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Successful Ayurvedic management of Hepatic Cirrhosis Complex with Ascites - A Case Study

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ABSTRACT

Hepatic cirrhosis of liver is an inflammatory condition of the liver caused by various factors specially excessive alcohol consumption over an extended period of time. When alcohol gets processed in the liver, it produces highly toxic chemicals. These chemicals can fatally injure the liver cells. Normally the treatment is too much time consuming, difficult and inadequate Ayurvedic treatment serves as a promising different modality. In present study the case of alcoholic cirrhosis complicated with Ascites is presented. The patient was given Ayurvedic treatment with *Vardhamana Pippali*, *Katuki Churna*, *Punarnavadi Kvatha*, *Bhrungaraja Panchanga Churna*, *Arogyavardhini Rasa*, Mixture of *Bhummyamalaki Panchanga Churna*, *Sharpunkha Mula Churna* and *Sveta Parpati*. This treatment approach has improved condition of patient greatly by bringing hepatitis from Child-Pugh stage C to stage B with improvement in sign and symptoms as well as in ascetic condition.

Key words: *Jalodara*, Hepatic cirrhosis, Ascites.

INTRODUCTION

Hepatic cirrhosis especially if complicated by ascites, causes remarkable damage in human health and lives. Its management involves high costs for health care systems worldwide. Liver transplantation as one of the few treatment options bears risks and is largely unavailable or unaffordable for common patients in many countries, particularly in India. Therefore, alternative treatment measures are desirable. Excessive intake of alcohol results in cirrhosis of liver. It is usually found in association with fatty liver, an early stage of alcoholic liver disease, and may

contribute to the progression of fibrosis, leading to cirrhosis. Signs and symptoms include jaundice, ascites (fluid accumulation in the abdominal cavity), fatigue and hepatic encephalopathy (brain dysfunction due to liver failure). Mild cases are self-limiting, but severe cases have a high risk of death.

CASE STUDY

This is a case of 42 years old male. He had started to consume alcohol before 4 years. He was healthy before 1 year. Before 2 months he had started feeling weakness, anorexia, vomiting and nausea. He had also noticed yellowish discoloration in the eyes. He consulted a physician and he was diagnosed as a patient of jaundice. He had taken medicine but he didn't get significant relief, so he went different hospitals for better relief. On 21st January he came at our P D Patel Ayurveda Hospital, Nadiad. He was admitted here for 75 days. The patient was presented with symptoms like vomiting, severe weakness, decreased appetite, abdominal distension, difficulty in walking, constipation, pain in abdomen, generalized oedema and increased abdominal girth. The laboratory diagnostic tests and radio-ultra

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sonographical investigation had confirmed hepatomegaly, mild splenomegaly with mild ascites with Child-Pugh Grade C. As per Ayurvedic analysis of the disease he had increase of all the *Doshas* especially more *Pitta* and *Vata*.

- *Dosha - Vata and Pitta Pradhana*
- *Dushya - Rasa, Rakta, Purisha*
- *Srotasa - Rasavaha, Raktavaha, Udakavaha, Annavaha, Purishavaha*
- *Srotodushti Prakara - Sanga, Vimargagamana*
- *Agni - Jatharagni and Dhatvagni*
- *Ama - Jatharagnijanya and Dhatvagnijanya*
- *Udbhavasthana - Amashaya*
- *Adhithana - Yakta, Pliha, Koshtanga*

In his Ayurvedic treatment following treatment regimen was followed.

Vardhamana Pippali Kalpa for the first 14 days. During this period, we have given *Pippalichurna* (*Piper longum* powder) in *Vardhamana Krama* (increasing and tapering dose-pattern). In this pattern 1g powder of *Piper longum* was given twice with milk on the first day. Every day the dose was increase by 1g to eventually reach 5g twice daily. The dose of 5g was kept for 5 consecutive days and then taper down 1g every day to finally reach 1g again. So on the 13th day the dose was 1g twice daily. On the 14th day we have given *Virecana* (mild purgation) with the help of *Katuki Churna* (*Picrorrhiza kurroa*). The dose of *Katuki* was 3g according to the patient's *Kostha* (sensitivity of bowels).

After the completion of *Virecana* the following treatment have given for the next 61 days;

- *Punarnavadi Kvatha* (decoction of *Punarnavadi* (*Borhevia diffusa*), *Daruharidra* (*Berberis aristata*), *Musta* (*Cyperus rotundus*), *Haridra* (*Curcuma longa*), *Nimba* (*Azadiracta indica*), *Guduci* (*Tinospora coridifolia*), *Sunthi* (*Zinziber officinalis*), and *Katuki* (*Pichrorrhiza curroa*) – 40ml 2 times a day.

