



A CLINICAL STUDY ON AJIRNA AND ITS MANAGEMENT WITH BADA VAMUKHA CHURNA

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ABSTRACT

Background: Ayurveda consider Health and Disease both as the products of food and life style. Today when population is moving with modernization in the 21st century a lot of new diseases emerge out due to faulty life style, unhealthy food, lack of exercise, mental stress and disturb sleep. All these disturbs the biological clock of human being and produce new life style diseases. Ajirna is a common disease which originates from digestive power insufficiency (Agni) due to all above factors of modern Era. Ayurveda is the ancient Indian system of medicine, deals with management and prevention of disease. It has given prime importance to Agni, as it is one of the basic biological elements of the living body. It is having Its own physical characteristics, location, function and secretions like digestive juices and enzymes which participate in the digestion and metabolic functions. There are 4-6 types of Ajirna mentioned in Ayurveda by different acharyas. Also there is variation in treatment as per opinion of different acharyas. So it is important to see the details of Ajirna Chikitsa in Ayurved collectively. Preventive measures like Dincharya, Ratricharya, Ritucharya, Sadvrita, pathya bhojana Grahan are helpful to reduce the Ajirna Avastha in patient. So this article is focusing on the Ajirna (Indigestion) Chikitsa in Ayurveda.

Materials and Methods: For the present study, 40 patients of Ajirna were randomly selected according to the Inclusion criteria. The prepared medicine was trailed in two groups (Groups A and B) each having 20 Patients. The assessment was in every 15 days of intervals.

Discussion and Conclusion: Statistically, Placebo drugs provided no significant results and Vadabamukha Churna provided significant results in improving subjective and objective signs and symptoms of Ajirna.

KEYWORDS: Ayurveda, Ajirna, Agni, Ama, Badavamukha Churna.

1. INTRODUCTION

In *Ayurvedic Samhita*, decrease in the intensity of *Agni* has been termed as "*Agnimandya*". Whereas Incomplete digestion and metabolism due to disturbed *Agni* leads to formation of under processed state of food termed as "*Ajeerna*". The process by which the ingested food is broken down into a simpler and absorbable form. According to *Ayurveda*, *Agni* is considered as the key factor for digestion (*Pachana*) and transforms the food substances into various forms which can be easily assimilated by our body.

Human body is made up of three *Doshas*, Seven *Dhatus* and three *Malas*. In *Samyavastha* these *Dosha*, *Dhatu* and *Mala* maintains the Health of the Body and their imbalance creates various type of disease condition. These factors are also very important for proper Digestion, without proper digestion we cannot receive our nourishment for overall Well-being. Excessive diet without the concern of *Kaal*, *Matra*, *Rashi*, *Guna* intake of opposite characteristics at a Time, Excessive Sweet, Excessive Bitter or Salty food, repeatedly consumption of food, *Chinta*, *Shoka*, *Bhaya* etc causes *Annavaaha Srotas Dushti* which leads to Indigestion (*Ajirna*).

Incomplete digestion and metabolism due to disturbed digestive fire leads to formation of under processed state of food termed as *Ajeerna*. It is the root of many disease and causes many types of pains. The main reason for indigestion is the deranged functions of *Agni*. the state of incomplete process of digestion of ingested food, due to low digestive power or other reason.

According to *Madhav Nidan* - Persons who eat food in excessive quantities recklessly like 'pashu' become prone for the development of *Ajeerna* which may lead development of many diseases.



The factors involving are: 1. Ahara 2. Pranavayu 3. Saman Vayu 4. Apana vayu 5. Pachaka Pitta 6. Bodhaka Kapha 7. Kledaka Kapha 8. Agni. 9. Annava srotas Any vikruti among these may leads to Ajeerna.

1.1 Aims and Objectives

To assess the efficacy of *Badavamukha churna* on *Ajirṇa*.

