

A CLINICAL STUDY ON ROLE OF SHRIKHANDASAVA IN MADATYAYA WITH SPECIAL REFERENCE TO ALCOHOL WITHDRAWAL SYNDROME

¹Dwivedi Ramakant

²Wange Dilip Uttamrao

¹Assistant Professor Department of Kaya chikitsa .Shubhdeep Ayurved medical college and hospital Indore (Madya pradesh)

²Assistant Professor Department of Kaya chikitsa .R.A.Podar Ayurved medical college and hospital Worli Mumbai Maharashtra India

ABSTRACT :

Madatyaya (Alcohol Withdrawal Syndrome) is a crucial problem in India ,many people lose their life due to it .*Madya* (Alcohol) is when taken judiciously act like *Nector* but when used without restriction act like poison and creates symptoms of *Madatyaya*(Alcohol withdrawal Syndrome).It ruins our social mental and economic status, Modern studies show that regular heavy alcohol intake not only affects Hepato-biliary system but also other systems like Digestive, Respiratory and Cardiovascular system also. The treatment described for *Madatyaya* (Alcohol Withdrawal Syndrome) in Modern medicine is not very satisfactory but in *Charaka samhita* it is clearly indicated that the symptoms originated due to improper intake can be treated by proper intake of medicated *Madya*.(*Hetu vyadhi vipreetarthkari chikitsa*) That is why present work was carried out taking consideration of above principle. *Shreekhandasava* described in *Bhaisajya ratnavali* was given to thirty patients for two months with regular follow up of every fifteen day ,and after completion of study by applying suitable parametric and non parametric test the result was very good and it was seen that among 30 patients 15 completely cured and 10 patient markedly improved ,this overall resulted created a heat of hope in the study for future on *Madatyaya*.

Key words: *Madatyaya*,*Hetu- vyadhi vipreetarthkari chikitsa*, Alcohol withdrawal syndrome

INTRODUCTION:*Madatyaya*(Alcohol Withdrawal Syndrome) is very serious problem in India Many people lose their life due to it either by road accident or by liver failure. Since ancient time beneficial as well as hazardous Properties of *Madya* (Alcohol) well explained in our *Samhitagrantas* . *Madya* (Alcohol) has a nectar like properties when used judiciously following all norms otherwise it acts like poison¹ *Madatyaya*(Alcohol Withdrawal Syndrome) is an addictive disorder once the brain has repeated exposed to high doses of alcohol sudden decrease in intake can produce symptoms

of withdrawal, it is characterized by compulsive and uncontrolled consumption of Alcohol ,despite its negative effect on drinkers health, relationship and social standing. In modern science alcohol is perhaps the most versatile and most remarkable of all pharmacological agents. Alcohol is absorbed from mucus membranes The rate of absorption increases with rapid gastric emptying, the absence of proteins fats or carbohydrates, maximum absorption is seen about 20% by volume but lesser part is excreted from urine And Other way greater part is Metabolized into Aldehydes in liver

through Aldehyde Dehydrogenase pathway and Microsomal Ethanol oxidizing systems. In beginning liver cell try to compensate, once the cells have adopted the chronic alcohol exposure, the structural and biochemical changes may not return to normal for several weeks. The physical addiction is distinct from psychological dependence, a poorly defined concept indicating that the person is psychologically uncomfortable without the drug.

In Alcohol Withdrawal Syndrome tremor of hands, anxiety, autonomic nervous system over activity like increase pulse and respiratory rate, Insomnia and gastrointestinal disturbance occurs, withdrawal symptoms generally begins within 5 to 10 hours of Alcohol intake decrease with higher intensity on day second or third day. Some symptoms may persist for months which contribute to the tendency to return to drinking. 2 to 5% of patient experiences withdrawal seizures within 48 hours of stop drinking.

