

**Ayurvedic Management of Alcohol Withdrawal Syndrome -Case Series****Anita Sharma<sup>1</sup>, Sunita Yadav<sup>2\*</sup>, Rinkesh Vishnoi<sup>3</sup>**

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**ABSTRACT:**

The most significant complication of persistent alcoholism is alcohol withdrawal syndrome is also known for causing sudden death. Delirium tremens occur in the later stages and is marked by agitation, confusion, disorientation, visual and auditory hallucinations, hyperactivity of the sympathetic nervous system. In this case series, five cases of alcohol withdrawal syndrome (AWS) were treated with *Kharjuradi Mantha* 50 ml BD before meal and *Eladi Modaka* 10 gm. BD on empty stomach with cow's milk for one month along with *Sarwang Abhyanga*, *Swedana* with *Dashmool Tail* and *Kwath* respectively, *Shirodhara* with *Til tail* and *Brahmi Tail*, *Nasya Karma* with *Jatamansi Tail*, and *Padabhyanga* with *Til Tail* for 15 days. The interventions aim to improve the condition of the patient by reducing its withdrawal effects and increasing metabolism. The final assessment was based on the Clinical Institute Withdrawal Assessment of Alcohol revised scale (CIWA-Ar score) along with the LFT investigation, before and after the treatment given.

**KEY WORDS:** Alcohol dependence, CIWA-Ar score, *Madatyaya*, *Sirodhara*.

Received: 21.01.2022 Revised: 25.02.2022 Accepted: 03.03.2022 Published: 20.03.2022

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**INTRODUCTION:**

Alcohol use disorders (AUDs) are a serious public health concern linked to high rates of morbidity and mortality. Alcohol consumption is responsible for about 3.8% of deaths worldwide. In addition, alcohol is responsible for 4.6% of global disability-adjusted life years. Alcohol was reported to account for more than 1% of the gross national product in both high- and middle-income countries [1]. According to the

"National Household Survey on Drug Use," the average prevalence of alcohol dependence syndrome in the Indian population is 4% [2]. According to recent statistics, roughly 6% of people are addicted to alcohol, with about 11% having AUDs (abusive use and dependence). Alcohol use has become a passion for many people as a result of rising westernization, without understanding its proper value and detrimental effects, individuals are

becoming hooked to alcohol, resulting in a decline in health and life span. In the classical texts, the sickness is associated with the term as "*Madatyaya*," which is a mixture of two terms *Mada* which means harsh and *Atyaya* which means *Atikrama*. According to the classics, *Madya* (alcoholic beverages) is the substance that produces *Mada* (excitement). When consumed with proper rules in adequate quantity, time and procedure, it gives happiness, strength, reduces fear, strain and act as *Amruta* (nectar) for the body. But when same is consumed without following these rules it results in *Madatyaya*<sup>[3]</sup>, it causes the person to lose his senses. The harmful consequences of the *Dosha* vary depending on its involvement. The clinical manifestation as well as the *Dosha-Dushya Sammurchana* should be evaluated and treated as necessary. Patients with *Tamas* and *Rajas Manas Prakruti* are more readily accustomed to alcohol than those with *Satvik Manas Prakruti*, and vice versa, resulting in a constant need for alcohol, known as *Panapkruma*<sup>[4]</sup>. Because all three *Doshas* may be implicated in *Madatyaya* therefore, management should be targeted at pacification of most prevalent *Dosha*. If all three *Doshas* are equally aggravated, *Kapha* should be treated first, followed by *Pitta* and *Vata*<sup>[5]</sup>. Treatment strategy followed is internally as *Sanshaman Chikitsa* by using medicines such as *Kharjuradi Mantha* and *Eladi Modaka* whereas externally *Panchakarma* procedures- *Sarwang Abhyanga*, *Swedana*, *Shirodhara*, *Padabhyang* and *Nasya* with the aim of management by balancing *Doshas* and by providing symptomatic relief. Details of each case based on the demographic data is presented in Table 1.

**CASE-01:** A 50 years old male patient presented on 26/07/2021 at De-Addiction OPD at National Institute of Ayurveda,

Jaipur, (RAJ.) with the H/O Alcohol addiction for 8 years with increased frequency of intake since 2 years, on withdrawal pt. complaints of Anxiety, restlessness, vomiting, anorexia, headache, and tremors for more than 5 months, for which he was admitted to the De-Addiction unit. Further, necessary investigations were done where the blood report showed elevated SGOT and SGPT levels in LFT dated 26/07/2021 as SGOT-171.3U/L and SGPT: 205.5U/L [Figure 1& Table 9].

**CASE-02:** A 40 years old male patient presented on 26/07/21 at De-Addiction OPD at NIA, Jaipur (RAJ.) with a history of alcohol addiction since 17 years, with resistance to withdrawal since 7 months and complaints of vomiting, nausea, headache, anxiety, agitation, weakness, body ache, insomnia in case of withdrawal of it. His LFT report showed elevated SGOT and SGPT levels as -224.3U/L and 212U/L respectively [Figure 2& Table 9].

**CASE-03:** A 40 year old male patient entered in the De-Addiction OPD at NIA, Jaipur (Raj.) on 16-08-21, had a history of alcohol addiction for more than 4 years with increased frequency of intake for more than twice a day since 6 months on withdrawal he complaints of loss of appetite, insomnia, agitation, headache, on blood investigation found raised SGOT and SGPT levels as 134.2U/L and 125.0U/L respectively [Figure 3& Table 9].

