* again, 1 patient has *Tikashana* again, 18 patients have *Agni*. In group B, 3 patients had *Sama* again, 1 patient had *Tikashana* again, 16 patients had *Agni*. Discussion on subjective parameters (Table No 10) 1. *Shushkakasa* Since observations are on an ordinal scale (gradations), we have used Wilcoxon Signed Rank Test to test efficacy in Group A and Group B. We can observe that P-Value for Group A and Group B is less than 0.05. Hence, we conclude that the effect observed in Group A and Group B is significant. *Kasantaka Choorna* shows a better effect than *Sitopaladi Choorna*, because of its content. *Shirashoola* Since observations are on an ordinal scale (gradations), we have used Wilcoxon Signed Rank Test to test efficacy in Group A and Group B. We can observe that P-Value for Group A and Group B is less than 0.05. Hence, we conclude that the effect observed in Group A and Group B is significant. *Parshwashoola* Since observations are on an ordinal scale (gradations), we have used Wilcoxon Signed Rank Test to test efficacy in Group A and Group B. We can observe that P-Value for Group A and Group B is less than 0.05. Hence, we conclude that the effect observed in Group A and Group B is significant. *Hrutashoola* Since observations are on an ordinal scale (gradations), we have used Wilcoxon Signed Rank Test to test efficacy in Group A and Group B. We can observe that P-Value for Group A and Group B is less than 0.05. Hence, we conclude that the effect observed in Group A and Group B is significant. *Kasantaka Choorna* shows a better effect than *sitopaladi Choorna*, because of its content. 5.

**Swarabheda** Since observations are on an ordinal scale (gradations), we have used Wilcoxon Signed Rank Test to test efficacy in Group A and Group B. We can observe that P-Value for Group A and Group B is less than 0.05. Hence, we conclude that the effect observed in Group A and Group B is significant. **Prasakta Vega** Since observations are on an ordinal scale (gradations), we have used Wilcoxon Signed Rank Test to test efficacy in Group A and Group B. We can observe that P-Value for Group A and Group B is less than 0.05. Hence, we conclude that the effect observed in Group A and Group B is significant. **Kasantaka Choorna** shows a better effect than **Sitopaladi Choorna**, because of its content. **Kanthe kandu** – Since observations are on an ordinal scale (gradations), we have used Wilcoxon Signed Rank Test to test efficacy in Group A and Group B. We can observe that P-Value for Group A and Group B is less than 0.05. Hence, we conclude that the effect observed in Group A and Group B is significant. **Kasantaka Choorna** shows a better effect than **Sitopaladi Choorna**, because of its content. **Objective Parameters.** **AEC** Since observations are quantitative, we have used Paired t-test to test efficacy in Group A and Group B. We can observe that P-Value for Group A and Group B is less than 0.05. Hence, we conclude that the effect observed in Group A and Group B is significant. **DC** Since observations are quantitative, we have used Paired t-test to test efficacy in Group A and Group B. We can observe that P-Value for Group A and Group B is less than 0.05. Hence, we conclude that the effect observed in Group A and Group B is significant. **Hb** Since observations are quantitative, we have used Paired t-test to test efficacy in Group A and Group B. We can observe that P-Value for Group A is less than 0.05 and Group B is greater than 0.05. Hence, we conclude that the effect observed in Group A is significant and Group B is not significant. **ESR** Since observations are quantitative, we have used Paired t-test to test efficacy in Group A and Group B. We can observe that P-Value

for Group A and Group B is greater than 0.05. Hence, we conclude that the effect observed in Group A and Group B is not significant. **ESR** is a clinical parameter that does not come within the normal limit within a very short time. (Table No 11).

## CONCLUSION

Both groups show better results in *VatajKasa*. *Sitopaladi & Kasantaka Choorna* is effective in *VatajKasa*. For comparison between *Sitopaladi Choorna* and *Kasantak Choorna*, we have used an unpaired t-test, we can observe that P-Values for almost all parameters are greater than 0.05. Hence, we conclude that there is no significant difference between Group A and Group B. For *Shira Shoola*, *Parshwa Shoola* and *Swarabheda*, the effect observed in Group A is more than Group B. By both assessment parameters subjective & objective we have to conclude that, there is no significant difference in both groups.