2. MATERIALS AND METHODS

2.1. Ethical Clearance

The study was approved by IEC (Institutional Ethical Committee), Govt. Ayurvedic college and Hospital, Balangir vide Letter No: 595 and registered in clinical Trial Registry of India (CTRI; www.ctri.nic.in) vide registration No: CTRI/2023/08/056982 on dated 28.08.2023. The study has been conducted among the patients registered for the purpose. Written consent was obtained from each patient participated in the study with prior proper information.

2.1.1. Source of Patient

Forty patients were selected from the OPD and IPD of Government Ayurvedic College and Hospital, Balangir, and Sharadeswari Govt. Ayurvedic Hospital, Balangir, and were enrolled for the clinical study.

2.1.2. Study Design

This is a clinicopathological study (single-blind Study).

2.2. Grouping

2.2.1. Method of collection of patients

Forty patients suffering from Ajirna were taken for the present study. They were screened by a special proforma which includes details history taking, physical signs and symptoms, and pathological investigations mentioned in classics and modern science. The patient examination pro forma is placed in the appendix of this dissertation.

2.2.2. Methodology

Randomised control trial (Single blind study)

GROUP-A (TRIAL GROUP): 20 patients will be treated with *Badavamukha churna*, 5gm twice daily, for 30 days.

GROUP-B (CONTROL GROUP): 20 patients will be treated with Placebo drug, 5gm twice daily, for 30 days.

2.2.3. Duration

The duration of the study was 30 days.

Comparison was one within two groups to find out the effectiveness of the mentioned medicines.

2.3. Diagnostic Criteria

The patients will be diagnosed on the basis of both subjective and objective parameters. The subjective and objective parameters will be examined through *Trividha*, *Sadvidha*, *Astavidha*, *Dashvidha parikshya*. The following clinical features mentioned in *charak chikitsa* are included in this study.

- Bistambha* (Constipation), *Sadana* (Weakness), *Shirasaruk* (Headache), *Bhrama* (Vertigo), *Angamarda* (Bodyache), *Trushna* (Thirst), *Jwara* (Fever), *Chardi* (Vomiting), *Pravahana* (Applying pressure for defaecation), *Arochaka* (Anorexia), *Daha* (Burning Sensation)
- Hb%, DC, TLC, ESR, STOOL (ROUTINE & MICROSCOPIC)

2.4. Inclusion Criteria

- The patients between the age group of 18-60 years, irrespective of gender.
- Patient having classical sign and symptoms of Ajirna

2.5. Exclusion Criteria

- Patients with disorder like diabetes mellitus, peptic ulcer etc
- Pregnant and Lactating mother
- patients suffering from multiple organ disease.
- Ajirna* patients suffering from any life threatening disorders.
- Patients suffering from any infectious diseases

2.6. Assessment Criteria: For the purpose of the assessment of result, severity of the signs and symptoms mentioned in subjective & objective parameters will be graded as 3,2,1,0 grade for severe (3), moderate (2), mild (1), and normal (0) accordingly. Assessment



will be revealed by favorable shift to left (i.e. 0-1-2-3). The detail pathogenesis of clinical study will be carried out based on Trividha, Sadvidha, Astavidha and Dashvidha parikshya as per Ayurvedic classics.

2.7. Dose, duration and administration procedure

- i) **Dose of *Badavamukha churna***:-5 gm twice daily for 30 days.
Anupana:- Luke warm water
- ii) **Dose of placebo drug** (wheat flour with sugar candy)- 5 gm twice daily
Anupana:- Normal Water

2.8. Follow-up

Follow up will be done in every 15 days interval i.e. 15th, 30th day in both groups. During follow up both subjective and objective parameters of assessment will be done to assess the result.

2.9. Assessment for Result

The degree of severity as per above gradation criteria and data collected from pathological investigations after 15 days AT1, 30 days AT2 of treatment were assessed. The assessment has been done in two stages as follows

2.9.1. Clinical assessment

The average percentage improvement in the severity of different clinical sign and symptoms was calculated. The overall clinical assessment has been done considering the sign and symptoms as follows -

- Marked Improvement: 76 - 100% relief in sign & symptoms in Trial period.
- Moderate Improvement: 51 - 75% relief in sign & symptoms.
- Mild Improvement: 26-50% relief in sign and symptoms.
- Unsatisfactory: below 25% relief in sign and symptoms.