**CASE-04:** A 36 year old male patient on 04-09-21 came in the De-Addiction unit at NIA, Jaipur (Raj) he complaint of nausea, vomiting, indigestion, heaviness in abdomen, headache, anxiety, frequent sweating, insomnia, irritability, loss of appetite etc. on further asking, had a history of alcohol addiction since more than 10 years and with increased intake since

more than 1 year with these complaints he was admitted and investigated and found raised SGOT and SGPT levels to 316.5U/L and 107.9U/L respectively [Figure 4& Table 9].

**CASE-05:** A male patient of age 30 years with the history of more than 10 years of alcohol addiction presented in the De-Addiction OPD at NIA, Jaipur (Raj) he complaint of insomnia, agitation, headache, nausea vomiting, indigestion with reduced appetite, agitation on withdrawal of the alcohol, he was further sent for investigation where the reports showed increased level of SGOT and SGPT to 473.4U/L and 286.7U/L [Figure 5& Table 9].

After proper assessment, they were diagnosed with *Madatyaya* ~alcohol withdrawal syndrome, since the disease is *Tridosha Pradhana* therefore multiple strategies were used in order to overcome the disease and its related effects they were administered with internally *Kharjuradi Mantha* [Table-5] mentioned in the context of *Madatyaya* in the dose of 50 ml twice a day, orally before meal along with *Eladi Modaka* [Table-6] 10 gm. BD with cow's milk for one month also with the external *Panchkarma* therapies as *Sarwang Abhyanga*, *Swedana* with *Dashmool Tail* and *Kwath* respectively for vitiation of *Vata Dosha* to overcome symptoms such as generalized body ache, tremors, paroxysmal sweat, tactile disturbances and for headache, insomnia, anxiety, agitation, *Shirodhara* with *Til tail* and *Bhrami Tail*, along with *Nasya Karma* with *Jatamansi Tail*, and *Padabhyanga* with *Til Tail* was prescribed for 15 days [Table-3, 4].

#### **Pathya:**

- Drink normally 200 ml water in every hour at day time.

- Pulses; Green gram lentils take with added cow ghee in sufficient quantity.
- Old cereals; wheat & rice etc.
- Cream less Milk, Butter milk.
- Vegetables; Bitter guard, pointed guard, Bottle guard, Sponge guard, Indian squash, Ladies finger, Drumstick, etc.
- Seasonal fruits & Juice, Tomato, Carrot, Cucumber, Beetroot, etc.

#### **Apathya:**

- *Ushna Padartha* (Hot Food materials)
- *Guru Ahara* (Heavy Food materials)
- *Snigdha Padartha* (Unctuous)
- *Abhishyandi Ahara* (Channel Blocking Diet)
- *Pistanna Ahara* (white flour prepared food)
- *Picchila Ahara* (Sticky food items)
- *Payasa Ahara* (Milk prepared food)
- *Agni Santapa* (Exposure to heat)
- *Divaswapna* (Day time sleep)
- *Krodha* (Anger)
- *Atapa Sevana* (Exposure to Sunlight)
- *Maithuna* (Sexual Activities)
- *Ati Vyaayama* (Physical Exertion)
- *Viruddhahara* (Incompatible food combinations)
- *Vegavarodha* (Supressing of natural urges)

**Observations:** Withdrawal symptoms were assessed in table-8, based on the rating of CIWA-Ar scale [table-7] along with Hematological investigations like liver function test, Hemoglobin were done before and after the treatment given in [table-9].

**Follow up:** At the end of one month, the assessment was done and internal medicines were continued for next one month as follow up for complete abstaining of alcohol and reduction in the symptoms as well as the withdrawal effects.

Table 1: Demographic data of the presented cases:

Data	Case-01	Case-02	Case-03	Case-04	Case-05
Name	01	02	03	04	05
OPD No.	106774	107841	113819	120614	132517
D.O.A	26-7-21	26-7-21	16-8-21	04-9-21	13-10-21
Age	46	40	40	36	30
Sex	Male	Male	Male	Male	Male
Marital Status	Married	Married	Married	Married	Married
Occupation	Govt. employee	Police constable	Self-employed	Businessman	Worker
Nidra	Alpa	Alpa	Alpa	Alpa	Alpa
Koshtha	Mridu	Madhya	Krura	Madhya	Madhya
Agni	Vishama	Manda	Manda	Manda	Vishama
Prakriti	KV	VP	KP	KV	VK

Table 2: General examinations:

Data	Case 01	Case 02	Case 03	Case 04	Case 05
Height	5'9 inches	5'7 inches	5'8 inches	5'7 inches	5'6 inches
Weight	74kg	75kg	70kg	71kg	72kg
Icterus	Mild +	Mild +	Mild +	Mild +	Mild +
Cyanosis	Absent	Absent	Absent	Absent	Absent
Clubbing	Absent	Absent	Absent	Absent	Absent
Lymphadenopathy	Absent	Absent	Absent	Absent	Absent
Oedema	Absent	Absent	Absent	Absent	Absent
B.P.	140/100 mm of Hg	135/90 mm of Hg	130/95 mm of Hg	140/100 mm of hg	140/96 mm of hg
Pulse	94/min	88/min	90/min	96/min	89/min
R.R	16/min	17/min	16/min.	17/min	18/min.
Temperature	99.60 ° F	99.20°F	98.40°F	99.40°F	98.70° F
Skin discolouration	Absent	Absent	Absent	Absent	Absent
Advice investigations	Hb & LFT	Hb & LFT	Hb & LFT	Hb & LFT	Hb & LFT
Treatment duration	1 month	≈ 1month	1 month	≈ 1month	1month