## REFERENCES

1. <http://www.ncbi.nlm.nih.gov/pmc/articles/pmc1059861>
2. <http://jech.bmj.com/content/47/6/469.abstract>
3. <http://www.ncbi.nlm.nih.gov/pmc/articles/pmc1485295/pdf/cmaj00268-0063.pdf>.
4. Dr. P. Himasagara Chandra Murthy ed. Sarangadhara Samhita of Sarangadhara, Poorvakhanda, 5/48-49, 1<sup>st</sup> ed. 2001, Chaukhambha Sanskrit Series Office, Varanasi, pp- 48.
5. Kaviraj Govind Das Sen, Siddhiprada "Hindi Commentary by Prof. Siddhi Nandan Mishra Bhashajya Ratnavali, Edition-2017, pub: Chaukhambha Surabharati Prakashan, Varanasi; Kasaroga Adhikara ch.15/38, pp442.
6. Pandita Sarangadharacarya: Sarangadhara Samhita of containing Anjananidana of Maharsi Agnivesa Annotated with 'Dipika' Hindi Commentary by Dr Brahmanand Tripathi: ed 2019 madhyama khanda choorna Kalpana ch.6 /136-139

**Table 1: Kasantaka Choorna Ingredients**

Sl.	Sanskrit Name	Botanical name	Part used	Proportion
1	Amalaki	Phyllanthus Emblica	Fruit	1 pala
2	Haritaki	Terminalia chebula	Fruit	1 pala
3	Vibhitaki	Terminalia bellirica	Fruit	1 pala
4	Sunthi	Zingiber officinale	Rhizome	1 pala
5	Marica	Piper nigrum	Fruit	1 pala
6	Pippali	Piper longum	Fruit	1 pala

**Table 2: Sitopaladi Choorna Ingredients**

Sl.	Sanskrit Name	Botanical name	Part used	Proportion
1	Sitopala	Sugar candy	Sugar	16 parts
2	Vamshlochana	Bambusabambos	Inner part	8 parts
3	Pippali	Pipper longum	Fruit	4 parts
4	Ela	Elettaria cardomom	Fruit	2 parts
5	Twaka	Cinnamum zeylanicum	Bark	1 pala

## OVERALL EFFECT IN PERCENTAGE AND SIGNIFICANCE

**Table 3: Subjective Parameter**

Symptoms	Control group	Trial group	Significance
Shushkakasa	95.74	96.15	Significant
Shira shola	91.11	87.50	Significant
Parshwashoola	95.92	94.59	Significant
Hrutshola	80.00	87.50	Significant
Swarabheda	100.00	96.97	Significant
Prasaktavega	94.12	93.55	Significant
KantheKandu	89.66	92.50	Significant

**Table 4: Shows Shushkakasa wise distribution of patient's data**

SuskaKasa	Mean	Median	SD	Wilcoxon W	P-Value	% Effect	Result*
Group A	BT	2.35	2.00	0.59	-4.064 <sup>a</sup>	0.0000483	95.74
	AT	0.10	0.00	0.31			
Group B	BT	2.60	3.00	0.50	-4.038 <sup>a</sup>	0.0000540	96.15
	AT	0.10	0.00	0.31			

**Table 5: Shows Shira Shoola wise distribution of patient's data**

Shira shola	Mean	Median	SD	Wilcoxon W	P-Value	% Effect	Result
Group A	BT	2.25	2.00	0.55	-4.008 <sup>a</sup>	0.0000612	91.11
	AT	0.20	0.00	0.41			
Group B	BT	1.60	2.00	0.60	-3.839 <sup>a</sup>	0.0001237	87.50
	AT	0.20	0.00	0.41			

**Table 6:** Shows Parshwashoola wise distribution of patient's data

Parshwashoola		Mean	Median	SD	Wilcoxon W	P-Value	% Effect	Result
Group A	BT	2.45	2.00	0.51	-4.072 <sup>a</sup>	0.0000467	95.92	Sig
	AT	0.10	0.00	0.31				
Group B	BT	1.85	2.00	0.88	-3.985 <sup>a</sup>	0.0000675	94.59	Sig
	AT	0.10	0.00	0.31				

**Table 7:** Shows Hrut Shoola wise distribution of patient's data

Hrutshoola		Mean	Median	SD	Wilcoxon W	P-Value	% Effect	Result
Group A	BT	0.25	0.00	0.44	-2.000 <sup>a</sup>	0.0455003	80.00	Sig
	AT	0.05	0.00	0.22				
Group B	BT	0.40	0.00	0.50	-2.646 <sup>a</sup>	0.0081510	87.50	Sig
	AT	0.05	0.00	0.22				