- Mixture of *Bhumyamalaki* (*Phyllanthus urinaria*) - 3g; *Sharfunkhamula Churna* (*Tephrosia purpurea* root-powder) - 2g and *Sveta Parpati* (contains *Navasagara* / ammonium chloride 1 part, *Suryakshara* / potassium nitrate 16 parts and *Sphatika* / alum 2 parts) - 500 mg twice a day.
- *Bhrungarajapanchanga Churna* (*Eclipta alba* whole plant powder) - 3 g twice a day.
- *Arogyavardhini Rasa* tablet – 2 tablets twice a day.
- *Ushnodaka Basti* - as per requirement for severe constipation
- *Nirgundi Patra Pinda Upnaha Sveda* - on knee joint for pain management
- Patient was totally on milk diet.
- 10gm *Cyavanaprashavaleha* gave as a breakfast with milk.
- He was supplemented human albumin thrice during the period of 75 days as an inpatient.

DISCUSSION

The present modality available for advanced stage of liver damage is liver transplantation which is very complex and costly for common people. But with the given Ayurvedic treatment good improvement could be achieved in sign and symptoms and also in laboratory parameters within 2 and half months.

Table 1: Sign and symptoms

Signs and Symptoms	Initial (21/01/2017)	After Treatment (4/4/2017)	Follow-Up (24/4/2017)
Abdominal Girth (in cm)	89	72	68
Urine output (in ml)	600	1100	About 1300

Weight (in kg)	54	47.600	52
Oedema	+++	0	0
Weakness	+++	+	+
Loss of appetite	+++	+	0
Vomiting	+	0	0
Pain in abdomen	+++	+	+

Table 2: Sonography

Before Treatment	After Treatment
Mild to moderate hepatomegaly with enlarged periportal lymphnodes with mild splenomegaly, moderate ascitis, mild left sided pleural effusion.	No ascitis seen.

Table 3: Clinical Laboratory Tests

Investigation	Initial (21/01/2017)	After treatment (4/4/2017)	Follow-Up (24/4/2017)
Hb (gm %)	10.1	11.0	12.0
S. Billirubin (mg/dl) Total	16.7	2.6	2.0
Direct	10.7	1.5	1.5
Indirect	6	1.1	0.5
S.G.P.T. (IU/L)	59	21	19
S.G.O.T.	114	36	32

(IU/L)			
S. Alkaline phosphatase (IU/L)	689	197	292
S. Protein (mg/dl)	6.3	6.4	6.5
S. Albumin (mg/dl)	2.3	2.1	2.3
S. Globulin (mg/dl)	4.0	4.3	4.2
HbSAg	Negative	Negative	Negative
WBC	14,400	15,000	12,400
Prolongation of Prothrombin time	19 seonds	13 seconds	11 seconds
Child-Pugh Grade	C	B	B

Table 4: Clinical Laboratory Tests with ongoing treatment

Laboratory tests	Initial	After Pippali Rasayana	After Virechana
S.G.P.T. (IU/L)	59	28	21
S.G.O.T. (IU/L)	114	73	41
S. Albumin (mg/dl)	2.3	2.8	2.2
S. Globulin (mg/dl)	4	5	5.2
S. Billirubin (mg/dl) Total	16.7	7.3	4.9
S. Alkaline phosphatase (IU/L)	689	593	399
PT/ INR	1.61	1.31	1.1

Abdominal girth	89	75	72
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Udara Roga especially *Jalodara* is closely related with *yakrutodara* and caused by *Agnimandhya*. Due to *Agnimandhya* subject feels symptoms like decrease appetite, weakness, abdominal pain. So to break this *Samprapti* (vicious cycle) protocol should be like that which can make *Agni* proper, remove waste products and have rejuvenating effect at tissue. The classical ayurvedic text *Charaka Samhita* mentioned *Udara Roga* as an indication for *Vardhamana Pippali*.^[1] According to Ayurvedic pharmacological principles, *Pippali* (*Piper longum*) is *Anushnasita* (having temperate properties) and *Tikshna* (having penetrating properties) as well as *Pliharogahara* (acting against splenic disorders) and *Mutrala* (having diuretic properties).^[2] *Pippali* has *Katu Rasa* and it directly acts on *Jathragni* as well as *Dhatvagni* (digestive enzymes). *Vardhamana Pippali* is also mentioned as a *Rasayana* (rejuvenating) drug in Ayurveda and it is an immunomodulator and hepatoprotective.^[2] Having these properties and actions, it is helpful in the management of this condition. Piperine, the main active ingredient of *Pippali*, is antipyretic and mild hypotensive. Piperine was found to enhance the bioavailability of structurally and therapeutically diverse drugs, possibly by modulating membrane dynamics due to its easy partitioning and increase in permeability characteristics along with induction in the synthesis of proteins associated with cytoskeletal function, resulting in an increase in the small intestine absorptive surface, thus assisting efficient permeation through the epithelial barrier.^[3-5]