2.9.2. Statistical analysis

The subjective and objective data, like the signs and symptoms, Hb%, DC, TLC, ESR, STOOL (ROUTINE & MICROSCOPIC), gathered from the patients were subjected for statistical analysis. Data were analyzed statistically in terms of mean, standard deviation, standard error, t-value, and P-value. The statistical analysis after 30 days of treatment has been done. For the effectiveness of the trial drug and control drug, paired "t" test and unpaired t-test have been used. The effectiveness of trial drugs and control drugs has been assessed through the P-value.

The P-value was interpreted as:

- >0.05 statistically insignificant at 5% level.
- <0.05 significant at 5% level.
- <0.01 significant at 1% level.
- <0.005 significant at 0.5% level.
- <0.001 highly significant at 0.1% level.

Presentation of Data: Data collected from the patients was tabulated under following two sections

A. General observation like Age, Sex, Religion, Occupation, Educations status, Socio-economics status, Marital Status, Dietary Habit, Habit/ Addiction, History of past illness, Family history, Sleeping Habit, Urination, Bowel Habit and Vyayama.

B. Result of therapy based on changes in sign - symptoms and disease specific- biochemical-investigations.

3. RESULTS

3.1. Registration of Patient

It has been observed from the above table that 21 numbers of patients were registered in Group – A and 20 numbers of patients were registered in Group – B. Out of them 1 number of patient was drop out from the study. 20 patients in both the groups have completed the study.

3.2. Individual Assessment of Subjective Parameters (Table 2)

3.2.1. *Sadanam*

Since observations are on ordinal scale (gradations), we have used Wilcoxon Signed Rank Test to test efficacy in Group A and Group B. From above table we can observe that, P-Value for Group A and Group B is less than 0.05. Hence, we can conclude that, effect observed in Group A and Group B is significant.

**3.2.2. Arochaka**

Since observations are on ordinal scale (gradations), we have used Wilcoxon Signed Rank Test to test efficacy in Group A and Group B. From above table we can observe that, P-Value for Group A and Group B is less than 0.05. Hence, we can conclude that, effect observed in Group A and Group B is significant.

3.2.3. Angamarda

Since observations are on ordinal scale (gradations), we have used Wilcoxon Signed Rank Test to test efficacy in Group A and Group B. From above table we can observe that, P-Value for Group A and Group B is less than 0.05. Hence, we can conclude that, effect observed in Group A and Group B is significant.

3.2.4. Jwara

Since observations are on ordinal scale (gradations), we have used Wilcoxon Signed Rank Test to test efficacy in Group A and Group B. From above table we can observe that, P-Value for Group A is less than 0.05 and Group B is greater than 0.05. Hence, we can conclude that, effect observed in Group A is significant while Group B is not significant.

3.2.5. Shirasoruk

Since observations are on ordinal scale (gradations), we have used Wilcoxon Signed Rank Test to test efficacy in Group A and Group B. From above table we can observe that, P-Value for Group A and Group B is less than 0.05. Hence, we can conclude that, effect observed in Group A and Group B is significant.

3.2.6. Bhrama

Since observations are on ordinal scale (gradations), we have used Wilcoxon Signed Rank Test to test efficacy in Group A and Group B. From above table we can observe that, P-Value for Group A is less than 0.05 and Group B is greater than 0.05. Hence, we can conclude that, effect observed in Group A is significant while Group B is not significant.

3.2.7. Trushna

Since observations are on ordinal scale (gradations), we have used Wilcoxon Signed Rank Test to test efficacy in Group A and Group B. From above table we can observe that, P-Value for Group A and Group B is less than 0.05. Hence, we can conclude that, effect observed in Group A and Group B is significant.