**Table 8:** Shows Swarabheda wise distribution of patient's data

Swarabheda		Mean	Median	SD	Wilcoxon W	P-Value	% Effect	Result
Group A	BT	2.00	2.00	0.00	-4.472 <sup>a</sup>	0.0000077	100.00	Sig
	AT	0.00	0.00	0.00				
Group B	BT	1.65	2.00	0.49	-4.053 <sup>a</sup>	0.0000506	96.97	Sig
	AT	0.05	0.00	0.22				

**Table 9:** Shows Prasktavega wise distribution of patient's data

Prasktavega		Mean	Median	SD	Wilcoxon W	P-Value	% Effect	Result
Group A	BT	1.70	2.00	0.47	-4.053 <sup>a</sup>	0.0000506	94.12	Sig
	AT	0.10	0.00	0.31				
Group B	BT	1.55	2.00	0.51	-4.041 <sup>a</sup>	0.0000531	93.55	Sig
	AT	0.10	0.00	0.31				

**Table 10:** Shows Kanthkandu wise distribution of patient's data

Kanthkandu		Mean	Median	SD	Wilcoxon W	P-Value	% Effect	Result
Group A	BT	1.45	1.00	0.51	-3.839 <sup>a</sup>	0.0001237	89.66	Sig
	AT	0.15	0.00	0.37				
Group B	BT	2.00	2.00	0.86	-3.774 <sup>a</sup>	0.0001609	92.50	Sig
	AT	0.15	0.00	0.37				

**Table 11:** Shows Comparison between Trial & control group for subjective parameters

	Group	N	Mean Rank	Sum of Ranks	Mann-Whitney U	P-Value
SuskaKasa	Group A	20	18.25	365.00	155.000	0.159
	Group B	20	22.75	455.00		
	Total	40				
Shira shola	Group A	20	24.95	499.00	111.000	0.008
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	Total	40				
Parshwashoola	Group A	20	24.93	498.50	111.500	0.009
	Group B	20	16.08	321.50		
	Total	40				
Hrutshola	Group A	20	19.00	380.00	170.000	0.294
	Group B	20	22.00	440.00		
	Total	40				
	Group A	20	24.50	490.00		



Swarabheda	Group B	20	16.50	330.00	120.000	0.002
	Total	40				
Prasktavega	Group A	20	22.00	440.00	170.000	0.348
	Group B	20	19.00	380.00		
	Total	40				
Kanthkandu	Group A	20	17.30	346.00	136.000	0.067
	Group B	20	23.70	474.00		
	Total	40				

**Table 12:** Shows DC wise distribution of patient's data

DEC		Mean	N	SD	SE	t-Value	P- Value	Result
Group A	BT	5.00	20	1.62	0.36	10.389	0.000	Sig
	AT	1.30	20	0.47	0.11			
Group B	BT	6.50	20	1.67	0.37	15.422	0.000	Sig
	AT	1.30	20	0.47	0.11			

**Table 13:** ESR (Erythrocyte Sedimentation Rate) wise distribution of patient's data

ESR		Mean	N	SD	SE	t-Value	P-Value	Result
Group A	BT	19.65	20	7.31	1.63	1.582	0.130	NS
	AT	18.85	20	6.16	1.38			
Group B	BT	26.40	20	10.05	2.25	1.111	0.280	NS
	AT	25.20	20	9.86	2.20			

**Table 14:** AEC (Absolute Eosinophil count) wise distribution of patient's data

		Mean	N	SD	SE	t-Value	P- Value	Result
Group A	BT	1.30	20	0.47	0.11	12.583	0.000	Sig
	AT	0.05	20	0.22	0.05			
Group B	BT	1.50	20	0.51	0.11	12.704	0.000	Sig
	AT	0.05	20	0.22	0.05			

**Table 15:** Comparison between Trial & control group for Objective Parameter

	Group	N	Mean	SD	SE	t-Value	P- Value
AEC	Group A	20	1.25	0.44	0.10	-1.322	0.194
	Group B	20	1.45	0.51	0.11		
Differential EC	Group A	20	3.70	1.59	0.36	-3.059	0.004
	Group B	20	5.20	1.51	0.34		
HB%	Group A	20	0.41	0.46	0.10	-0.694	0.492
	Group B	20	0.53	0.68	0.15		
ESR	Group A	20	0.80	2.26	0.51	-1.256	0.217

**Source of Support: Nil**

**Conflict of Interest: None Declared**

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