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CLINICAL STUDY TO EVALUATE THE EFFICACY OF UDARAPRASHAMANARTHA GUDUCHYADI KWATHA IN ALCOHOLIC LIVER DISEASE

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ABSTRACT

Acoholic liver disease is a result of overconsuming alcohol that damages the liver, leading to a build up of fats, inflammation and scarring. It can be fatal. The condition is a primary cause of chronic liver disease. The liver is one of the most complex organs in the human body, with over 500 functions. These include filtering out blood toxins, storing energy, making hormones and proteins, and regulating chloesterol and blood sugar. Many patients of Alcoholic Liver disease having the clinical manifestation viz. Ascites, Hepatitis etc. It was decided to work upon ALD with some Ayurvedic medicines. For that total 30 patients of ALD were selected and treated with Guduchyadikwatha (containing guduchi, amalaki and haritaki in equal proportion). The formulation was given in the dose of 20ml twice a day for the duration of one month. In the patients with raised bilirubinlevel, Katuki was added in the formulation in the appropriate quantity. All the necessary parameters along with required investigations were assessed. In the results, weight of the patients was reduced by 12.13%. The parameters like abdominal girth, distance between umblicus and pubis, distance between umblicus and right anterior superior iliac crest, distance between umblicus and left anterior superior iliac crest showed highly significant results. The investigations such as bilirubin,SGPT and SGOT also showed significant reduction in their levels. Hence , it can be said that Guduchyadi kwatha can be a good option for disease like ALD.

KEYWORDS: ALD, Guduchi,Amalaki, Haritaki,Katuki, Sannipatodara.

INTRODUCTION

Alcoholic liver disease is the most common cause of advanced liver disease. However, there has been limited research investment into ALD despite its significant burden on the health. ALD is a complex disease, the successful management of which hinges on the integration of all the competences in public health, epidemiology, addiction behaviour and alcohol induced organ injury. ALD is not directly mentioned in Ayurveda but the disease can be compared with Sannipataj Udara. The symptoms of the disease are swelling of the abdomen, hands,legs, discolouration of nails, eyes, face, skin,urine and stool, appearance of networks of veins on the abdomen etc.

which are very much similar to alcoholic liver disease another fact is that the cause mentioned for sannipataj udara is 'Manda visha' (slow poison) which can be considered as alcohol.the causes as well as the symptoms of disease ALD could be taken as 'Sannipataj udara' according to Ayurveda.

Many patients of ALD having the clinical manifestation viz. ascites, hepatitis etc.used to visit the OPD of Jammu Institute of Ayurveda and Research. hence it was decided to work upon ALD with some Ayurvedic medicines. For this, three drugs viz.Guduchi, Amalaki and Haritaki were selected and the formulation was named as Guduchyadi kwatha. Hence with the aim to evaluate the efficacy of Guduchyadi kwatha on Alcoholic liver disease with the present study.

Material and Methodology: Total 30 patients were taken suffering from alcoholic liver disease between the age group of 25-60 years were selected from the OPD and IPD of jammu Institute of ayurveda and research irrespective of their age and religion.

Inclusion criteria

1. Patients of liver parenchymal disease including fatty changes and cirrhosis with ascitis without any bar of caste, sex and religion.
2. Patients having excessive alcohol consumption.
3. Patients having age between 25 and 60 years.

Exclusion criteria

1. Patients having age less than 25 years and more than 60 years.

2. Patients having severe cardiac, renal disease, altered consciousness, malignancy, AIDS, neurological disorders etc.
3. Pregnant and lactating women.
4. Non-alcoholic liver disease.

Ingredients of Guduchyadi Kwatha

All the patients were provided with 'GUDUCHYADI KWATHA'. The ingredients of the formulation and their quantity is mentioned as:

Drug	Latin name	Part used	Quantity
Guduchi	Tinospora cardifolia	Stem	1 part
Amalaki	Embelica officinalis	Fruit	1 part
Haritaki	Terminalia chebula	Fruit	1 part

Kutaki was added in the formulation in the appropriate quantity, if the patients having raised bilirubin levels.

DOSAGE

The formulation of Guduchyadi kwatha was given in the dose of 20 ml twice a day for the duration of one month.

ASSESSMENT

Signs and Symptoms of all the patients were observed before and after the treatment.

Subjective Parameters
Abdominal girth.
Distance between umbilicus to xiphisternal girth.
Umbilicus to pubis.
Umbilicus to right and left anterion superior iliac crest.

Objective parameters
SGPT
SGOT
Direct Bilirubin levels
Indirect bilirubin levels
Statistical analysis
Statistical analysis was done by applying paired t test.

