



### Research Article

## A COMPARATIVE CLINICAL STUDY ON WITHDRAWAL SYMPTOMS OF *MADATYAYA* WITH *PUNARNAVADI GHRITA*

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**KEYWORDS:** *Madatyaya*,  
Withdrawal Symptoms,  
*Punarnavadi Ghritta*, Drug  
Deaddiction centre.

### ABSTRACT

The disease caused by the excessive and regular use of *Madya* is called *Madatyaya* which can be correlated to Alcoholism on basis of withdrawal symptoms. In present world of modernisation the unlimited pressure of carrier and livelihood the youth and middle age generation easily get addicted to alcohol which is a big hazard to social and economic development and deteriorates the health services. The addicted alcoholic patients cannot come out of the condition easily because the withdrawal symptoms. The present study has been done to manage the withdrawal symptoms of *Madatyaya*. In this study the clinical efficacy of medicine given by the Drug De-addiction centre and *Punarnavadi Ghritta* was compared on 20 patients of withdrawal symptoms divided in 2 groups i.e. A and B for 30 days. Hb gm%, TLC, DLC, ESR, LFT were also done to assess the efficacy of the drug. Group-A was treated with the medicine provided by the Drug De-addiction centre, which was statistically significant ( $P < 0.05$ ) in subjective parameters. Group-B treated with *Punarnavadi Ghritta*, showed significant ( $P < 0.05$ ) results in objective parameters. Follow-up was on 15<sup>th</sup> day and after treatment. Our study revealed that the test drug *Punarnavadi Ghritta* is more effective on objective parameters than modern medicine which is more effective on subjective parameters in treatment of withdrawal of *Madatyaya*. Hence the trial drug can be used as a medicine to improve laboratory findings for patients of withdrawal symptoms of *Madatyaya*.

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### INTRODUCTION

Acharya Charaka described *Madya* as the destroyer of sorrow, unhappiness, fear and distress.<sup>[1]</sup> When a strong poison is used in its impure form and without knowledge it shows deleterious and fatal effects on the body but if used after purification under proper rules it acts as a *Rasayana*.<sup>[2]</sup> *Madkari Dravya* are those which produces disturbance in the brain by virtue of its *Tamoguna* e.g. *Madya*, *Sura* etc.<sup>[3]</sup> If *Madya* is taken according to the rules and regulations it produces exhilaration, energy, happiness, nourishment, good health, excellent virility and pleasant intoxication<sup>[1]</sup>. One that produces *Mada* is called *Madya*, the disease produced due to improper use of *Madya* is called *Madatyaya*.<sup>[4]</sup> Similarly alcohol is one such fatal poison if used appropriately acts as a *Aushadhi- Agnivardhak*, *Balavardhak*, *Hridya*.<sup>[2]</sup> According to Ayurveda the poisons have 10 *Gunas* which are exactly similar with all *Gunas* (properties) of *Madya* but in less potency.<sup>[5,6]</sup>

According to the Ayurvedic texts the excessive and improper use of *Madya* results in the disease called *Madatyaya*<sup>[7]</sup>; which can be correlated with the

alcoholism up to some extent as *Madatyaya* has clinical symptoms similar to Alcoholism. The *Samanya lakshanas* of *Madatyaya* mentioned in Ayurveda<sup>[8]</sup> can be correlated with the withdrawal symptoms of chronic alcoholism.<sup>[9]</sup> Which are: *Shareera Dukham* (Excruciating pain in the body), *Balavat Sammoha* (unconsciousness), *Hridaya Vyatha* (discomfort in the chest region), *Aruchi* (anorexia), *Pratata Trishna* (incessant thirst), *Jvarah Sheetoshna Lakshana* (fever having the characteristics of cold and heat), *Shirah Parshvasthi Sandheenam Vidyuttulya Cha Vedana* (severe pain in the head, sides of the chest, bones and joints), *Atibala Jrimbha* (severe yawning), *Sphuranam* (horripilation), *Vepanam* (tremors), *Shrama* (fatigue), *Urovibandha* (feeling of obstruction in the chest), *Kasa* (cough), *Hikka* (hiccup), *Shwasa* (dyspnoea), *Prajagarana* (insomnia), *Shareera Kampa* (trembling of the body), *Karnakshimukharoga* (diseases of ears, eyes and mouth), *Trikagraha* (stiffness of sacro-iliac joint), *Chardi*, *Atisara* and *Hrilasa* of *Tridoshatmaka* (vomiting, diarrhoea and nausea), *Bhrama* (giddiness), *Pralapa* (delirium), *Roopanamasa-*

stanam Darshanam (visual hallucinations), *Vyakulana-mashastaanaam Svapnaanam Darshanani* (dreaming of terrifying and inauspicious objects).