3.2.8. Chhardi

Since observations are on ordinal scale (gradations), we have used Wilcoxon Signed Rank Test to test efficacy in Group A and Group B. From above table we can observe that, P-Value for Group A and Group B is less than 0.05. Hence, we can conclude that, effect observed in Group A and Group B is significant.

3.2.9. Prawahanam

Since observations are on ordinal scale (gradations), we have used Wilcoxon Signed Rank Test to test efficacy in Group A and Group B. From above table we can observe that, P-Value for Group A and Group B is less than 0.05. Hence, we can conclude that, effect observed in Group A and Group B is significant.

3.2.10. Daha

Since observations are on ordinal scale (gradations), we have used Wilcoxon Signed Rank Test to test efficacy in Group A and Group B. From above table we can observe that, P-Value for Group A and Group B is less than 0.05. Hence, we can conclude that, effect observed in Group A and Group B is significant.

3.2.11. Vishtambha

Since observations are on ordinal scale (gradations), we have used Wilcoxon Signed Rank Test to test efficacy in Group A and Group B. From above table we can observe that, P-Value for Group A and Group B is less than 0.05. Hence, we can conclude that, effect observed in Group A and Group B is significant.

3.3. Individual Assessment of Objective Parameters (Table 3)**3.3.1. Vegetable cells**

Since observations are on ordinal scale (gradations), we have used Wilcoxon Signed Rank Test to test efficacy in Group A and Group B. From above table we can observe that, P-Value for Group A and Group B is less than 0.05. Hence, we can conclude that, effect observed in Group A and Group B is significant.



3.3.2. Starch

Since observations are on ordinal scale (gradations), we have used Wilcoxon Signed Rank Test to test efficacy in Group A and Group B. From above table we can observe that, P-Value for Group A and Group B is less than 0.05. Hence, we can conclude that, effect observed in Group A and Group B is significant.

3.3.3. Fat Globules

Since observations are on ordinal scale (gradations), we have used Wilcoxon Signed Rank Test to test efficacy in Group A and Group B. From above table we can observe that, P-Value for Group A is less than 0.05 and Group B is greater than 0.05. Hence, we can conclude that, effect observed in Group A is significant and Group B is not significant.

3.4. Differential Count

3.4.1. Neutrophil

Since observations are quantitative, we have used paired t-test to test significance in Group A and Group B. We can observe that, P-value for Group A and Group B is >0.05 . Hence, we can conclude that there is no significant change observed in Group A and Group B.

3.4.2. Eosinophil

Since observations are quantitative, we have used paired t-test to test significance in Group A and Group B. We can observe that, P-value for Group A and Group B is >0.05 . Hence, we can conclude that there is no significant change observed in Group A and Group B.

3.4.3. Basophil

Since observations are quantitative, we have used paired t-test to test significance in Group A and Group B. We can observe that, P-value for Group A and Group B is >0.05 . Hence, we can conclude that there is no significant change observed in Group A and Group B.

3.4.4. Lymphocyte

Since observations are quantitative, we have used paired t-test to test significance in Group A and Group B. We can observe that, P-value for Group A and Group B is >0.05 . Hence, we can conclude that there is no significant change observed in Group A and Group B.

3.4.5. Monocyte

Since observations are quantitative, we have used paired t-test to test significance in Group A and Group B. We can observe that, P-value for Group A and Group B is >0.05 . Hence, we can conclude that there is no significant change observed in Group A and Group B.

Unpaired t-test is carried out for comparison between Group A and Group B. We can observe that, P-value for all parameters is >0.05 . Hence, we can conclude that there is no significant difference observed between Group A and Group B (Table 5).

4. DISCUSSION

EFFECT ON SIGN AND SYMPTOMS

Daha/Bhrama/Trishna

In Group A, 70.0 % result was found in *Daha*(Hrit, Kantha, Udara) while 80.00 % result found in *Bhrama*, 69.23% result was found *Trishna*, in which is highly significant. This may be due to *Pitta Saraka* and *Pita Vatanulomana* properties of drug.