In the subject of cirrhosis with ascitis removal of the fluid is main aim, and to fulfil it *Tikshana Shodhana* in the form of *Virechana* is needed. *Katuki* works as *Pitta Virechana* and it is the prime treatment in *Kamla* with *Udara Roga*. *Katuki* (*Picrorrhiza kurroa*) has *Ushna* (hot), *Tikshna* (penetrating) and *Pitta Virecana* (cholegogue) actions.^[6] It may be helpful in removing the obstruction of hepato-biliary channels and correcting hyperbilirubinaemia. Cucurbitacin glycosides, isolated from the root of *Katuki*, exhibited

liver protective, tumor inhibitory and anti-inflammatory activities.^[7] *Kutkin*, a glycosidal bitter principle of *katuki* exhibited hepatoprotective activity in carbon-tetrachloride-induced toxicity in rats.^[7]

As mentioned in texts, in *Jalodara* there is accumulation of fluid in *Udara* and to remove it, strong *Mutrala* (diuretic) action *Dravya* is needed. *Punarnavadi Kvatha* has a *Sothahara* (anti-oedemic) action.^[8] The main ingredient *Punarnavadi* (*Boerhaavia diffusa*) itself has a *Sothahara* as well as *Mutrala* (diuretic) action.^[9] *Punarnava* also has anti-inflammatory, antiarthritic, spasmolytic and antibacterial actions and is known to be useful in inflammatory renal diseases as well as nephrotic syndrome, in cases of ascites resulting from early cirrhosis of liver and chronic peritonitis.^[10] Thus, it is helpful to increase the urine output and remove oedema. *Bhumyamalaki* (*Phyllanthus urinaria*) is diuretic and in this way helpful to increase the urine output. Ayurvedic physicians use it as a hepatoprotective drug.

Sarpunkha (*Tephrosia purpurea*) removes portal hypertension. It is specifically considered for the treatment of inflammation of spleen and liver. In classical texts *Sarpunkha* (*Tephrosia purpurea*) is mentioned as *Plihashatru* (enemy of splenic disorders). Powdered aerial parts prevent an elevation of SGOT, SGPT and bilirubin levels.

Bhrungaraja (*Eclipta alba*) is mentioned as best tonic for liver in classical texts. It is used in hepatitis and spleen enlargements. The herb contains wedelolactone and diethyl-wedelolactone, which showed a dose dependent effect against carbon-tetrachloride, d-galactosamine- or phalloidin-induced cytotoxicity in primary cultured rat hepatocytes and exhibited potent antihepatotoxic properties.^[11] The whole plant showed effects on liver cell regeneration and an immunoactive property was observed against surface antigens of the hepatitis B virus.^[12]

So, possibly cumulatively by all this mode of actions various herbal drugs may have improved the condition of cirrhotic patient by providing liver protection, liver regeneration, preventing

inflammatory and necrotic damage, and improving oedema by effective diuresis.

CONCLUSION

The patient shows encouraging results during the management of *Yakrutroga* with *Jalodara* with given Ayurvedic modalities. The improvement obtained may be attributed to the disease modifying effect of given Ayurvedic treatment by means of its *Agnivardhaka*, *Rasayana* and *Vata-Piita Shamaka* effect. This treatment has improved the condition of patient from child-pugh class C stage to B stage and improve the liver function, too. In addition, the ascetic condition has also taken into control. The treatment protocol improves overall general condition of the patient. Currently patient is living healthy life. This treatment approach is safe, effective and economic alternative in case of alcoholic cirrhosis with ascitis. In a difficult condition where conventional treatments are beyond the financial capacities of a common man of the country like India, this therapy can be hopeful and promising.

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