In Ayurveda *Madatyaya* is a *Tridoshaja Vyadhi* mainly *Kapha Sthana* is vitiated along with Agni.<sup>[10]</sup> Different Acharyas mentioned their different medicinal and non-medicinal therapeutic measures for treatment of *Madatyaya* mentioned in Ayurvedic texts. Among them Acharya Chakradatta has mentioned the use of *Punarnavadi Ghritta* in the management of *Madatyaya*<sup>[11]</sup>, which was taken for the present study. It is the combination of *Punarnava*, *Yashtimadhu*, *Go-dugdha* and *Go-ghritta* which act as a *Rasayana* and have the potency and properties which directly act on the sign and symptoms of *Samanya Madataya* mentioned in Ayurvedic texts. In the present modern era the youth and middle age generation, immediately and easily gets attracted towards alcohol to reduce tension and stress. The continuous intake of *Madya* results in imbalance of three *Doshas: Vatta, Pitta & Kapha*. Hence *Madataya* is called as *Tridoshaja vayadhi*<sup>[10]</sup>. Keeping in view, the prevalence of the disease in the society and to execute with effective but economical and complication free modality of treatment, the present study has been undertaken.

**Aim and objectives**

To compare the clinical efficacy of *Punarnavadi Ghritta* and medicine given by drug de-addiction centre in withdrawal symptoms of *Madataya*.

**Materials and methods**

**Selection of drug**

In this clinical trial the drug *Punarnavadi Ghritta* was selected as per the reference of Acharya Chakradatta<sup>[11]</sup>.

**Preparation of the Drug**

The drug was prepared according to procedure as mentioned in the classical text<sup>[11]</sup>, in the pharmacy of Uttaranchal Ayurvedic College, Dehradun, under the supervision of Ras Shashtra and *Dravya guna* Department. *Punarnava kwath* (8 part), *Yashtimadhu kalka* (1 part), *Go-dugdha* (4 part), *Go-ghritta* (4 part). The first three ingredients were mixed together and the *go-ghritta* was to make *Sidhh* (medicated) from them on low fire.<sup>[11]</sup>

**Selection of patients**

The selection criteria were based on the signs and symptoms of *Madatyaya* described in the Ayurvedic texts. The Alcohol Use Disorder Identification Test (AUDIT) is also used as a screening test of the patients as per the guidelines of WHO.

**Patient criteria**

**Inclusion criteria**

- (a) Patient of age group 18 years to 45 years.
- (b) Patients those having signs and symptoms of "*Madataya*" as mentioned in Ayurvedic texts.
- (c) The Alcohol Use Disorder Identification Test (AUDIT) was used for the screening of the alcoholic patients.

- (d) Patients having drinking history of less than 10 years.

**Exclusion criteria**

- (a) Occasional drinkers.
- (b) Patients in emergency condition.
- (c) Patients having chronic disorders like ascitis, splenomegaly etc.

**Discontinuing criteria**

- (a) Any other acute illness develops during the trial.
- (b) Uncontrolled cardinal features.
- (c) Patients not willing to continue

**Place of Study**

After taking written, informed consent of patient total 20 patients were taken from the Jagrati Foundation, Drug De-addiction, Counselling and Rehabilitation centre, Dehradun, (U.K). Medicines were given to the patient and they were also advised for early morning yoga and exercise in the evening. Along with this, group counselling sessions were also held as per their follow-up schedule.

**Plan of Study**

The 20 selected patients was divided into two groups i.e. Group-A and Group-B containing 10 patients each.

**Group-A:** 10 patients treated with the medicine given by the Drug De-addiction centre.

**Group-B:** 10 patients treated with *Punarnavadi Ghritta* 10 ml. in morning and evening for 1 month.

**Follow-up advise**

Follow-up of patients was on 15<sup>th</sup> day and after treatment. The nature of disorder and sign and symptoms caused due to Alcohol was explained to the patients in detail. Reassurance was given. Simple and regular counselling on individual and family level was done to all patients.

**Parameters for Evaluation:** Assessment was done on following parameters:

- (a) Symptomatic Improvements
- (b) Laboratory investigations

**(a) Symptomatic Improvements:**

In the present study the particular symptoms of *Madataya* was taken which were present in the patients and these were assessed on the basis of a self prepared gradation index.