Arochaka

In Group A, 33.01 % result was found in *Abhyavaharana Shakti*. It was statistically highly significant. This may be due to *Deepana* property of drug. Which enhances the power of *Jatharagni*. It causes improvement in the quantity and frequency of food intake, also intensity of hunger. The *Laghu*, *Snigdha*, *Ushna* and *Vatanulomana* properties are implanted in body which does *Agni Deepana* by removing *Ama* having properties of *Guru*, *Picchila* as a result *Abhyavaharana Shakti* and *Jarana shakti* were increased

Vishtambha/Prawahanam

In Group A, 78.57 % result was found in *Prawahanam* and 72.00 % result was found in *Vishtambha*, which is statistically highly significant. This may be due to *Anulomana* of vitiated *Vata* and *Pitta* by the action of drug. Which gives more comfort to stomach to increase digestive power and improvement in *Ahara Parinamakara Bhavas*.



Due to the *Badavamukha Churna* with hot water, *Laghu*, *Snidha*, *Ushna*, and *Vatanulomana* properties are embedded in body which does *Agni Deepana*, *Rochana* by removing *Ama* having properties of *Guru*, *Picchhila* as a result *Jarana shakti* was increased. Also due to *Ama pachana* the *Agni* becomes free to digest the food and due to *Katu Rasa*, *Ushna*, *Tikshana*, *Snigdha Guna* of drugs, *Apakva Mala* gets *Pakva Avastha* and *Mala samata* was vanished almost completely. Subsequently it is thrown outside the body without any efforts.

5. DISCUSSION ON MODE OF ACTION OF TRIAL DRUGS

- *Badavamukha Churna* i.e. predominant *Rasa* is *Katu* followed by *Tikta* and *Kashaya Rasa*, predominant *Guna* is *Laghu* and *Ruksha*. Most of the drugs are having *Ushna Veerya*, predominantly *Katu Vipaka*. The doshghnata of churna is *Kapha-Vata Shamaka* followed by *Kapha-Pitta Shamaka*, While some drugs having *tridōṣa Shamaka* property.
- According to *Āyurvēda sunthi* is best *Dipana*, *Rochana*, and *Vata Sleshma Vibandha Prashamana*. *Ācārya Charaka* quoted it as a best *Kanda* in *Agrya Varga*. *Snigdha Guna*, *Ushna Virya* and *Madhur Vipaka* OF *Sunthi* gives *Vata Shamana* effect and as it is having *Katu Rasa*, *Laghu Guna* and *Ushna Virya*, it increase the *Agni* and also give *Kapha Shamana*, *Deepana*, *Pachana*, *Rochana* and *Amahara* properties.
- *Haritaki* having *Tridōṣa Shamaka* properties.
- *Sharkara* having *Pittashamaka Kaphakara*.
- *Pippali* having *Kaphahara* and *Vatashamaka* properties. *Karanja vija* and *Bilwa* both have *Vata kapha hara* properties. *Chitraka* also having properties of *kaphaghna* and *pittasaraka* properties.
- *Aam Pachana* properties of *Pippali* clears *Srotorodha* and *Rasadhatu Niramikarana*. As per textual reference drug is indicated in *Udavarta Aanaha Rogadhikara* which shows its action in *Ajīrṇa*, *Pippali* pacifies the *Strotorodha* and helps in *Strotorodha Janya Samprapti*.
- The drug *Badavamuka churna* is having ingredients i.e. *Haritaki*, *Sunthi*, *Pippali*, *Karanja Vija*, *Bilwa*, *Chitraka*, *Sita* with *tridōṣa samana* and *vata anulomana* properties. *Anaha*, *Ajīrṇa* and *Udavarta* are the disorders which are *Vata Vaigunya* and *Kapha Vaigunya Pradhana*. Overall effect of *Badavamuka Churna* is on *Tridōṣa*. Drug has efficacy on *Koshtha* as well as on *Rasa Dhatu* by checking *Ajīrṇa* on *Koshtha* and *Ama Pachana* in *Rasa Dhatu*.