Table 3: Treatment given (internal medications)

Medicine	Dose	Sevan Kala	Duration	Anupana
Kharjuadi Mantha	50ml	Twice daily before meal	1 month	-
Eladi Modaka	10gm	Twice a day	1 month	Go Dugdha

**Table 4: Treatment given (external procedures)**

Procedure	Medicine	Duration
<i>Sarwang abhyanga</i>	<i>Dashmool Tail</i>	15 days
<i>Sarwang swedana</i>	<i>Dashmool Kwath</i>	15 days
<i>Shiro dhara</i>	<i>Til Tail + BhramiTail</i>	15 days
<i>Nasya karma</i>	<i>Jatamansi Tail</i>	1 month
<i>Padabhyanga</i>	<i>Til Tail</i>	1 month

**Table 5: Ingredients of Kharjuradi Mantha: [6]**

Drug name	Botanical name	Part used	Quantity
<i>Kharjura</i>	<i>Phoenix Sylvestris Roxb.</i>	Fruit	1 Part
<i>Draksa</i>	<i>Vitis Vinifera Linn.</i>	Fruit	1 Part
<i>Vrikshamla</i>	<i>Garcinia Indica</i>	Fruit	1 Part
<i>Amalika</i>	<i>Emblia Officinals Gaertn.</i>	Fruit	1 Part
<i>Chincha</i>	<i>Tamarindus Indica Linn.</i>	Fruit	1 Part
<i>Dadima</i>	<i>Punica Granatum Linn.</i>	Fruit	1 Part
<i>Parushaka</i>	<i>Grewia Assiatica Linn.</i>	Fruit	1 Part

**Table 6: Ingredients of Eladi modaka:**

Drug name	Botanical name	Part used	Quantity
<i>Suksma ela</i>	<i>Eletaria cardamomum Maton.</i>	Seed	1 Part
<i>Madhuka</i>	<i>Madhuka indica J.F.Gmel</i>	Flower	1 Part
<i>Citrakamula</i>	<i>Plumbago Zeylanicum Linn.</i>	Root	1 Part
<i>Haridra</i>	<i>Curcuma Longa Linn.</i>	Tuber	1 Part
<i>Daruharidra</i>	<i>Berberis Aristata DC.</i>	Root, stem, fruit	1 Part
<i>Haritki</i>	<i>Terminalia Chebula Retz.</i>	Fruit	1 Part
<i>Vibhitki</i>	<i>Terminalia Bellirica (Roxb.)</i>	Fruit	1 Part
<i>Amalika</i>	<i>Emblia Officinals Gaertn</i>	Fruit	1 Part
<i>Rakta Sali</i>	<i>Oryza longistaminata</i>	Fruit	1 Part
<i>Pippali</i>	<i>Pipper Longum Linn.</i>	Fruit	1 Part
<i>Draksa</i>	<i>Vitis Vinifera Linn.</i>	Fruit	1 Part
<i>Kharjura</i>	<i>Phoenix Sylvestris Roxb.</i>	Fruit	1 Part
<i>Tila</i>	<i>Sesamum Indicum Linn.</i>	Seed	1 Part
<i>Yava</i>	<i>Hordeum Vulgare</i>	Seed	1 Part
<i>Vidari</i>	<i>Pueraria Tuberosa DC.</i>	Tuber	1 Part
<i>Goksura</i>	<i>Tribulus Terrestris Linn.</i>	Seed	1 Part
<i>Trivrit</i>	<i>Operculina terpeethum Linn.</i>	Root bark	1 Part
<i>Satavari</i>	<i>Asperagous racimosus Willd.</i>	Tuber	1 Part
Sugar			36 Part
Water			SOS