**Gradation Index:**

**(1) Daha (Burning sensation)**

Features	Score
Absent	- 0
Occasionally present	- 1
Frequently present	- 2
Continuously present	- 3

**(2) Atisaara (Loose stools)**

Features	Score
Absent	- 0
4 loose stools per day	- 1
4 to 8 loose stools per day	- 2
> 8 loose stools per day	- 3

**(3) Sweda (Sweating)**

Features	Score
Absent	- 0
Sweating over forehead only	- 1
Sweating in axilla & body folds	- 2
Profuse sweating over whole body	- 3

**(4) Prajalgrana (Insomnia)**

Features	Score
Sleep of more than 8 hours a day	- 0
Sleep of 6 to 8 hours a day	- 1
Sleep of 4 to 6 hours a day	- 2
Sleep of less than 4 hours a day	- 3

**(5) Sharirkampa (Tremors)**

Features	Score
Absent	- 0
Occasionally present	- 1
Present but not disrupts activities	- 2
Disrupts activities	- 3

**(6) Trishana (Thirst/Dehydration)**

Features	Score
Absent	- 0
Occasionally present	- 1
Thirst relieved after drinking water	- 2
Thirst not relieved even after drinking water-	- 3

**(7) Chardi (Vomiting)**

Features	Score
Absent	- 0
2 times in a day	- 1
4 times in a day	- 2
> 4 times in a day	- 3

**(8) Aruchi (Tastelessness) :**

Features	Score
Absent	- 0
Occasionally present	- 1
Aruchi even towards good food	- 2
Aruchi towards favorite food	- 3

**(9) Pralapa (Irrelevant speech)**

Features	Score
Normal speech	- 0
Occasionally irrelevant speech	- 1
Frequently irrelevant speech	- 2
Continuously irrelevant speech	- 3

**(10) Bhrama (Hallucinations)**

Features	Score
Absent	- 0
Occasionally present	- 1
Frequently present	- 2
Continuously present	- 3

**(a) Laboratory investigations**

Blood Examinations – The following blood tests were performed of every patient before and after the completion of the trial to assess the efficacy of the drug.

- Hb gm%
- TLC (Total Leukocyte Count)
- DLC (Differential Leukocyte Count)
- ESR (Erythrocyte Sedimentation Rate)

- LFT (Liver Function Test)

SGOT, SGPT, Total Bilirubin, Direct Bilirubin, Indirect Bilirubin.

**Statistical Observation and Analysis**

The information and data collected on the basis of above observations and parameters was processed in statistical manner. Student's paired-t test was applied for statistical improvement and analysis in the clinical features and objective parameters of *Madatyaya* to compare the value of significance in the same group at two different occasions (before and after treatment comparison of quantitative data). For inter group comparison the student's unpaired -t test is used to compare the value of significance between two groups.<sup>[12]</sup>

- $p > 0.05$  – not significant
- $p < 0.05$  – significant
- $p < 0.01$  – significant
- $p < 0.001$  – highly significant

**Assessment of Improvement on the basis of Sign and Symptoms**

**Marked Relief :** More than or equal to 75% relief in sign and symptoms.

**Moderate Relief:** 50 to 74% relief in sign and symptoms.

**Mild Relief :** 25% to 49% relief in sign and symptoms.

**No relief :** Below 25% relief in sign and symptoms.

**Results and Discussion****Observations**

Out of the total 20 patients taken for the study 55% of patients belonged to the age group of 28-37 years. 25% patients were in agriculture. Maximum 30% patients were graduate. 40% of patients were of lower class. 45% started drinking alcohol at the age in between 21-25 years. 35% of patients started drinking due to group pressure and family problem. Maximum 55% patients consume alcohol before food. 55% patients drink alcohol with friends. 35% of patients took country liquor. 55% of patients consume 540-720 ml of alcohol daily. Insomnia is the withdrawal symptom which first appeared in the maximum 40% of patients. 90% of patients want to abstain alcohol. The data shows that with the use of alcohol maximum 35% of patients were addicted to smoking and tobacco. 70% of patients have depression. The most common symptom found in patients was *Aruchi* with 65%, followed by, after that *Prajagrana* and *Sharirkampa* was found in 60% of patients, then *Trishna* was found in 55% of patients, then *Daha*, *Atisara*, *Sweda*, *Pralapa*, *Bharama* in 50%, *Sweda*, *Bharama*, was found in 50% and *Chardi* was found in 30% of patients.

