

# Ayurvedic Management of *YakritVikara* W.S.R. Alcoholic Fatty Liver Disease: A Case Report

## Abstract:

Since ancient times, alcohol has occupied an important place in human social and cultural practices. Ayurvedic texts describe alcohol as beneficial and nectar-like when consumed in an appropriate manner and within proper limits, but harmful and toxic when misused. Humanity has long been aware of the detrimental effects of excessive alcohol consumption and has developed various approaches to counteract and manage these harmful effects. Chronic alcohol consumption leads to steatosis, characterized by intracellular fat accumulation within hepatocytes, a hallmark of Alcoholic Fatty Liver Disease (AFLD). Steatosis is seen in 90% of heavy drinkers and is usually considered harmless because of its reversibility with abstinence. However, it includes metabolic stress that heightens the risk of more severe liver disease. Liver, identified as the *Yakrit* in Ayurveda, is regarded as a vital organ responsible for crucial functions. Excessive consumption of *Madya* with *Amla*, *Ushna*, *Teekshna*, *Vikasi Gunas* results in *RaktvahaSrotao Dushthi* and its *Moola* i.e. *Yakrit*. The present clinical study was undertaken to evaluate the efficacy of *Shaman Yog* in the form *Kwatha* & Tablets. At last, it can be concluded that the treatment regimen has a significant role in the management of Alcoholic Fatty Liver Disease.

**Keywords:** Alcohol, Steatosis, Liver, *Yakrit*, *Madya*

## Introduction:

In today's era of modernization, drinking alcohol has become a trend, largely due to the persistent allure of Western culture. The detrimental effects of alcohol are a global concern, affecting millions. Although the liver has a significant capacity for regeneration, even slight negligence can result in severe complications with poor prognosis. Regrettably, the liver often endures the most abuse in the body, being exposed to alcohol, drugs, and various environmental toxins, which heavily burden this essential organ. Alcohol can produce a wide spectrum of liver diseases from fatty change to hepatitis, cirrhosis, liver failure and hepatocellular carcinoma. Alcoholic steatosis or alcoholic fatty liver is first sequential stage in the development of alcoholic liver disease (ALD). Alcoholic fatty liver disease (AFLD) is characterised histologically by the accumulation of fat molecules within hepatocytes, appearing as a combination of big (macrovesicular) and small (microvesicular) droplets due to increased intracytoplasmic triglyceride formation.<sup>[1]</sup> Under a microscope, this fat deposition is seen as lipid droplets or fat vacuoles in liver tissue sections. The hepatocytes that surround the liver's central vein (perivenular hepatocytes) are the first to be affected, followed by mid-lobular hepatocytes and, finally, periportal hepatocytes, which surround the liver's portal vein.<sup>[2]</sup> The maximum limit for alcohol consumption is 30g/day for men and 20g/day for women <sup>[3]</sup>. In individuals, alcohol consumption above these limits suggests alcoholic fatty liver disease or alcoholic steatohepatitis. However, liver damage from alcohol is influenced by factors such as the type of alcohol, duration of exposure, genetic

41 predisposition, and the drinking patterns. Additionally, patients consuming alcohol in lower  
42 doses may still develop AFLD due to metabolic risk factors like Diabetes Mellitus,  
43 Hypertension etc. Ayurveda possesses many hepato-protective formulations which are  
44 effective even in more serious forms of alcoholic liver disease, with drugs having *Pittahara*  
45 and *Deepana Pachana* properties to treat *Yakrit-Vikara*. Hence the present study was  
46 undertaken to establish a treatment regimen for Alcoholic fatty liver.

#### 47 **Case Report:**

48 Chief complaints: A 26-Year old female belonging to middle economic status, with no known  
49 history of any co-morbidities came to *Panchkarma* OPD (OPD Visit number 2519957) at  
50 Dayanand Ayurvedic College, Jalandhar with chief complaint of dull ache at upper right  
51 quadrant of abdomen since 1 year associated with loss in weight by 5KG in 1 Month. She  
52 feels mild nauseatic after taking heavy meals. Patient also complained of loss of appetite  
53 without change in eating habits associated with irregular digestion. She also suffers from  
54 constipation.