In *Ayurveda* these all specification of *Madatyaya* along with its stages are explained in All *samhitas* (*Charaka samhita* *chikitsa sthana*, *Sushrut samhita* *Uttar tantra*, *Astang samgraha Chikitsa sthana*).²

The treatment described in Modern medicine for Alcohol withdrawal is not very satisfactory, But in *Ayurvedic* texts the detail treatment of *Madatyaya* is described as a combine therapy of Psychological treatment, Nutritious support and main thing to avoid the re-entrance of the patient in the Withdrawal³. As per *chikitsa sidhanta* of *Madatyaya* it is very beneficial to have *Madya in Madatyaya*⁴. So *ShriKhandasava* is

having all properties to deal with *Madatyaya*⁵.

MATERIAL AND METHODS:

A Open Prospect Randomized clinical study was carried out, With ethical Clearance from the committee of R.A. Podar Medical (Ayu.) college Worli Mumbai ,(study centre) and informed written consent of all patients included taken in their best understood language . Drug *Shrikhandasava* prepared as per *Sharangdhara samhita* and *Bhaishajya ratnavali*⁶. Dose 1 pal (50 ml) with *jala Anupana* administered *Bhakta pashchyat* (*vyana- udana*) two times a day after lunch and dinner on 30 patients for two months with follow up of regular interval of 15 days.

INCLUSION CRITERIA:

- 1-Age -17 to 60 years irrespective of sex.
- 2- Patient with classical signs and symptoms of *Madatyaya*.
- 3-Patient meeting DSM – IV criteria⁷ for Alcohol dependence.

DSM – IV CRITERIA: (Diagnostic and Statistical Manual of Mental Disorders)

- 1-Cessation of (or reduction in) alcohol use that has been heavy and prolonged.
- 2Two or more after of the following developing within several hours to a few days after criteria
 - a-Autonomic hyperactivity i.e. sweating or pulse >100
 - b-Increased hand tremors
 - c-Insomnia
 - d-Nausea or vomiting
 - e-Transient visual tactile or auditory hallucination or illusions.
 - f-Anxiety

The symptoms in criteria 2 cause clinically significant distress or impairment in social occupational or other important areas of functioning.

The symptoms are not due to a general medical condition and are not better accounted for by another mental disorder.

4-Subject having abnormal values of one or more liver function tests.(SGPT, SGOT, S.bilirubin,increased & decreased level of serum albumin

5-Subject having the ratio of SGOT to SGPT more than 2.

EXCLUSION CRITERIA:

1. Patient above 60 yrs and below 17 yrs age

2. Pregnancy and Lactating mother

3 .subjects having liver disorders other than ALD

i.e. viral hepatitis, Drug induced hepatitis, genetic hepatic disease, CA liver, Amoebic liver abscess etc.

4. Patients having malignancy.

5. Patients in state, intoxication Hepatic encephalopathy.

6. Serum bilirubin level more than 20mg/dl.

7. Psychotic patients.

8. Hyperbilirubinaemia due to congenital cause, Drug toxicity, AKT.

9. Obstructive pathology.

10. Subject with HIV / AIDS/ TB / CA

INVESTIGATIONS:

Liver Function Test – SGPT (ALT) ,SGOT (AST) ,Serum bilirubin level and Urine for Bile salt and Bile pigment per 15 days .And serum protein , Albumin at the start and end of study .while USG Abdomen , HIV ,VDRL at the start of the study at the start of the study. Other investigations like Haemogram , RFT's , Lipid profile, at the start and end of the study.

PARAMETERS OF ASSESMENT:

Madatyaya was assessed on the basis of criteria described in classical text ⁸like

Aruchi, , Pralapa Chardi, Prajagara Bhrama,Hrullasa kampa and Roopam cha astam pasyat(visual hallucination) was taken with suitable grading 0,1,2,3

GRADING OF CRITERIA OF SUBJECTIVE ASSESSMENT:

Aruchi

| | |
|----------------------|---|
| Absent | 0 |
| Occasionally present | 1 |
| Frequently present | 2 |
| Continuously present | 3 |

Chhardi (vomiting)

| | |
|------------------------------|---|
| No vomiting | 0 |
| Less than 3 episodes | 1 |
| 3-6 episodes per day | 2 |
| More than 6 episodes per day | 3 |