**Table 7: Ratings of CIWA-Ar scale [7]**

<b>Nausea and vomiting-</b> Ask "Do you feel sick to your stomach? Have you vomited?"	<b>Tactile disturbances</b> -Ask "Have you any itching, pins and needles sensations, any
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<p>Observation.</p> <p>0 no nausea and no vomiting</p> <p>1 mild nausea with no vomiting</p> <p>2</p> <p>3</p> <p>4 intermittent nausea with dry heaves</p> <p>5</p> <p>6</p> <p>7 constant nausea, frequent dry heaves, and vomiting</p>	<p>burning, any numbness, or do you feel bugs crawling on or under your skin?" Observation.</p> <p>0 none</p> <p>1 very mild itching, pins and needles, burning or numbness</p> <p>2 mild itching, pins and needles, burning or numbness</p> <p>3 moderate itching, pins and needles, burning or numbness</p> <p>4 moderately severe hallucinations</p> <p>5 severe hallucinations</p> <p>6 extremely severe hallucinations</p> <p>7 continuous hallucinations</p>
<p><b>Tremor-</b> Arms extended and fingers spread apart.</p> <p>Observation.</p> <p>0 no tremor</p> <p>1 not visible, but can be felt fingertip to fingertip</p> <p>2</p> <p>3</p> <p>4 moderate, with patient's arms extended</p> <p>5</p> <p>6</p> <p>7 severe, even with arms not extended</p>	<p><b>Auditory disturbances-</b> Ask "Are you more aware of sounds around you? Are they harsh? Do they frighten you? Are you hearing anything that is disturbing to you? Are you hearing things you know are not there?" Observation.</p> <p>0 not present</p> <p>1 very mild harshness or ability to frighten</p> <p>2 mild harshness or ability to frighten</p> <p>3 moderate harshness or ability to frighten</p> <p>4 moderately severe hallucinations</p> <p>5 severe hallucinations</p> <p>6 extremely severe hallucinations</p> <p>7 continuous hallucinations</p>
<p><b>Paroxysmal sweats-</b>Observation.</p> <p>0 no sweat visible</p> <p>1 barely perceptible sweating, palms moist</p> <p>2</p> <p>3</p> <p>4 beads of sweat obvious on forehead</p> <p>5</p> <p>6</p> <p>7 drenching sweats</p>	<p><b>Visual disturbances-</b> Ask "Does the light appear to be too bright? Is its colour different? Does it hurt your eyes? Are you seeing anything that is disturbing to you? Are you seeing things you know are not there?" Observation.</p> <p>0 not present</p> <p>1 very mild sensitivity</p> <p>2 mild sensitivity</p> <p>3 moderate sensitivity</p> <p>4 moderately severe hallucinations</p> <p>5 severe hallucinations</p> <p>6 extremely severe hallucinations</p> <p>7 continuous hallucinations</p>
<p><b>Anxiety-</b> Ask "Do you feel nervous?" Observation.</p> <p>0 no anxiety, at ease</p> <p>1 mild anxious</p>	<p><b>Headache, fullness in head -</b>Ask "Does your head feel different? Does it feel like there is a band around your head?" Do not rate for dizziness or light-headedness. Otherwise, rate</p>



2	severity.
3	0 no present
4 moderately anxious, or guarded, so anxiety is inferred	1 very mild
5	2 mild
6	3 moderate
7 equivalent to acute panic states as seen in severe delirium or acute schizophrenic reactions	4 moderately severe
	5 severe
	6 very severe
	7 extremely severe
<b>Agitation- Observation.</b>	<b>Orientation and clouding of sensorium- Ask</b>
0 normal activity	“What day is this? Where are you? Who am I?”
1 somewhat more than normal activity	0 oriented and can do serial additions
2	1 cannot do serial additions or is uncertain about date
3	2 disoriented for date by no more than 2 calendar days
4 moderately fidgety and restless	3 disoriented for date by more than 2 calendar days
5	4 disoriented for place/or person
6	
7 paces back and forth during most of the interview, or constantly thrashes about.	

Table-8: Assessment of result on the basis of CIWA-Ar scale [7]

Clinical features	CASE 01		CASE 02		CASE 03		CASE 04		CASE 05	
	B.T.	A.T.	B.T.	A.T.	B.T.	A.T.	B.T.	A.T.	B.T.	A.T.
Nausea/Vomiting (0-7)	3	0	3	0	3	0	4	0	3	0
Tremors (0-7)	5	3	3	1	2	0	3	0	2	0
Anxiety (0-7)	5	1	5	2	4	1	5	1	5	2
Agitation (0-7)	4	1	2	0	3	1	4	1	4	1
Paroxysmal sweat (0-7)	3	0	3	1	2	0	2	0	3	1
Orientation & clouding of sensorial (0-4)	2	0	1	0	0	0	2	0	1	0
Tactile disturbances (0-7)	2	0	1	0	1	0	2	1	2	1
Auditory disturbances (0-7)	2	0	2	0	1	0	2	1	1	0
Visual disturbances (0-7)	0	0	0	0	0	0	0	0	0	0

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Headache (0-7)	4	1	3	0	3	1	4	1	5	0
TOTAL SCORE	30	6	23	4	19	3	28	5	26	5

\*The maximum score is 67; Mild alcohol withdrawal is defined with a score less than or equal to 15, moderate with scores of 16 to 20, and severe with any score greater than 20.

**Table 9: Effect on Haematological findings:**

Parameters	Case 01		Case 02		Case 03		Case 04		Case 05	
Investigations	B.T.	A.T.	B.T.	A.T.	B.T.	A.T.	B.T.	A.T.	B.T.	A.T.
HB (g/dl)	13.5	14.9	11.4	10.7	13.4	15.8	8.8	9.5	11.5	14.7
LFT -SGOT (U/L)	171.3	30.4	224.3	50.5	134.2	33.7	316.5	43.9	473.4	27.1
LFT -SGPT (U/L)	205.5	18.4	212.2	47.8	125.0	25.8	107.9	46.9	286.7	15.9
Total bilirubin (mg/dl)	0.7	0.7	1.1	0.8	1.3	0.6	-	-	1.5	0.8
Total serum protein (gm/dl)	7.8	6.4	8.4	7.7	8.0	7.7	-	-	9.7	7.3

## Images of Laboratory Reports:

**krsnaa**  
DIAGNOSTICS  
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### Medical Laboratory Report

Patient Name : MS  
Age and Gender : 46 Years / Male  
Category : OPD - RJ NIAJAIPUR  
Referring Doctor : Dr. (Smt.) Anita Sharma  
Sample Processed at : RJ NIAJAIPUR

Patient UID No : RNJ210700043966  
PRN No : RNJ210700043966  
Registered On : 26.07.2021 12:36  
Sample UID No : 20083375