#### 55 **History of Present Illness:**

56 The patient had no significant complaints until about one year ago. Since then, she has  
57 gradually developed dull ache at upper right quadrant of abdomen & weight loss by five  
58 kilograms in one month. She suffers from mild nausea, particularly after consuming heavy  
59 meals. Upon detailed questioning, he also reported a reduced appetite, although her eating  
60 habits have remained unchanged and irregular digestion. The patient has a long-standing  
61 history of alcohol use, regularly consuming 60-80 ml of alcohol thrice a week, usually along  
62 with non-vegetarian food at night, over the past 6 to 7 years. With these ongoing symptoms,  
63 the patient visited the *Panchakarma* OPD at Dayanand Ayurvedic College, Jalandhar, seeking  
64 further assessment and treatment.

65 **History of Past illness:** No H/O T2DM/HTN/Thyroid disorders/Kochs etc

66 **Family History:** Not Significant

67 **Personal History:**

68 Table no.1: Personal History:

Bowel	Constipation
Bladder	Normal
Appetite	Poor
Sleep	Normal

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#### 70 **General examination:**

71 •B.P. -110/70 mm Hg

72 •PR -72/Min

73 •R.R. -17/Min

74 •Height -5 feet 5 inches

- 75 •Weight -58 kg  
 76 •Temperature -Afebrile  
 77 •Edema/lymphadenopathy/pallor/icterus/ clubbing/cyanosis -Absent.

78

79 **Systemic examination:**

- 80 •R.S.-Centrally placed trachea, normal breathing sounds and airway entry  
 81 •CVS -S1 S2 normal, no murmur  
 82 •P/A -Soft, non-tender, no organomegaly  
 83 •CNS -Fullyconscious and well oriented to time, place and person, all cranial nerves are  
 84 intact.

85 **Abdominal Examination:**

86 Table 2: Abdominal Examination

Inspection	Centrally placed umbilicus, No redness or discolouration.
Palpation	Tenderness +nt at upper right quadrant, No rise in temperature, No rigidity.
Percussion	Tympanic note heard over the abdominal area. No shifting dullness or fluid thrill
Auscultation	Normal bowel sound heard. No bruits over the liver or aorta.

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89 **Ashtavidh Pariksha:**

90 Table no 3: Ashtavidha Pariksha

<b>Nadi</b>	<i>Kaphaj</i> (72/Min)
<b>Mutra</b>	<i>Samanaya</i>
<b>Mala</b>	<i>Vibandha</i>
<b>Jihva</b>	<i>Malavrutta</i>
<b>Shabda</b>	<i>Spashta</i>
<b>Sparsha</b>	<i>Mrudu</i>
<b>Drika</b>	<i>Shweta</i>
<b>Akriti</b>	<i>Krusha</i>

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92 **Dashvidh Pariksha:**

93 Table 4: Dashvidh Pariksha

<b>Prakriti</b>	<i>Kapha Pittaj</i>
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<i>Vikriti</i>	<i>Pitta Kaphaja</i>
<i>Sara</i>	<i>Rakta</i>
<i>Samhanana</i>	<i>Madhyam</i>
<i>Pramana</i>	<i>Madhyam</i>
<i>Satva</i>	<i>Avara</i>
<i>Satmya</i>	<i>Vyomishra</i>
<i>Ahara Shakti</i>	<i>Abhyavaharanashakti: Madhyam</i> <i>Jaranashakti: Avara</i>
<i>Vyama Shakti</i>	<i>Madhyam</i>
<i>Vaya</i>	<i>Yuva</i>

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95 **Treatment protocol:**

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Table 5: Shows Therapeutic intervention:

Procedure	Duration	Drug	Dose	Time
<i>Shamana Drug</i>	45 Days	<i>Yakrit-16 Compound Kwatha</i>	30 ml Twice a day with lukewarm water	<i>Adhobhakta</i>
	45 Days	<i>Yakrit- 16 Compound Tablets</i>	2 Tablet Twice a day with lukewarm water	<i>Adhobhakta</i>

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99 *Yakrit-16 Compound Kwatha*& Tablets were procured from D.A.V. Pharmacy Jalandhar.