**Results on subjective parameters**

In *Daha*, the percentage relief in Group- A was 46.15% and in Group- B was 55.55%. Group- B had 9.4% more relief than Group- A, which is statistically insignificant. ( $p > 0.05$ )

In *Atisara*, the percentage relief in Group- A was 62.5% and in Group- B was 66.66%. Group- B had 4.16%

more relief than Group- A, which is statistically insignificant. (p>0.05)

In *Sweda*, the percentage relief in Group- A was 50% and in Group- C was also 50%. Group- A had equal relief to Group- B, which is statistically insignificant. (p>0.05)

In *Prajagarana*, the percentage relief in Group- A was 37.5% and in Group- C was 46.15%. Group- B had 8.65% more relief than Group- A, which is statistically insignificant. (p>0.05)

In *Sharirkampa*, the percentage relief in Group- A was 50% and in Group- B was also 50%. Group- A had equal relief to Group- B, which is statistically insignificant. (p>0.05)

In *Trishna*, the percentage relief in Group- A was 70% and in Group- B was 60%. Group- A had 10% more relief than Group- B, which is statistically insignificant. (p>0.05)

In *Chardi*, the percentage relief in Group- A was 75% and in Group- B was 50%. Group- A had 25% more relief than Group- B, which is statistically insignificant. (p>0.05)

In *Aruchi*, the percentage relief in Group- A was 60% and in Group- B was 40%. Group- A had 20% more relief than Group- B, which is statistically insignificant. (p>0.05)

In *Pralapa*, the percentage relief in Group- A was 44.44% and in Group- B was 44.44%. Group- A had equal relief to Group- B, which is statistically insignificant. (p>0.05)

In *Bharama*, the percentage relief in Group- A was 50% and in Group- B was 44.44%. Group- A had 5.56% more relief than Group- B, which is statistically insignificant. (p>0.05)

**Table: 1 Comparison on Subjective Parameters Between Group-A and Group-B**

Sign and Symptoms	% Relief		% Relief difference	t value A.T.	P value A.T.	Remarks
	Grp-A	Grp-B				
<i>Daha</i>	46.15	55.55	9.4	-1.152	.279	>0.05
<i>Atisara</i>	62.5	66.66	4.16	.000	1.000	>0.05
<i>Sweda</i>	50	50	0	.429	.678	>0.05
<i>Prajagrana</i>	37.5	46.15	8.65	-.896	.394	>0.05
<i>Sharirkampa</i>	50	50	0	-.361	.726	>0.05
<i>Trishna</i>	70	60	10	.557	.591	>0.05
<i>Chardi</i>	75	50	25	.000	1.000	>0.05
<i>Aruchi</i>	60	40	20	1.000	.343	>0.05
<i>Pralapa</i>	44.44	44.44	0	.000	1.000	>0.05
<i>Bhrama</i>	50	44.44	5.56	.802	.443	>0.05

Grp- Group, A.T. - After Treatment

**On Lab Investigation**

In **Hb%**, the percentage improvement in Group- A was 10.38% and in Group- B was 17.07%. Group- B had 6.69% more improvement than Group- A, which is statistically insignificant. (p>0.05)

In **TLC**, the percentage improvement in Group- A was 6.88% and in Group- B was 10.14%. Group- B had 3.26% more improvement than Group- A, which is statistically significant. (p<0.05)

In **DLC**, the percentage improvement in Group- A was 19.42% in polymorphs, 7.80% in lymphocytes, 18.51% in Monocytes, 11.76% in Eosinophils, 28.57% in Basophils and in Group- B was 25.24% in polymorphs, 23.35% in lymphocytes, 36.95% in Monocytes, 37.50% in Eosinophils, 42.85% in Basophils. Group- B had more improvement than Group-A, which is statistically insignificant. (p>0.05)

In **ESR**, the percentage improvement in Group- A was 9.90% and in Group- B was 29.03%. Group- B had 19.13% more improvement than Group- A, which is statistically significant. (p<0.05)

In **SGPT**, the percentage improvement in Group- A was 18.41% and in Group- B was 27.15%. Group- B had 8.74% more improvement than Group- A, which is statistically significant. (p<0.05)

In **SGOT**, the percentage improvement in Group- A was 42.44% and in Group- B was 50.13%. Group- B had 7.69% more improvement than Group- A, which is statistically highly significant. (p<0.001)

In **Total Bilirubin**, the percentage improvement in Group- A was 35.34% and in Group- B was 40.77%. Group- B had 5.43% more improvement than Group- A, which is statistically significant. (p<0.05)

In **Direct Bilirubin**, the percentage improvement in Group- A was 35.27% and in Group- B was 46.38%. Group- B had 11.11% more improvement than Group- A, which is statistically significant. (p<0.05)

In **In-Direct Bilirubin**, the percentage improvement in Group- A was 32.92% and in Group- B was 36.76%. Group- B had 3.84% more improvement than Group- A, which is statistically insignificant. (p>0.05)