Prajagara(insomnia)

| | |
|----------------------------------|---|
| Sleeping more than 8 hrs per day | 0 |
| Sleeping 6-8 hrs a day | 1 |
| Sleeping 4-6 hrs a day | 2 |
| Sleeping less than 3 hrs a day | 3 |

Bhrama

| | |
|--|---|
| Absent | 0 |
| Getting vertigo in position change | 1 |
| positional vertigo with vomiting able to sit | 2 |
| Cannot even sit | 3 |

Hs

| | |
|----------------------|---|
| No | 0 |
| Nausea | 1 |
| Nausea with vomiting | 2 |

Pralapa

| | |
|--|---|
| Normal talk | 0 |
| Relevant talk with 5-10 words per min. | 1 |
| Relevant talk with 10-15 words/min | 2 |
| Irrelevant talk. | 3 |

Sharira Kamp

| | |
|--|---|
| Absent | 0 |
| Occasionally present | 1 |
| Present but not disrupting in daily life | 2 |

disrupting in daily life 3 Present but not disrupting in daily life
Roopanam Asatyam chaiv Darshana 2
 Absent 0 Can be seen without Sunlight also 3
 Occasionally present 1

TABLE 1: STATISTICAL ANALYSIS OF SYMPTOMS(WILCOXON PAIRED SIGN RANK TEST)

| s.n | Symptoms | | Mean | SD | SEd | W | N | P |
|-----|--|------|--------|--------|---------|-----|----|---------|
| 1 | Aruchi (Anorexia) | BT | 2.533 | 0.5074 | 0.09264 | 465 | 30 | <0.0001 |
| | | AT | 0.733 | 0.6397 | 0.1168 | | | |
| | | Diff | 1.800 | 0.6644 | 0.1213 | | | |
| 2 | Chardi(vomiting) | BT | 2.067 | 0.5208 | 0.09509 | 435 | 29 | <0.0001 |
| | | AT | 0.4000 | 0.4983 | 0.09097 | | | |
| | | Diff | 1.667 | 0.7112 | 0.1298 | | | |
| 3 | Prajagara (Insomnia) | BT | 2.167 | 0.6477 | 0.1183 | 435 | 29 | <0.0001 |
| | | AT | 0.5667 | 0.5683 | 0.1038 | | | |
| | | Diff | 1.600 | 0.8137 | 0.1486 | | | |
| 4 | Bhrama (Giddiness) | BT | 2.000 | 0.5872 | 0.1072 | 378 | 27 | <0.0001 |
| | | AT | 0.6000 | 0.6215 | 0.1135 | | | |
| | | Diff | 1.400 | 0.8137 | 0.1486 | | | |
| 5 | Hrullas (Nausea) | BT | 1.500 | 0.5085 | 0.09285 | 378 | 27 | <0.0001 |
| | | AT | 0.3333 | 0.5467 | 0.09981 | | | |
| | | Diff | 1.167 | 0.5921 | 0.1081 | | | |
| 6 | Pralapa (Irrelevant talk) | BT | 2.033 | 0.6687 | 0.1221 | 378 | 27 | <0.0001 |
| | | AT | 0.3333 | 0.6065 | 0.1107 | | | |
| | | Diff | 1.700 | 0.8367 | 0.1528 | | | |
| 7 | Sharir kamp (tremors) | BT | 2.000 | 0.7878 | 0.1438 | 406 | 28 | <0.0001 |
| | | AT | 0.3333 | 0.5467 | 0.09981 | | | |
| | | Diff | 1.6767 | 0.8841 | 0.1614 | | | |
| 8 | RoopanamAsatym chaivpasyati (visual hallucination) | BT | 1.900 | 0.7120 | 0.1300 | 378 | 27 | <0.0001 |
| | | AT | 0.4000 | 0.6215 | 0.1135 | | | |
| | | Diff | 1.500 | 0.9002 | 0.1644 | | | |