100 **Assessment Criteria:**

101 **A. SUBJECTIVE PARAMETERS :**The result is assessed based on improvement in Sign  
102 and Symptoms of *YakritRoga*<sup>[4]</sup> mentioned in the classical texts. Standard terminologies  
103 are taken from NAMASTE PORTAL for assessment.<sup>[5]</sup>

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Table 6: Subjective parameters

PARAMETER TYPE	GRADE	EXPLANATION
	0	No anorexia

1. <i>Aruchi</i> (Anorexia)	1	Loss of appetite without changes in eating habits
	2	Oral intake altered, no significant weight loss / malnutrition
	3	Significant weight loss or malnutrition
2. <i>Udarshoola</i> (Abdominal pain)	0	No pain
	1	Mild pain
	2	Discomforting pain
	3	Intense pain
3. <i>Avipaka</i> (Indigestion)	0	No <i>Avipaka</i>
	1	Occasional indigestion, related to heavy meals
	2	Daily indigestion, seldom hungry but eats food
4. <i>Agnimandya</i> (Diminution of the Agni)	3	Never hungry; constant heaviness in abdomen
	0	Good hunger & proper digestion
	1	Good hunger, irregular digestion
	2	Less hunger, irregular digestion
5. <i>Utklesha</i> (Nausea)	3	Very little hunger and very little digestion
	0	None
	1	Mild nausea
	2	Moderate nausea
6. <i>Chhardi</i> (Vomiting)	3	Severe nausea
	0	None
	1	1-2 episodes in 24 hrs
	2	3-5 episodes in 24 hrs
	3	More than 6 episodes in 24 hrs, hospitalization indicated

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107 **B. OBJECTIVE PARAMETERS:**

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Table 7: Objective Parameters

PARAMETER TYPE	GRADE	EXPLANATION
1. Reduction in SGOT	0	NORMAL
	1	Reduced by 75%
	2	Reduced by 50%
	3	Reduced by 25%
	4	At the time of enrollment
2. Reduction in SGPT	0	NORMAL
	1	Reduced by 75%
	2	Reduced by 50%

	3	Reduced by 25%
	4	At the time of enrollment
3. Reduction in Alkaline Phosphatase	0	NORMAL
	1	Reduced by 75%
	2	Reduced by 50%
	3	Reduced by 25%
	4	At the time of enrollment
4. Reduction in GGT	0	NORMAL
	1	Reduced by 75%
	2	Reduced by 50%
	3	Reduced by 25%
	4	At the time of enrollment

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112 **Assessment Frequency:**

113 The patient was assessed on day 0 (at the time of enrolment of the patient), day 20<sup>th</sup>  
 114 (midway through the course of treatment), day 45<sup>th</sup> (at the end of treatment), day 60<sup>th</sup>  
 115 (Follow up after 2 weeks).

116 **Assessment:**

117 Table no. 8: Clinical Assessment of *Yakrit Vikara* based on Classical Signs and Symptoms:

Assessment criteria	Day 0	Day 20 <sup>th</sup>	Day 45 <sup>th</sup>	Day 60 <sup>th</sup>	Percentage relief
<i>Aruchi</i>	3	2	1	0	100%
<i>Udarshool</i>	1	1	1	1	0%
<i>Avipaka</i>	3	2	1	1	66%
<i>Agnimandya</i>	3	2	0	0	100%
<i>Utklesha</i>	1	1	0	0	100%
<i>Chhardi</i>	0	0	0	0	100%
<b>Total Score</b>	11	8	4	2	81%

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119 Table no. 9: Clinical Assessment of Objective parameters:

Assessment criteria	Day 0 Before Treatment	Day 60 <sup>th</sup> After Treatment	Percentage relief
Alanine Amino Transferase (SGPT,	82 IU/L	58 IU/L	29%

ALT)			
Asparate Amino Transferase (SGOT, AST)	64 IU/L	48 IU/L	25%
Alkaline Phosphatase	146 IU/L	90 IU/L	38%
Gamma-Glutamyl Transferase	58 IU/L	18 IU/L	68%