**Table: 2 Comparison On Lab. Investigations Between Group A And Group B**

Tests	% Relief		% Relief difference	t value A.T.	P value A.T.	Remarks	
	Grp-A	Grp-B					
Hb gm%	10.38	17.07	6.69	1.693	.125	>0.05	
TLC	6.88	10.14	3.26	-3.834	.004	<0.05	
DLC	P	19.42	25.24	5.82	-3.116	.012	<0.05
	L	7.80	23.35	15.55	-1.905	.089	>0.05
	M	18.51	36.95	18.44	-2.183	.057	>0.05
	E	11.76	37.50	25.74	.000	1.000	>0.05
	B	28.57	42.85	13.78	-.429	.678	>0.05
ESR	9.90	29.03	19.13	-3.343	.009	<0.05	
SGPT	18.41	27.15	8.74	-2.569	.030	<0.05	
SGOT	42.44	50.13	7.69	-5.771	.000	<0.001	
Total Bilirubin	35.34	40.77	5.43	-2.553	.031	<0.05	
Direct Bilirubin	35.27	46.38	11.11	-2.979	.015	<0.05	
Indirect Bilirubin	32.92	36.76	3.84	-1.000	.343	>0.05	

Grp- Group, A.T. - After Treatment, Hb- Haemoglobin, TLC- Total Leukocyte Count, DLC- Differential Leukocyte Count, P- Polymorphs, L- Lymphocytes, M- Monocytes, E- Eosinophils, B- Basophils, ESR- Erythrocyte Sedimentation Rate, SGPT- Serum Glutamic Pyruvic Transaminase, SGOT- Serum Glutamic Oxaloacetic Transaminase

**Overall effect of Therapy:-**

**Table 3: Overall effect of Therapy Between Group A And Group B**

Results	Group-A	Group-B	Number	Percentage
Marked Relief	02	01	03	15
Moderate Relief	08	06	14	70
Mild Relief	0	0	0	0
No Relief	0	03	03	15
Total	10	10	20	100

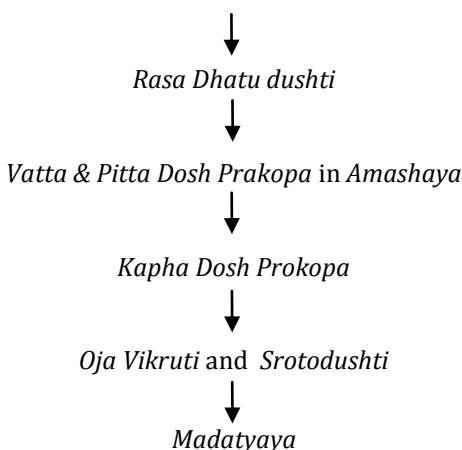
In **Group-A** there was marked improvement in 2 (20%) patients and moderate improvement in 8 (80%) patients. In **Group-B** there were 1 (5%) patients with marked improvement and 6 (30%) patient with moderate improvement and 3 (15%) patients with no relief. The above trial shows that there were total 3 (15%) patients had marked relief from the treatment given to them in both groups, 14 (70%) patients had moderate relief from the treatment and 3 (15%) patients with no relief.

**Discussion**

*Madatyaya* in general has been well described in all Samhitas and Samgrahas. Most of the Acharyas have said a separate chapter on *Madatyaya*. Different Acharyas has their different opinions about the types and effects of *Madatyaya*. In the Ayurvedic literature only Acharya Kasyapa has mentioned separately about the *Samanya samprapti* of *Madatyaya*.<sup>[13]</sup>

**Flow Chart Showing *Samanya Samprapti* of *Madatyaya*:**

Excessive intake of *Madya* in *Ajeerna* & by *Laghu Satva* person



According to modern science, the present study undergoes to the Chronic Alcoholism, i.e. the continuous long term use of alcohol which is characterized by a gradual physical, mental and moral deterioration; and when the person withdraw alcohol drinking or stops

high level alcohol intake continued over months he suffers from the alcohol withdrawal symptoms which are treated symptomatically. There are number of withdrawal symptoms appeared which varies from person to person. The *Samanya lakshanas* of *Madatyaya*

mentioned in Ayurveda<sup>[7]</sup> can be correlated with the withdrawal symptoms of chronic alcoholism up to some extent.

- Shareera Dukham* - Excruciating pain in the body
- Balavat Sammoha* - Unconsciousness
- Hridaya Vyatha* - Discomfort in the chest region
- Aruchi* - Anorexia
- Pratata Trishna* - Incessant thirst
- Jvarah Sheetoshna* - Fever having the characteristics of cold and heat
- Lakshana* - Severe pain in the head, sides of the chest, bones and joints
- Shirah Parshvasthi Sandheenam* - Severe pain in the head, sides of the chest, bones and joints
- Vidyuttulya Cha Vedana* - Severe yawning
- Atibala Jrimbha* - Horripilation
- Sphuranam* - Tremors
- Vepanam* - Fatigue
- Shrama* - Feeling of obstruction in the chest
- Urovibandha* - Cough
- Kasa* - Hiccup
- Hikka* - Dyspnoea
- Shwasa* - Insomnia
- Prajagarana* - Trembling of the body
- Shareera Kampa* - Diseases of ears, eyes and mouth
- Karnakshimukharoga* - Stiffness of sacro-iliac joint
- Trikagraha* - Vomiting, diarrhea and nausea
- Chardi, Atisara and Hrilasa of Tridoshatmaka* - Giddiness
- Bhrama* - Delirium
- Pralapa* - Visual hallucinations like if the body is covered with grass,
- Roopanasastanam* - Visual hallucinations like if the body is covered with grass,
- Darshanam* - Visual hallucinations like if the body is covered with grass,