TABLE :2 SHOWING THE EFFECT OF THERAPY ON OBJECTIVE PARAMETER

| OBJECTIVE PARAMETER | Mean \pm SD | | Mean of Diff. \pm SD | SE D | T value | P value |
|---------------------|------------------------|------------------------|--------------------------|--------|---------|---------|
| | BT | AT | | | | |
| SGOT | 261 \pm 119.79 | 48.032 \pm 23.555 | 213.35 \pm 111.99 | 20.115 | 10.607 | <0.0001 |
| SGPT | 286.52 \pm 131.34 | 62.065 \pm 26.884 | 224.45 \pm 127.35 | 22.872 | 9.893 | <0.0001 |
| Total BILLIRUBIN | 6.274 \pm 3.254 | 1.600 \pm 1.230 | 4.674 \pm 2.263 | 0.4044 | 11.501 | <0.0001 |
| URINE BILE SALT | 1.323 \pm 0.5993 | 0.1935 \pm 0.4016 | 1.129 \pm 0.5623 | 0.1020 | 11.180 | <0.0001 |
| URINE BILE PIGMENT | 0.2581 \pm 0.4448 | 0.1935 \pm 0.4016 | 0.0645 \pm 2 0.6290 | 0.1130 | 0.5710 | 0.5722 |

TABLE NO :3 TOTAL EFFECT OF THERAPY ON ON PATIENT HAVING, 2 MONTH FOLLOW UP ACCORDING TO SUBJECTIVE AND OBJECTIVE CRITERIA

| No.of Patients | Percentage relief in sign and symptoms | % relief in haematological values | Average percentage | Remarks |
|----------------|--|-----------------------------------|--------------------|---------|
| 1 | 55.0898 | 42.1 | 48.5949 | I |
| 2 | 66.9824 | 93.75 | 80.3662 | C |
| 3 | 60.1731 | 10.0288 | 35.101 | I |
| 4 | 75.8848 | 86.66 | 81.2724 | C |
| 5 | 30.7068 | 80 | 55.3534 | M |
| 6 | 31.2802 | 85.71 | 85.71 | C |
| 7 | 68.1911 | 84.21 | 76.2006 | C |
| 8 | 68.953 | 23.53 | 46.2415 | I |
| 9 | 65.5532 | 76.92 | 71.2366 | M |
| 10 | 72.0202 | 92.85 | 82.4351 | C |
| 11 | 57.3983 | 84.61 | 84.61 | C |
| 12 | 67.9015 | 92.85 | 80.3757 | C |
| 13 | 65.4508 | 88.57 | 47.0104 | I |
| 14 | 76.3828 | 82.35 | 79.3664 | C |
| 15 | 69.3836 | 70.58 | 69.9818 | M |
| 16 | 75.5578 | 71.42 | 73.4889 | M |
| 17 | 66.5778 | 77.77 | 72.1739 | M |
| 18 | 60.4966 | 81.25 | 70.8733 | M |
| 19 | 56.8064 | 80 | 68.4032 | M |
| 20 | 78.5499 | 81.25 | 79.8999 | C |
| 21 | 72.4513 | 66.66 | 69.5556 | M |
| 22 | 60.974 | 88.23 | 74.602 | M |
| 23 | 70.6881 | 90 | 80.344 | C |
| 24 | 70.829 | 85.71 | 78.2695 | C |
| 25 | 72.9981 | 76.47 | 74.734 | M |
| 26 | 70.7065 | 92.85 | 81.7782 | C |
| 27 | 68.3386 | 30.76 | 49.5493 | I |
| 28 | 78.3241 | 77.77 | 78.0471 | C |
| 29 | 77.868 | 94.11 | 85.989 | C |
| 30 | 61.9145 | 94.44 | 78.1773 | C |