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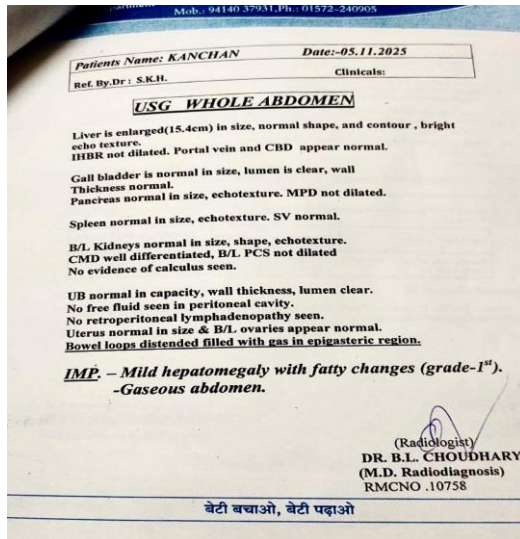
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Table no.10: Assessment of USG

Assessment Parameter	Before treatment	After Treatment
USG Grading	Grade I Fatty Liver	Liver is Normal.

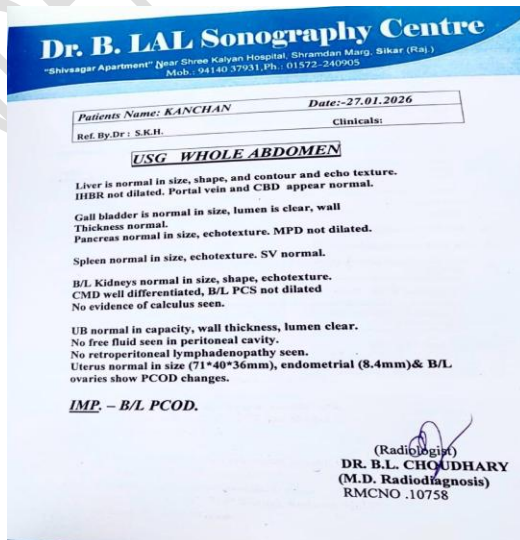
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123 **Image 1: Before Treatment**



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125 **Image 2: After Treatment**



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128 **Outcome:**

129 The patient showed substantial improvement in all presenting symptoms, as evidenced  
130 by the recorded clinical outcomes. There was a significant reduction in subjective as well  
131 as objective parameters following the internal medication. She has remained asymptomatic  
132 for the past two months, with no recurrence of symptoms noted during this follow-  
133 up period.

134 **Discussion:**

135 More than 90% of all heavy drinkers develop fatty liver and among the alcoholic fatty liver  
136 disease (AFLD) population 34.3% may end up with cirrhosis<sup>[6]</sup>. Hence the need of timely  
137 intervention can be well understood. This case study highlights the potential of Ayurvedic  
138 intervention in managing Alcoholic Fatty Liver Disease (AFLD). The therapeutic approach  
139 adopted in this case is based on classical Ayurvedic principles targeting *Pitta* and *Kapha*  
140 *dosha* imbalance, *Ama* (toxins), and impaired liver function (*Yakritvikriti*).

141 According to *Acharya Charak*, people suffering from afflictions and tormented grieve, if  
142 consume alcohol judiciously, then it becomes peaceful for them and when alcohol is consumed  
143 in excessive quantity it destroys the ten qualities of *Ojas*, thereby heart as well as the *Dhatu*s  
144 located there get affected.<sup>[7]</sup> *Acharya Charak* explains that the properties vitiating *Tridoshas*,  
145 observed in poison, are also found in alcohol, with the only difference that they are more  
146 potent in the former. Some poison is immediately fatal while the other causes some disorder.  
147 The last stage of intoxication due to alcohol should be taken like poison. Hence the symptom  
148 of *Tridoshas* are found in all type of alcoholism, their difference is known by their specific  
149 features.<sup>[8]</sup>

150 There is a direct reference of *YakritVikara* in *BhavaPrakasha*<sup>[9]</sup>, where he has mentioned  
151 *Yakrit Vriddhi* (can be compared with hepatomegaly) is the main feature of *YakritVikara* and  
152 *Nidana* for *YakritVikara* is *Vidahi*, *AbhishyandiAhar*. *Madya* being the *Abhishyandi*  
153 and *Vidahi*, can cause *YakritVikara* and *YakritVriddi* and thereby leads to different  
154 pathological symptoms of *Yakrit*.