creepers, leaves and dust; and afraid of birds as if they are colliding with his body.

- Vyakulanamashasta anaam Svapnaanam Darshanani* - Dreaming of terrifying and Inauspicious objects

*Madatyaya* is mentioned as *Tridoshja vyadhi* in Ayurveda and there are number of both medicinal and non-medicinal therapeutic measures described in Ayurvedic texts. Among them "*Punarnavadi Ghritta*" was put to clinical trial keeping the views of its general availability and palatability. The trial drug in the form of *Ghritta* was given to patients in the dosage of 10 ml. twice a day for one month.

#### Discussion on Probable Mode of Action of the trial Drug

Each drug performs its action with the properties like *Rasa, Guna, Veerya, Vipaka* and *Prabhava*. For any disease the main causative factor is the imbalance in *Doshas* and *Dushyas* of the body; and to cure any disease it is necessary to balance these factors. *Madatyaya* is considered as a *Tridoshja vyadhi* in Ayurvedic text. It includes the involvement of *Dushyas* i.e. *Rasa, Rakta* and *Sanghya*. *Rasavaha, Raktavaha* and *Sangyavahi* are the main *Srotas* involved in *Madatyaya* and *Srotodushti* is seen in the form of *Sanga*. In this *vyadhi Haridya* (Heart) is the main adhishthana<sup>5</sup>, due to which patient suffers from *Ojakshaya, Dhatukshaya, Sharirkampa, Pralapa, Bhrama, Agnivikriti (Amavisha), Anidra* and many more sign and symptoms of *Madatyaya* as discussed before. In the present study "*Punarnavadi Ghritta*" is selected because its constituents (*Punarnava, Yashtimadhu, Go-dugdha, Go-ghritta*) have *Tridosha shamaka* effects and increases *Oja, Bala, Dhatu* by its *Branhana* and *Rasayana* effects.

**Table 4: The Probable Mode Of Action Of The Drugs May Be Explained As Follows**

Drug	Rasa	Guna	Veerya	Vipaka	Doshagh- anta	Karma
<i>Punarnava (Mutaraladi varga)</i>	<i>Madhura, Tikta, Kasaya</i>	<i>Laghu, Ruksha,</i>	<i>Ushna</i>	<i>Madhura</i>	<i>Tridosha shamaka</i>	<i>Deepana, Pachana, Anulomana, Mutral, Yakritutejaka, Shothhara, Vrishya, Rasayana, Raktavardhak</i>
<i>Yastimadhu (Chedanadi varga)</i>	<i>Madhura</i>	<i>Guru, Snigdha</i>	<i>Sheeta</i>	<i>Madhura</i>	<i>Vata-Pitta shamaka</i>	<i>Varnashotha, Medhya, Vatanulomak, Amlapitta, Raktavardhka, Shleshamahar, Rakta-pitta shamaka,</i>
<i>Go-dugdha</i>	<i>Madhura</i>	<i>Guru, Snigdha, Mridu,</i>	<i>Sheeta</i>	<i>Madhura</i>	<i>Vata-Pitta shamaka</i>	<i>Rasayana, Medhya, Varnya, Pranadharaka, Mutrakriccha, Raktapitta and Jeernajwara nashaka,</i>
<i>Go-ghritta</i>	<i>Madhura</i>	<i>Guru, Snigdha</i>	<i>Sheeta</i>	<i>Madhura</i>	<i>Tridosha shamaka</i>	<i>Medhya, Rasayana, Veerya-Oja vardhak, Jwaranashaka, Urahkshata nashaka</i>

#### Discussion on Overall Effect of Therapy

According to the sign and symptoms included in the study; the 2 (20%) patients in Group-A, 1 (10%) patients in Group- B were markedly improved. This reveals that in Group- A there are 50% more patients with marked improvement than Group- B. 8 (80%) patients were moderately improved in Group- A, while only 6 (60%) patient was moderately improved in Group- B. This shows that 20% more patients in Group-

A were moderately improved than Group- B. There was 3 (30%) patient with no relief in Group- B during the trial. According to the lab. investigations the overall percentage improvement was 21.35% in Group- A, 32.56% in Group- B. Group- B has 11.21% more improvement than Group- A.

