

# Management of Alcoholic Liver Disease by Naturopathy and Yoga Intervention: A Case Report

Naveen GH<sup>1\*</sup>, Nithin K<sup>2</sup>, Selva Kumar G<sup>3</sup>

1. Assist. Professor, Dept of Research, SDM College of Naturopathy and Yogic Sciences, Ujire
2. Internee, SDM College of Naturopathy and Yogic Sciences, Ujire
3. Assistant Professor, SDM College of Naturopathy and Yogic Sciences, Ujire

**E-mail: naveenghnys@gmail.com**

## **Abstract:**

Alcoholic liver disease (ALD) is one of the main life threatening medical conditions usually seen in chronic alcoholics. Complete abstinence from alcohol and following proper nutritional guidelines is the cornerstone in the therapy. Conventional medicine is widely used for this condition mainly; however side effects of medications and challenges in cure are formidable. Liver transplantation has been shown to be effective for end stage ALD with Cirrhosis. In Conventional Medicine, abstinence from alcohol is the mainstay of treatment for this condition, but nutritional therapy, which emphasizes on reducing oxidative stress, may be beneficial. Also, certain dietary factors, fasting therapy, hydrotherapeutic treatments, massage therapy and yoga may enhance the liver function. Hence the importance of naturopathy and yoga has to be highlighted in the management of ALD. Here in this single case study, effectiveness of naturopathy and yogic intervention in treating ALD has been shown to be effective without any side effects.

**Keywords:** alcoholic liver disease, liver cirrhosis, diagnosis, treatment, yoga and naturopathy, diet and nutrition.

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## **Introduction**

Alcoholic liver disease (ALD), which ranges from simple steatosis to cirrhosis and hepato-cellular carcinoma, is a major medical disorder across the globe. Liver cirrhosis is a life threatening condition that is defined histopathologically and has a wide range of clinical manifestations and complications with progressive and widespread death of liver cells associated with inflammation and fibrosis destroying the normal lobular liver architecture.<sup>[1]</sup> ALD is a main etiological factor for liver related mortality across the globe.<sup>[2]</sup> Relationship between liver disease and excessive alcohol consumption was recognized more than 200 years ago.<sup>[3]</sup> Patients with ALD are usually diagnosed with alcohol dependence syndrome.

Alcohol dependence is defined as continuation of drinking despite organ damage, social problems or increased injuries due to intoxication.<sup>[4]</sup> Excessive alcohol consumption for long period plays a significant role in the development of alcohol related liver damage, though not more than one half of excessive alcohol consumers develop alcoholic hepatitis or cirrhosis.<sup>[5]</sup>

Patients with alcoholic steatohepatitis/ alcoholic liver disease may have symptoms like weakness, anorexia, fever, jaundice, weight loss, abdominal pain, diarrhea, nausea and vomiting.<sup>[6]</sup> On physical examination patient may have hepatomegaly. It is estimated that 70% of hospitalized patients with steatosis had

hepatomegaly.<sup>[7]</sup> Also they may have peripheral edema, splenomegaly, jaundice, ascitis and spider angiomas.<sup>[8]</sup> Also liver enzymes are likely to be elevated in patients with ALD.<sup>[9, 10]</sup> Diagnosis of ALD could usually be made on clinical basis with the support of blood tests and liver biopsy; though a liver biopsy is not usually required.

Abstinence from alcohol and nutritional therapy are the first line of therapeutic intervention in these patients. Pentoxifylline is one of the effective treatments for patients with ALD with renal dysfunction, or hepato-renal syndrome. Also liver transplantation is an effective mode of treatment in patients with end stage ALD.<sup>[3]</sup> Corticosteroids are useful in patients with severe alcoholic hepatitis. If withdrawal symptoms persist in these patients, it can be prevented with the usage of benzodiazepines. With this background, this condition could be well managed by naturopathy and yoga intervention, as diet therapy has been given a primary importance in naturopathy.<sup>[11]</sup>

In naturopathy clinical practice, various treatment modalities are recommended, including gastro hepatic pack (GH pack). Among these, GH pack seems to be effective, which is evident in one study which focused on GH pack as an additional treatment in patients with diabetes mellitus.<sup>[12]</sup> No studies have been conducted on effect of naturopathy and yoga intervention in patients with ALD. Hence, we would like to present a single case study of ALD in which yoga and naturopathy intervention including GH pack (daily) was given for 24 days.

### **Case Report**

A male patient aged 46 years visited Shree Dharmasthala Manjunatheshwara yoga and nature cure hospital (SDMYNCH), Dharmasthala on 22/10/2013 with

complaints of alcohol dependence for 20 years, increased blood sugar levels for 6 years, nausea, abdominal pain, weakness, loss of appetite and increased frequency of stools for 6 months. There was a history of jaundice twice in childhood and for the last 7 months. Pedal edema was present on general physical examination. Liver was enlarged in size, which showed generalized coarse texture and nodular margins, and gall bladder was distended. Past history of spleen enlargement was observed which measured about 13cms with homogeneous echo texture 2 months ago. Liver was palpable on per abdominal examination, along with tenderness.

A recent report on ultrasonography suggests a clear case of chronic liver disease with liver cirrhosis. There was a history of allopathic treatment for liver cirrhosis with no significant results observed, and later advised for liver transplantation. He was under medication, consisting of Evion 400mg/day, Shelcal twice per day, Glimepride once per day, Pantakind 400mg twice per day, and Zevit twice per day at the time of admission. After careful examination, patient was treated with naturopathy and yogic intervention along with GH pack.