155 Improper indulgence in alcohol causes *RaktavahaSrotas Dushti* due to its properties such as  
156 *Amla*, *Ushna*, *Teekshna*, *Vikasi Gunas*<sup>[10]</sup> along with vitiation of *Kapha Dosha*. When the  
157 *Srotas* gets vitiated, the *Sroto Moola* i.e. *Yakrit* also gets affected. These factors are  
158 responsible for the vitiation of *Agni* which leads to improper digestion of food resulting in the  
159 formation of *Ama Rasa* or *Apakva Anna Rasa*. That causes *Kapha Dushti* leading to impaired  
160 metabolism of fat which results in the deposition of excessive fat (*Medas*) in the liver. It leads  
161 to the enlargement of the liver or spleen and is known as *Pleehodara* or  
162 *Yakridodara*<sup>[11]</sup> Therefore, *Agnideepna*, *Amapachana*, *Kapha MedhoVatahara* and  
163 *SrotoshodhanaChitiksa* is beneficial in managing the disease.

164 The components of **Yakrit-16 Compound- Kwatha** are *Bhringraja*, *Bhumiamla*, *Punarnava*,  
165 *Rohitak*, *Haritaki*, *Amlaki*, *Makoy*, *Vidanga*. The components of **Yakrit-16 Compound-**  
166 **tablets** are *Kalmegha*, *Kutki*, *Haldi*, *Daruhaldi*, *Sharpunkhmool*, *Giloye*, *Parpat*, *Pippali*

167 .Most of the above mentioned drugs have *Shotha-Hara, Lekhana, Kapha-Pitta Hara,*  
168 *Deepana, Kamala hssara, Udara rogahara* properties.

- 169 ❖ *Kutki & Sharpunkhmool* with its *Bhedana*<sup>[12]</sup> action eliminates vitiated *Dosha* from  
170 *Yakrit*.
- 171 ❖ *Haritaki* being *Anulomaka*<sup>[13]</sup> leads to *Pratiloma* movement of *Doshas* or *Malas*.
- 172 ❖ *Makoy* is having *Medohara* properties, thus helps in elimination of fat from liver.<sup>[14]</sup>
- 173 ❖ Powder of *Vidanga* is indicated in *Medoroga*, Thus helps in eliminating excess fat  
174 from liver.<sup>[15]</sup>
- 175 ❖ *Haldi & Daruhaldi* has hepatoprotective action as proven in many studies.<sup>[16]</sup>
- 176 ❖ *Pippali* having *Rechan* action helps in eliminating vitiated *Doshas* from *Yakrit*.  
177 Moreover it is indicated in diseases of spleen, pain in abdomen.<sup>[17]</sup>
- 178 ❖ *Giloye & Amlaki* helps in *Tridoshshamana* and *Amapachana*<sup>[18]</sup>
- 179 ❖ *Punarnava* being *Shotghana* helps in reducing swelling in liver & being diuretic it is  
180 used with other drugs in early ascites due to hepatic disorders<sup>[19]</sup>

181 So *Yakrit* Compound- *Kwatha& Tablets* promotes digestive fire (*Agnideepaka*), clears body  
182 channels for the nutrients to reach the tissues (*Strotoshodhaka*), reduces excess *Meda* and  
183 detoxifies the body by improving the status of *Agni*.

#### 184 **Conclusion:**

185 The sign and symptoms of patient of alcoholic fatty liver disease has been subsided within 2  
186 month and significant improvement is found in USG and laboratory investigations after 60  
187 days. Thus, this case study suggested that the Ayurveda approach efficiently manage the  
188 Alcoholic Fatty Liver Disease. Although much more research is needed to confirm the  
189 findings and generalization of the results.

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191 **Source of support:** Nil

192 **Conflict of Interest:** None declared

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