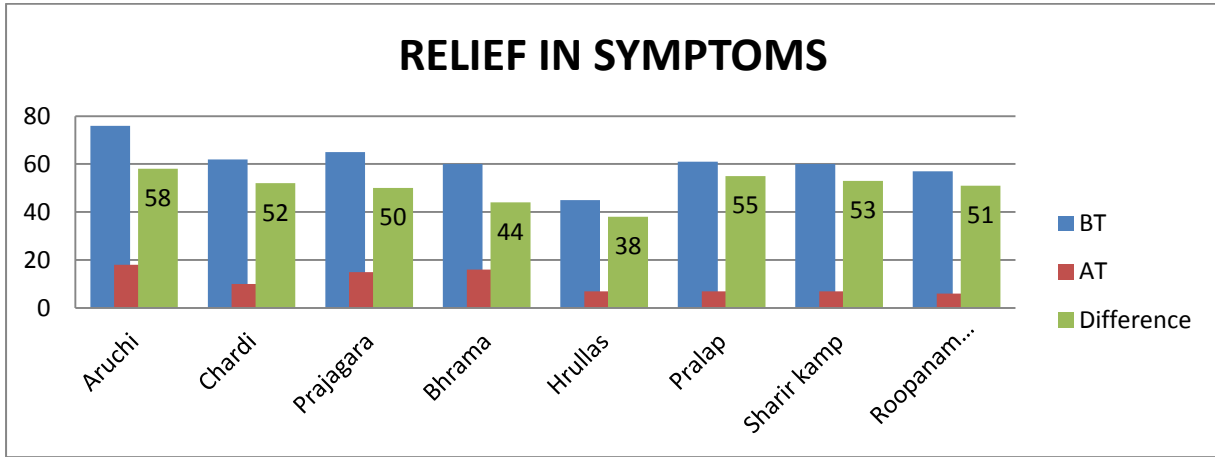


TABLE: 4 SHOWING EFFECT OF SHRIKHANDASAVA

| Sr.No | Effect of Shrikhandasava | Number | Percentage |
|-------|--------------------------|--------|------------|
| 1 | Cured | 15 | 50% |
| 2 | Markedly improved | 10 | 33.33% |
| 3 | Improved | 5 | 16.66% |
| 4 | Uncured | 0 | 0 |
| | Total | 30 | 100% |

DISCUSSION: From above observation it is clear that *Shreekhandasava* is highly effective in *Madatyaya*. Drug of *shrikhandasava* like *Draksa*, *Sweet chandan*, *Jatamansi*, *Tagara*⁹ have *Pitta Samak* action and *Maricha*, *Chitraka Pippali* have *Deepan* and *Pachan*¹⁰ properties *jatamansi*¹¹ have *Nidrajanan* effect and *Draksha*¹² has *tarpana guna* with help to subside the symptoms of *Madatyaya*. According to Modern science In Alcohol withdrawal syndrome there is hypoglycemia, Insomnia, tremor, irrelevant talk, which are very similar to symptoms of *Madatyaya*. If we see the Effect of *Shreekhandasava* on symptoms (Table no2) and on objective parameters (Table no3) very significant result obtained. On the basis of percentage relief on Symptoms Among 30 patient 50% patient cured and 33.33% markedly improved and 16.66% patient very little improved. This may be either cumulative or individual effect of contents of drug.

SHRIKHANDASAVA ⇨ 1. Shrikhand (Safed Chandan)-Trushna And Dahasamak

2. Marich-----Deepan, Trushna Samak

3. Jatamansimedhya, Nidrakar, Anticonvulsent

4. Haridra And Daruharidra—Rakta Shodhak

5. Chitrakmula—Deepan

6. Khasa----Chardighna(-Antiemetic)

7. Tagara---Nidrajanan

8. Draksha—Tarpan Guna

9. Amalki—Tridosasamaka

10. Lavang—Aruchi Nasan

11. Guda(Sugercane)—Sadya Tarpak

Subside The Symptoms Of *Madatyaya*

CONCLUSION: From above study it is clear that Symptoms of *Madatyaya* closely resembles with alcohol withdrawal syndrome and the drug *shrikhandasava* act on it ,as it act as *Hetu vyadhi vipreetarthkari upsaya*.it also act as a *samyak pan drug* for *madya* due to its contents like *draksa swetchandana jatamansi, tagara usheera* etc. It helps to restore the Qualities of *Oja* and cure the *Madatyaya*.

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Corresponding Author : Dr. Ramakant Dwivedi .MD.Assistant Professor Department of Kaya chikitsa .Shubhdeep Ayurved medical college and hospital Indore (Madya pradesh)

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Declared