After analysing the clinical data of study it is concluded that the inter group comparison shows that

there was insignificant difference in relief in sign symptoms of both the groups as  $p > 0.05$ . While on statistical analysis of laboratory investigations Group-B showed significant improvement in TLC, ESR, SGPT, Total Bilirubin, Direct Bilirubin as  $p < 0.05$  and highly significant improvement in SGOT as  $p < 0.001$  as compared to Group-A.

### CONCLUSION

The *Samanaya lakshanas* of *Madatyaya* can be correlated with the withdrawal symptoms alcoholism up to some extent. The term *Madatyaya* is a broad term as mentioned in the classical texts. It cannot be concluded in Alcoholism. But the disease alcoholism can be compared with *Madatyaya*.

*Madatyaya* is caused by excessive intake of alcohol in *Ajeerna* or by a person of *Laghu satva* results in the *Vikriti* of *Rasa dhatu*. This *Vikriti* of *rasa* due to its *Ruksha* and *Teekshna* effects makes the *Vayu prakupit*, and due to its *Ushana veepaka* it results in *Pitta prakopa*. Then these *Prakupit vatta* and *Pitta dosha* reached the *Aamashya* and makes the *Kapha prakupit*. Then all three *Vikrita doshas* reached the heart and cause obstruction of *Srotas* and channels of heart circulation. Due to this the patient suffers from *Ojakshya*, *Dhatukshya*, pain and *Kalesha* in whole of the body.

*Punarnavadi Ghritta* the trial drug of the study act as a *Rasayana* for the patients. As a *Ghritta* preparation it is *Yogavahi* and delivers its action on each and every cell of the body easily and more effectively. Its contents help in removing toxins from the body, act as liver stimulant, brain tonic, *Ojovardhaka*, *Balya*, *Dhatuwardhaka*. These also help in decreasing the side effects of modern medicine on liver and other organs of the body. So, the trial drug can be used as effective medicine to improve sign symptoms and laboratory investigations of withdrawal symptoms in patients of *Madatyaya*.

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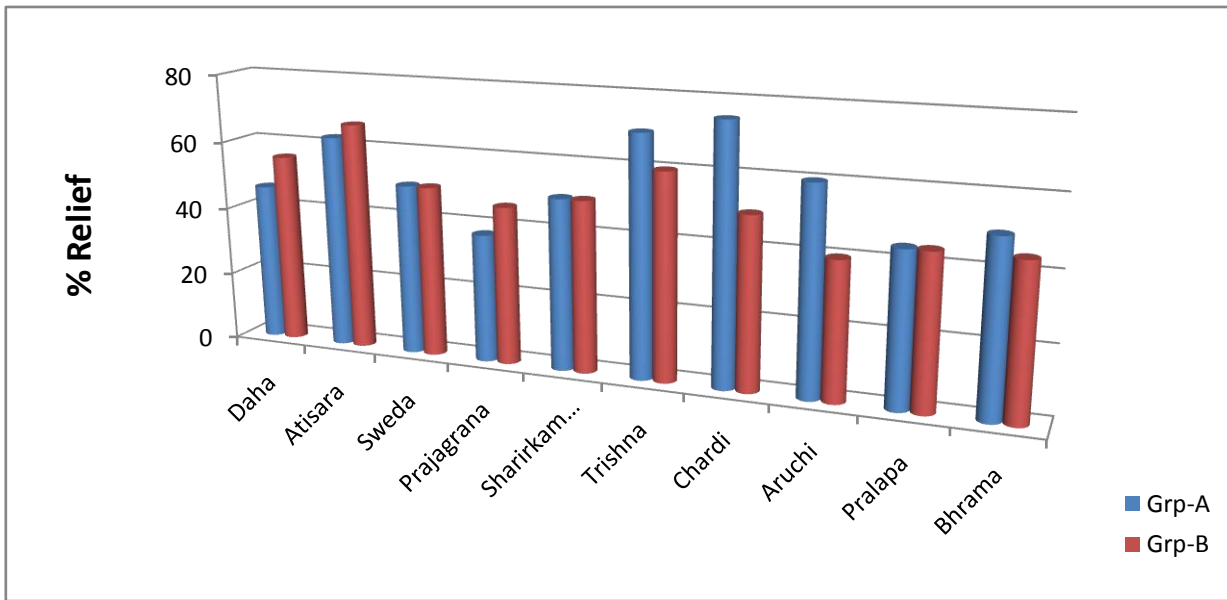