Acceptability of the Trial Drugs

In *Ajīrṇa Roga*, mainly there is vitiation of *Agni*, usually *Mandagni* is seen. This ultimately results in *Ama* formation and also may lead to *Suktapaka*. *Badavamukha Churna* has properties like *Katu*, *Tikta Rasa*, *Katu Vipaka*, *Laghu*, *Ruksha*, *Tikshna*, *Snigdha Guna* acts as *Agni Dipaka* and also *Amapachaka*. *Tikta Rasa* and *Laghu*, *Ruksha Guna* helps in reducing the colonic motility and thereby helps in *Sashleshma Mala Pravrtti*.

The drugs were well tolerated, accepted, and accomplished by the patients. In my entire study period, I noticed no unpleasant incident due to drug therapy which would compel discontinuation.

6. CONCLUSION

Development in facility is the prime cause of *Sukumarta*, and causative factor for sedentary life, which is the main cause of *Kapha Prakopa* and *Ajirna*. There are many type of *Ajirna* according to *Doshas*. Though it is *Krichhsadhya* but can be treated by *Nidan Parivarjanam* & proper management of *Agni* for the digestion of ingested food. *Badavamukha Churna* is very good remedy which is widely accepted and used herb having *Deepana*, *Pachana*, *Rochana*, *Vata Kapha Hara* and *Vibandha Hara* properties. *Badavamukha Churna* is widely available and cost effective medicine which shown highly significant results in *Ajirna*, in this study.

In Group A, 6(30%) patients had marked improvement, 12(60%) moderately improved, while 2(10%) patients had mild improvement. **In Group B**, 10(50%) Patients had Mild Improvement and 7(35%) had moderate improvement while 3(15%) patients had no improvement.

Better clinical improvement was seen in Patients Group A with *Badavamukha Churna*, Than Group B with Placebo Drugs. The positive point observed during the study that, there were no side effects seen during the trial, which is really a good sign to the patients and is of vital importance in view of the global acceptance of *Ayurveda*. Middle age group People with less physical activity & Stress were more prone to *Ajirna*, So All Patients were advised to follow Healthy life style and Daily Practicing of *Pranayam*, Meditation recommended with Physical exercises.

7. ACKNOWLEDGMENTS

None.

8. AUTHORS' CONTRIBUTIONS

All the authors contributed equally in design and execution of the article.

**9. FUNDING**

Nil.

10. CONFLICTS OF INTEREST

Nil.

11. DATA AVAILABILITY

This is an original manuscript and all data are available for only research purposes from principal investigators.

12. PUBLISHERS NOTE

This journal remains neutral with regard to jurisdictional claims in published institutional affiliation.

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Table No. 1- Showing the Assessment of Subjective Parameters

ILLNESS	SEVERITY	GRADE
Sadanam(exhaustion or tiredness to body)	Severe Disability	3
	Loss of capacity to carry out some activity	2
	Difficulty in carrying out some activities	1
	Normal activities	0
Arochaka (Tastelessness)	Pt. taking meal once in a day	3
	Feeling of hunger in 7-8hrs after taking first meal	2
	Feeling of hunger in 5-6hrs after taking first meal	1
	Pt. having usual meal	0
AngamardaH (generalized body ache)	Pt cant do its normal work	3
	Pt. is able to do routine work but have to take some rest	2
	Pt. can do his/her normal work	1
	Not present	0
Jvara	High Fever(more then 103 ⁰ F)	3
	Moderate fever (100.5 to 100.4 ⁰ F)	2
	Mild fever(98.6 to 100.4 ⁰ F)	1
	Normal Temperature	0
Shirasruk/headache	Severe -shirashoola persist through out the day , which requires medication	3
	Moderate-persistence of shiroshoola throughout the day but does not effect daily routine	2
	Mild-persistence of thriving type headache but it is for sometimes only	1