Test Done	Observed Value	Units	Reference Range
<b>BIOCHEMISTRY</b>			
<b>LFT - LIVER FUNCTION TESTS (Serum)</b>			
<b>LIVER FUNCTION TEST</b>			
Total Bilirubin - Serum	0.7	mg/dL	0 - 2
Dichlorophenyl Diazonium	0.5	mg/dL	0 - 0.4
Direct Bilirubin - Serum	0.2	mg/dL	0.0 - 1.00
Dichlorophenyl Diazonium	0.2	mg/dL	0.0 - 1.00
Indirect Bilirubin - Serum	0.5	mg/dL	0.0 - 1.00
Calculated	7.8	gm/dL	6.0 - 7.8
Total Protein - Serum	7.8	gm/dL	6.0 - 7.8
Buntest	4.6	gm/dL	3.5 - 5.2
Albumin - Serum	3.2	g / dL	2.0 - 3.50
Bromocresol green	3.2	g / dL	2.0 - 3.50
Globulin - Serum	1.4	%	1.0 - 1.8
Calculated	171.3	U/L	0.0 - 40
A/G Ratio	171.3	U/L	0.0 - 40
SGOT/AST - Aspartate Transaminase	205.5	U/L	0.00 - 41.0
IFCC	205.5	U/L	0.00 - 41.0
SGPT/ALT - Alanine Transaminase	84.3	U / L	Women : Up to 105 U/L Men : Up to 115 U/L
IFCC	84.3	U / L	Women : Up to 105 U/L Men : Up to 115 U/L
Alkaline Phosphatase - Serum			
2-Amino-2-Methyl-1-Propanol Buffer			
Note : Test performed on fully automated biochemistry analyzer			

Test Done	Observed Value	Units	Reference Range
<b>HAEMATOLOGY</b>			
Hemoglobin	13.5	g/dL	13.0 - 17.0
Spectrophotometry			
--- END OF REPORT ---			

*Pharma*  
DR. PRIYANKA SHARMA  
(MD PATHOLOGIST)

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### Medical Laboratory Report

Patient Name : MS  
Age and Gender : 40 Years / Male  
Category : OPD - RJ NIAJAIPUR  
Referring Doctor : Dr. (Smt.) Anita Sharma  
Sample Processed at : RJ NIAJAIPUR

Patient UID No : RNJ210800045660  
PRN No : RNJ210800045660  
Registered On : 26.08.2021 10:46  
Sample UID No : 20083383

Test Done	Observed Value	Units	Reference Range
<b>BIOCHEMISTRY</b>			
<b>LFT - LIVER FUNCTION TESTS (Serum)</b>			
<b>LIVER FUNCTION TEST</b>			
Total Bilirubin - Serum	0.7	mg/dL	0 - 2
Dichlorophenyl Diazonium	0.4	mg/dL	0 - 0.4
Direct Bilirubin - Serum	0.3	mg/dL	0.0 - 1.00
Dichlorophenyl Diazonium	0.3	mg/dL	0.0 - 1.00
Indirect Bilirubin - Serum	0.4	mg/dL	0.0 - 1.00
Calculated	7.5	gm/dL	6.0 - 7.8
Total Protein - Serum	6.4	gm/dL	6.0 - 7.8
Buntest	5.4	gm/dL	3.5 - 5.2
Albumin - Serum	3.1	g / dL	2.0 - 3.50
Bromocresol green	3.1	g / dL	2.0 - 3.50
Globulin - Serum	1.3	%	1.0 - 1.8
Calculated	5.8	U/L	0.0 - 40
A/G Ratio	5.8	U/L	0.0 - 40
SGOT/AST - Aspartate Transaminase	30.4	U/L	0.00 - 41.0
IFCC	30.4	U/L	0.00 - 41.0
SGPT/ALT - Alanine Transaminase	18.4	U/L	0.00 - 41.0
IFCC	18.4	U/L	0.00 - 41.0
Alkaline Phosphatase - Serum	53.4	U / L	Women : Up to 105 U/L Men : Up to 115 U/L
2-Amino-2-Methyl-1-Propanol Buffer			
Note : Test performed on fully automated biochemistry analyzer			

Test Done	Observed Value	Units	Reference Range
<b>HAEMATOLOGY</b>			
Hemoglobin	14.9	g/dL	13.0 - 17.0
Spectrophotometry			
--- END OF REPORT ---			

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Figure: 1 Before Treatment (Case 1)

Figure 1 After Treatment (Case 1)