figure 1: Percentage relief in sign and symptoms in Group-A and Group-B

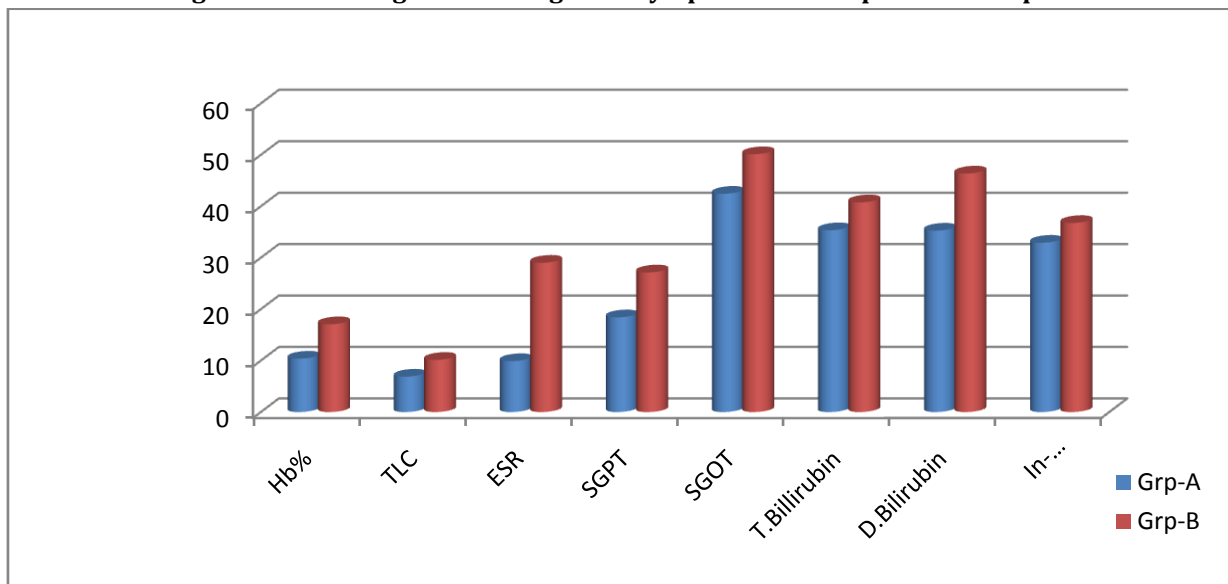


figure 2: Percentage improvement in laboratory investigations in Group-A and Group-B

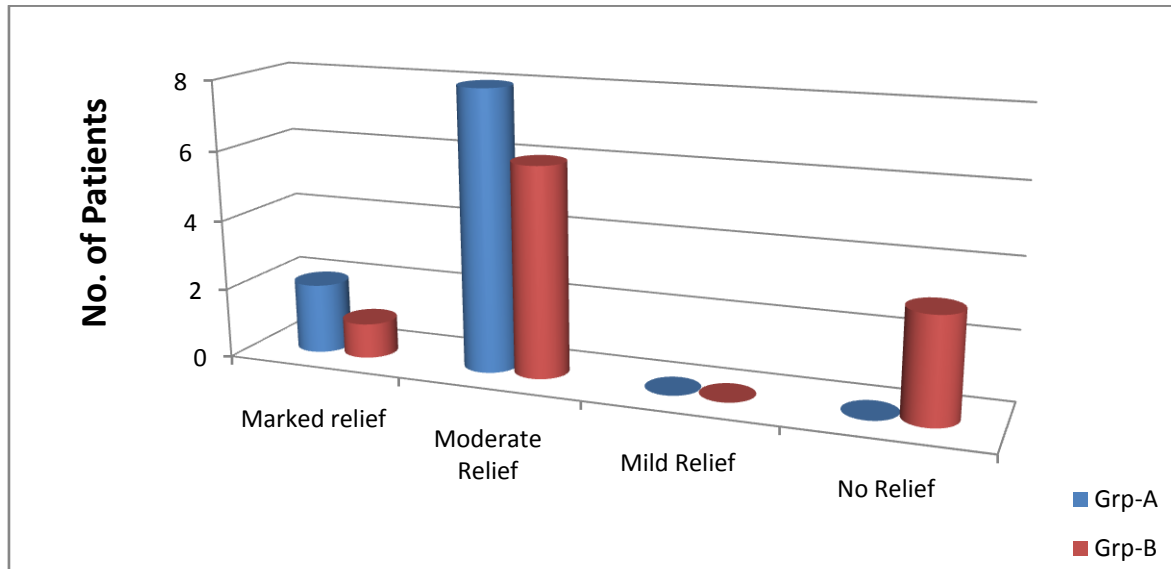


figure 3: Overall relief in Group-A and Group-B