Treatment sittings are as follows. GH pack was given daily in the afternoon as one of the first line treatments (24), along with steam bath with cold chest pack (2), full body massage (3), partial massage to legs and abdomen (7), full mud bath (2), alternate douche (3), colon hydrotherapy (1), neutral underwater massage (2), deluxe hydro massage (2), whirlpool bath (1), cold circular jet (1), sauna bath (1), cold hip bath (1), and alternate hip bath (1). One hour daily yoga was done for 24 days, consisting of a set of sukshma vyayama, Asanas, pranayama and relaxation techniques. Dietetic regimen details in table 1.

Table 1. Dietetic regimen followed for 24 days

Time	Type of diet and quantity taken	Days	Calories (approximate)
7.30AM	Ash gourd juice/ lemon honey juice	18/6	12/54 (250ml)
9AM	Ragi ganji	24	150 (250ml)
11AM	Naturopathic boiled diet consisting of fresh, bland, vegetarian diet, consisting of 2 chapatis or daliya, boiled vegetables, and buttermilk / raw diet consisting of a blend of fruits, vegetables and sprouts	14/10	800/110(250ml)
2PM	Ash gourd juice/ bottle gourd juice	9/ 15	12/14 (250ml)
4.30PM	Barley water	24	67.2 ( 250ml)
6.30PM	Naturopathic boiled diet consisting of fresh bland, vegetarian diet consisting of 2 chapatis or daliya, boiled vegetables, and buttermilk/bottle gourd juice	19/5	800/ 14(250ml)

With these 24 days of treatment, patient got relief from abdominal pain, nausea, anorexia, weakness and increased frequency of stools. Also weight reduction was observed. A post therapeutic report reveals that liver function has improved by considering the improvement in liver function test results (Table 2).

Table 2: Liver function test details

Outcome measures	Naturopathy and Yoga intervention		
	22/10/2013	11/11/2013	15/11/2013
S.BILIRUBIN (T)	3.9mgs/dl	3.1mgs/dl	2.8mgs/dl
S.BILIRUBIN D)	2.0mgs/dl	1.7mgs/dl	1.2mgs/dl
S.TOTAL PROTEIN	7.0gms/dl	6.1gms/dl	6.0gms/dl
S.ALBUMIN	3.9gms/dl	3.3gms/dl	3.2gms/dl
S.GLOBULIN	3.1gms/dl	2.4gms/dl	2.1gms/dl
SGOT(AST)	113.1Units/L	104.6Units/L	97.3Units/L
SGPT(ALT)	57.5Units/L	51.8Units/ L	47.7Units/L
ALKALINE PHOSPHATASE	238.6 IU/L	202.8 IU/L	200.9 IU/L

Edema and ascitis was not present, Liver was not palpable at the end of the treatment. Patient gained self confidence and was more relaxed compared to day one, and had complete abstinence from alcohol without any withdrawal symptoms. Liver function test was done with the help of a biochemist in SDMYNCH laboratory. Procedure of GH pack: A hot bag was applied anteriorly from the fourth rib to the umbilicus, extending to the axillary line on each side, while a cold bag at least eight inches long was applied to the dorsal and lumbar spine. <sup>[13]</sup> This was covered by a dry woolen blanket.

### Discussion

Liver cirrhosis could develop mainly due to alcohol dependence for many years. Alcohol cessation is a primary treatment for this condition. <sup>[1]</sup> In this case report, liver function has been improved considerably. Though there is no evidence till date which addresses influence of naturopathy and yoga intervention on liver function test, they have indirect influence on liver function, as mentioned below.

Probable mode of action:

Hydrotherapy treatments are useful in enhancing cardiovascular hemodynamic

function, cellular immunity, psychological parameters and neonatal growth.<sup>[14-17]</sup> GH pack is a treatment modality in hydrotherapy that uses combination of hot and cold treatments. The hot and cold treatment modality has beneficial effects on tissue metabolism, blood flow, inflammation, edema and connective tissue extensibility.<sup>[18]</sup> While the underlying mechanism of the clinical benefits of GH pack remains to be studied, addition of GH pack showed reduction in blood glucose levels in patients with diabetes mellitus.<sup>[12]</sup>

Diet may play a significant role on the health of an individual. It is evident that patients with ALD may have micronutrient deficiencies such as folate, vitamin B6, vitamin A, vitamin B1, Selenium, zinc, copper and magnesium. Also, few micronutrient deficiencies are involved in pathogenesis of ALD.<sup>[19]</sup> Diet rich in polyphenols and antioxidants may be useful for patients with liver disease. It is evident that patients with ALD have oxidative stress.<sup>[3]</sup> Diets rich in

polyphenols improve dyslipidemia and reduce oxidative stress.<sup>[20]</sup> Four months of daily consumption of antioxidants (vitamin E, 400 IU; vitamin C, 500 mg; selenium, 50 µg) improved antioxidant-oxidant balance and modestly improved liver function tests among overweight or obese children and adolescents.<sup>[21]</sup>

Therefore Naturopathy and Yoga life style intervention consisting of diet therapy, juice fasting therapy, hydrotherapy treatments, massage therapy and Yoga plays a significant role in patients with ALD by improving the liver function.

### **Conclusion**

Hence naturopathy and yoga intervention can be used as a treatment option in patients with ALD.

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