	Headache is absent	0
Bhramah(giddiness / dizziness/ vertigo)	Feeling of reeling head/ Bhrama > 3 times a day	3
	Feeling of reeling head/ Bhrama < 3 times a day	2
	Sometimes feeling of reeling head/ Bhrama	1
	No Reeling of head/ Bhrama	0
Trushna(sensation of dryness in the mouth)	Absence of moisture/ coated mucosa	3
	Absence of moisture/ sticky, viscous saliva	2
	Scant Saliva	1
	Normal Moisture	0

Chardi(vomiting)	Severe	3
	Moderate	2
	Mild	1
	None	0
Pravahanam(straining to defecate)	Severe	3
	Moderate	2
	Mild	1
	Normal	0
Daha	Feeling of burning sensation after intake of normal food	3
	Feeling of burning sensation after intake of light food	2
	Burning sensation in empty stomach	1
	No burning sensation	0
Vistambha	Moderate distension of abdomen up to 6 hr after intake of food	3
	distension of abdomen up to 1-3 hr after intake of food	2
	Occasionally feeling of distension of abdomen	1
	No Adhmana	0

Table 2: The assessment of subjective parameters before and after treatment in Group A and Group B (n=40)

Variable	Group	N	Mean Rank	Sum of Ranks	Mann-Whitney U	P-Value
Sadanam	Group A	20	24.53	490.50	119.500	0.00150
	Group B	20	16.48	329.50		
	Total	40				
Arochaka	Group A	20	27.93	558.50	51.500	0.00002
	Group B	20	13.08	261.50		
	Total	40				
Anga marda	Group A	20	22.40	448.00	162.000	0.02458
	Group B	20	18.60	372.00		
	Total	40				
Jwara	Group A	20	23.00	460.00	150.000	0.00616
	Group B	20	18.00	360.00		
	Total	40				
Shirasoruk	Group A	20	23.63	472.50	137.500	0.00481
	Group B	20	17.38	347.50		
	Total	40				
Bhrama	Group A	20	21.00	420.00	190.000	0.06812
	Group B	20	20.00	400.00		
	Total	40				



<i>Trushna</i>	Group A	20	21.50	430.00	180.000	0.05239
	Group B	20	19.50	390.00		
	Total	40				
<i>Chhardi</i>	Group A	20	24.43	488.50	121.500	0.00189
	Group B	20	16.58	331.50		
	Total	40				
<i>Prawahanam</i>	Group A	20	23.93	478.50	131.500	0.00473
	Group B	20	17.08	341.50		
	Total	40				
<i>Daha</i>	Group A	20	23.13	462.50	147.500	0.00927
	Group B	20	17.88	357.50		
	Total	40				
<i>Vishtambha</i>	Group A	20	24.35	487.00	123.000	0.00220
	Group B	20	16.65	333.00		
	Total	40				

Table 3: The assessment of objective parameters before and after treatment in Group A and Group B (n=30)

<i>Variable</i>	<i>Group</i>	<i>N</i>	<i>Mean Rank</i>	<i>Sum of Ranks</i>	<i>Mann-Whitney U</i>	<i>P-Value</i>	<i>Result</i>
<i>Vegetable Cells</i>	Group A	20	28.78	575.50	34.500	0.0001	Sig
	Group B	20	12.23	244.50			
	Total	40					
<i>Starch</i>	Group A	20	26.40	528.00	82.000	0.0006	Sig
	Group B	20	14.60	292.00			
	Total	40					
<i>Fat Globules</i>	Group A	20	22.60	452.00	158.000	0.0325	Sig
	Group B	20	18.40	368.00			
	Total	40					

Table 4: Clinical assessment of Result in Group A and Group B

<i>Overall Effect</i>	<i>Group A</i>		<i>Group B</i>	
	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>
<i>Marked Improvement</i>	6	30.00%	0	0.00%
<i>Moderate Improvement</i>	12	60.00%	7	35.00%
<i>Mild Improvement</i>	2	10.00%	10	50.00%
<i>No Improvement</i>	0	0.00%	3	15.00%
<i>TOTAL</i>	20	100.00%	20	100.00%

Graph 1