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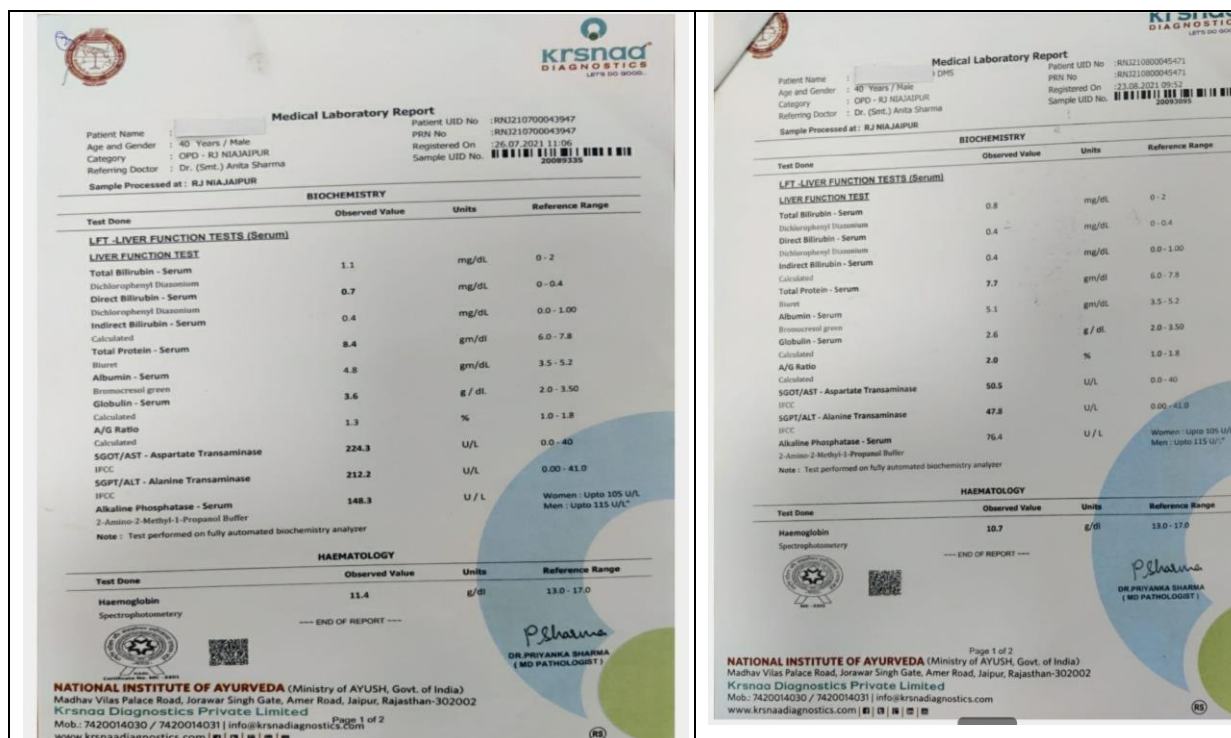


Figure 2 Before Treatment (Case 2)

Figure 2 After Treatment (Case 2)

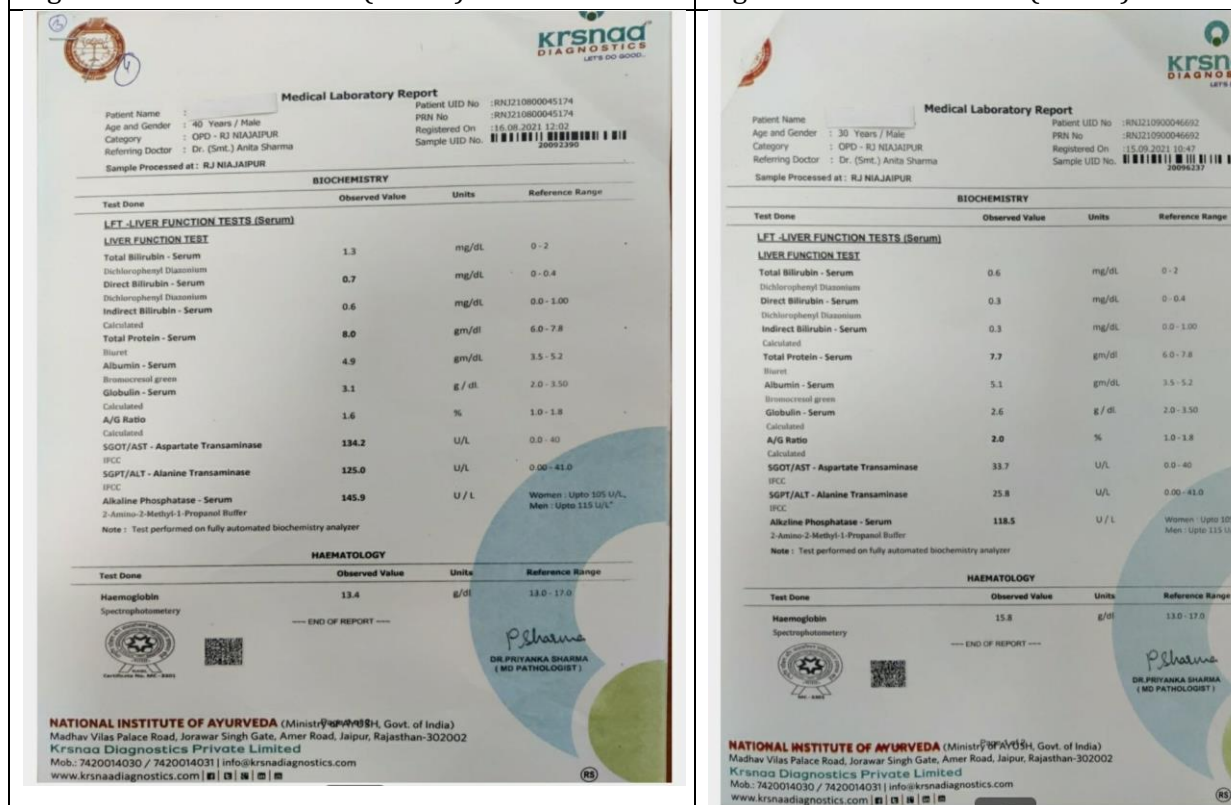


Figure 3 Before Treatment (case 3)

Figure 3 After Treatment (Case 3)

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Patient Name		: Mr. [REDACTED]		Patient UID No		: RNJ210900046171	
Age and Gender		: 36 Years / Male		PRIN No		: RNJ210900046171	
Category		: IPD - RJ NIAJAPUR		Registered On		: 06.09.2021 09:11	
Referring Doctor		: Dr. (Smt.) Anita Sharma		Sample UID No.		: 8111111111111111 20954962	
Sample Processed at: RJ NIAJAPUR							
BIOCHEMISTRY							
Test Done	Observed Value	Units	Reference Range				
SGOT/AST - Aspartate Aminase	316.5	U/L	0.0 - 40				
IFCC							
Note : Test performed on fully automated biochemistry analyzer.							
SGPT/ALT - Alanine Transaminase	107.9	U/L	0.00 - 41.0				
IFCC							
Note : Test performed on fully automated biochemistry analyzer							
HAEMATOLOGY							
Test Done	Observed Value	Units	Reference Range				
Haemoglobin	8.5	g/dl	13.0 - 17.0				
Spectrophotometry							
--- END OF REPORT ---							
 		<p>P. Sharma DR. PRIYANKA SHAH MD PATHOLOGIST</p>					
Sample Collected On : 06.09.2021 09:32		Sample Accepted On : 06.09.2021 09:33		E12267		Printed On : 06.09.2021 12:02	
Results Authenticated : 06.09.2021 12:06		Results Reported : 06.09.2021 12:06					

Figure 4 Before Treatment (Case 4)

[illegible]

Figure 4 After Treatment (Case 4)

Patient Information		Medical Laboratory Report	
Patient Name	399/39	Patient UID No	RN3211000048397
Age and Gender	30 Years / Male	PRIN No	RN3211000048397
Category	OPD - RJ NIAJAIPUR	Registered On	13.10.2023 10:06
Referring Doctor	NIA JAIPUR	Sample UID No	201000006
Sample Processed at: RJ NIAJAIPUR			
BIOCHEMISTRY			
Test Done	Observed Value	Units	Biological Reference
<b>LET - LIVER FUNCTION TESTS (Serum)</b>			
<b>LIVER FUNCTION TEST</b>			
Total Bilirubin - Serum (Sample type: Serum )	1.5	mg/dL	0 - 2
Ducluthenphenyl Diazonium			
Direct Bilirubin - Serum (Sample type: Serum )	0.6	mg/dL	0 - 0.4
Ducluthenphenyl Diazonium			
Indirect Bilirubin - Serum (Sample type: Serum )	0.9	mg/dL	0.0 - 1.00
Calculated			
Total Protein - Serum (Sample type: Serum )	9.7	gm/dl	6.0 - 7.8
Bisuret			
Albumin - Serum (Sample type: Serum )	5.5	gm/dL	3.5 - 5.2
Bromocresol green			
Globulin - Serum (Sample type: Serum )	4.2	g / dL	2.0 - 3.50
Calculated			
A/G Ratio (Sample type: Serum )	1.3	%	1.0 - 1.8
Calculated			
SGOT/AST - Aspartate Transaminase (Sample type: Serum )	473.4	U/L	0.0 - 40
IFCC			
SGPT/ALT - Alanine Transaminase (Sample type: Serum )	286.7	U/L	0.00 - 41.0
IFCC			
Alkaline Phosphatase - Serum (Sample type: Serum )	255.0	U / L	Women: Up to 100 Men: Up to 115
2-Amino-2-Methyl-1-Propanol Buffer			
Note : Test performed on fully automated biochemistry analyzer			
<b>RFT - RENAL FUNCTION TEST (Serum)</b>			
<b>RENAL FUNCTION TEST</b>			
SERUM UREA (Sample type: Serum )	18.5	mg/dl	15 - 39
Ureaase/GLOH			
<b>NATIONAL INSTITUTE OF AYURVEDA</b> (Ministry of AYUSH, Govt. of India) Madhav Vilas Palace Road, Jorawar Singh Gate, Amer Road, Jaipur, Rajasthan-302002 <b>Krnsnao Diagnostics Private Limited</b> Mob: 7420014030 / 7420014031   info@krnsnaoagnostics.com www.krnsnaoagnostics.com			

Figure 5 Before Treatment (Case 5)

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## Medical Laboratory Report

Patient Name \_\_\_\_\_  
Age and Gender : 30 Years / Male  
Category : OPD - RJ NIAJAIPUR  
Referring Doctor : Dr. (Smt.) Anita Sharma  
Sample Processed at : RJ NIAJAIPUR

Patient UID No. : RNJ21200051060  
PIN No. : RNJ21200051060  
Registered On : 09.12.2021 11:09  
Sample UID No.   
20287492

### BIOCHEMISTRY

Test Done	Observed Value	Units	Biological Reference Interval
<b>LFT - LIVER FUNCTION TESTS (Serum)</b>			
<b>LIVER FUNCTION TEST</b>			
Total Bilirubin - Serum (Sample type : Serum ) [Colorimetry] [Bilirubin]	0.8	mg/dL	0 - 2
Direct Bilirubin - Serum (Sample type : Serum ) [Colorimetry] [Bilirubin]	0.3	mg/dL	0 - 0.4
Indirect Bilirubin - Serum (Sample type : Serum ) Calculated	0.5	mg/dL	0.0 - 1.00
Total Protein - Serum (Sample type : Serum ) BPC	7.3	gm/dl	6.0 - 7.8
Albumin - Serum (Sample type : Serum ) Bromocresol green	5.5	gm/dL	3.5 - 5.2
Globulin - Serum Calculated	1.8	g / dL	2.0 - 3.50
A/G Ratio Calculated	3.1	%	1.0 - 1.8
Aspartate Transaminase (SGOT/AST) - Serum (Sample type : Serum ) BPC	27.1	U/L	0.0 - 40
Alanine Transaminase (SGPT/ALT) - Serum (Sample type : Serum ) BPC	15.9	U/L	0.00 - 41.0
ALKALINE PHOSPHATASE - SERUM (Sample type : Serum ) 2-Amino-2-Methyl-1-Propanol Buffer	94.0	U / L	Women : 100 - 300 U/L Men : Up to 275 U/L*

Note : Test performed on fully automated biochemistry analyzer

### HAEMATOLOGY

Test Done	Observed Value	Units	Biological Reference Interval
Haemoglobin ( Sample type : EDTA Whole Blood ) Spectrophotometry	14.7	g/dl	13.0 - 17.0

— END OF REPORT —

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(No)

Figure 5 After Treatment (Case 5)

## RESULT AND DISCUSSION:

The traditional Hindu system of medicine has a unique knowledge of understanding the detailed aspects of human pathophysiology, diagnosis, and treatment protocols. The treatments were provided by NIA Jaipur's De-Addiction team, which used a pre-planned treatment strategy that is

purely based on Ayurveda and its fundamentals. *Doshas* are vitiated by alcohol which further leads to *Strotovrodha* (an obstruction of the pathways of the systemic circulation).

It's pathogenesis involves alteration of all the three *Doshas*, are treated according to the principles of *Madatyaya* disease by

ancient methods described in authentic *Ayurvedic* texts. During the period of abrupt abstinence from alcohol, the normal metabolism of the body (*Agni*) gets shifted to the unbalanced state and leads to accumulation of *Ama Dosha* which further leads to *Strotovrodha* which when left untreated or if not eliminated from the body will result in the decreased *bala (oja)*.<sup>[8]</sup>

Internal medicines used, *Kharjuradi Mantha* described by *Acharya Charaka* and *Sharangdhara* in context of *Mada* and *Madatyaya* has 7 constituents mainly amla and madhura in their property which helps to renew the organ damage produced by *Madhya* and further neutralizes its alkaline nature produced on its metabolism.<sup>[9]</sup> Whereas *Eladi Modaka* detailed in *Bharat Bhaishajya Ratnawali* in the course of *Madatyaya* disease has 18 drugs<sup>[10]</sup> such as *Pippali*, *Chitrakmool*, *Ela* acts as *Deepana*, *Pachana* *Aruchighana* and helps in digestion of *Ama Dosha* and further pacifies the altered dosh *Avastha* and helps in detoxification and elimination *Tri Doshas* with the help of *Tri Dosha Samaka Dravya* such as *Haridra*, *Daruharidra*, *Gokshura*, and further builds up the *Oja* by rejuvenating drugs such as *Shatavari*, *Yashtimadhu*, *Vidarikanda*, *Draksha* present in it.

*Sarwanga Abhyanga* mainly acts against *Ruksha Guna* caused by *Vata* by application of *Dashmool Tail* and *Swedana* with *Dashmool Kwath* mainly act against *Sheeta Guna* by reducing *Stambha* and *Gauravta*. *Dashmool* has *Vatashamak* and *Vedanasthapan* property. <sup>[11]</sup>

*Nasya Karma* with *Jatamansi Tail* and *Shirodhara* with *Til Tail* and *Brahmi Tail* relaxes the mind helps in relieving stress, <sup>[12]</sup> anxiety and agitation produces calmness and stability in the mind<sup>[13]</sup> and relieves in insomnia<sup>[14]</sup>. *Padabyanga* with *Til Tail* helps in releasing blockages that can hold back

energy that should be flowing through the body freely and helps in reduces the stress and provides stability to mind and body by causing sound sleep.<sup>[15]</sup>

#### CONCLUSION:

Treatment focuses on balancing *Tri Dosha* (*Vata*, *Pitta*, and *Kapha*) as well as *Triguna* (*Satva*, *Raja* and *Tama*) to bring symptomatic respite to the patient. The detoxification of the body and the maintenance of normal metabolism are two aspects of *Ayurvedic* management. The outcome of therapy is measured using current parameters and scales, such as the CIWA-Ar scale, which demonstrates that with adequate medicine and *Panchkarma* procedures used. The treatment proves to be effective in treating alcohol withdrawal syndrome by normalizing the elevated levels of SGOT and SGPT and further helps in detoxification and purification of the body and mind, with no adverse reactions of the treatment protocol being followed so far. However, further research is needed in this area to improve the *Ayurvedic* management options already accessible.

#### CONSENT OF PATIENT:

The written informed consent has been taken from the patients before stating the treatment and for publication of data without disclosing the identity.

#### LIMITATION OF STUDY:

Addiction is difficult to treat as well as there are chances of revival for the same therefore, cannot be treated as outpatient therapy in case withdrawal and craving for the drug is moderate to severe and also require regular long term follow ups.



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**CONFLICT OF INTEREST:** Author declares that there is no conflict of interest.

**GUARANTOR:** Corresponding author is guarantor of this article and its contents.

**SOURCE OF SUPPORT:** None

**HOW TO CITE THIS ARTICLE:**

Sharma A, Yadav S, Vishnoi R. Ayurvedic Management of Alcohol Withdrawal Syndrome -Case Series. *Int. J. AYUSH CaRe*. 2022; 6(1):135-146.