OBSERVATIONS AND RESULTS

Weight of the patient was reduced by 12.13% which was statistically highly significant shown in table A. Abdominal girth in sitting position was reduced by 7.12% whereas in suoine position it was reduced by 7.13%. Both these parameters showed highly significant results. Among the various distances measured, distance between umbilicus and xiphisternum was reduced by 15.60% and 17.34% in sitting and supine position respectively(table B and table C, chart 1 and 2). Likewise, the distance between umbilicus and pubis by 19.13% and 19.18%, distance between umbilicus and right anterior superior iliac crest by 23.73% and 19.55% while the distance between umbilicus and left anterior superior iliac crest by 15.83% and 16.83% in sitting and supine position respectively.

Table A: Effect of Guduchyadi kwatha on weight of the patients of ALD.

Parameter (n=30)	Mean score		Mean	% relief	SD	SE	t	p
	BT	AT						
Weight	**63.20**	**55.53**	**7.66**	**12.13**	**7.66**	**0.99**	**7.68**	**p<o.oo1**

Table B: Effect of Guduchyadi kwatha on various parameters in sitting position of the patients of ALD.

Parameter (n=30)	Mean score		Mean	% relief	SD	SE	t	p
	BT	AT						
Abdominal girth	88.93	82.60	6.33	7.12	2.32	0.56	12.75	p<0.001
Dist.B/W Umbilicus-xiphisternum	19.86	15.76	3.10	15.80	1.63	0.30	10.44	p<0.001
Dist. B/W Umbilicus-pubis	18.90	13.67	5.23	19.13	1.91	0.35	9.29	p<0.001
Dist. B/W Umbilicus-RAS iliac crest.	25.00	19.67	5.33	23.73	4.04	0.05	6.57	p<0.001
Dist.B/W Umbilicus-LAS iliac crest.	24.00	20.20	3.80	15.83	3.44	0.63	6.05	p<0.001

Table C: Effect of Guduchyadi kwatha on various parameters of ALD in supine position.

Parameter	Mean score		Mean diff.	% relief	SD	SE	T	p
	BT	AT						
Abdominal girth	80.47	74.73	5.73	7.13	4.48	0.82	7.01	p<0.001
Dist.B/W Umbilicus-xiphisternum	21.53	17.80	3.73	17.34	1.46	0.27	14.00	p<0.001
Dist. B/W Umbilicus-pubis	21.20	17.13	4.07	19.18	1.80	0.33	12.38	p<0.001
Dist. B/W Umbilicus-RAS iliac crest.	20.80	16.73	4.07	19.55	2.27	0.42	9.80	p<0.001
Dist.B/W Umbilicus-LAS iliac crest.	21.00	17.47	3.53	16.83	2.25	0.41	8.58	p<0.001

Total bilirubin was decreased by 60.69%, direct bilirubin by 62.83% and indirect bilirubin was reduced by 54.12%.

Table D: Effect og Guduchyadi kwath on bilirubin value of ALD patients.

Parameter	Mean score		Mean diff.	% relief	SD	SE	t	p
	BT	AT						
Total bilirubin	3.4	1.3	2.3	60.69	0.18	0.18	11.43	p<0.001
Direct bilirubin	2.61	0.97	1.64	62.83	0.16	0.16	10.48	p<0.001
Indirect bilirubin	0.85	0.39	0.46	54.12	0.13	0.06	7.91	p<0.001

Table E: Effect of Guduchyadi kwatha on SGPT and SGOT values of ALD patients.

Parameter	Mean score		Mean diff.	% relief	SD	SE	t	p
	BT	AT						
SGOT	259.93	43.4	216.53	83.30	157.69	28.79	7.52	p<0.005
SGPT	296.10	51.40	244.70	82.64	137.54	25.11	9.75	p<0.005

SGPT and SGOT were decreased by 83.30% and 82.64% respectively which showed highly significant results.

DISCUSSION

The mainstay of treatment for hepatic encephalopathy is to use lactulose, a non-absorbable disaccharide, which results in colonic acidification. The goal of lactulose therapy is to promote 2-3 soft stools par day.

According to Harrison, patients of small amount of ascitis can usually be managed with dietary sodium restriction alone. When a moderate amount of ascitis is present, diuretic therapy is usually necessary. If ascitis is still present with high dose of diuretic in patients who are complaint with a low sodium diet, then they are defined as having refractory ascitis, and alternative treatment modalities including repeated large volume paracentesis, or a TIPS Procedure should be considered. It is often associated with an increased frequency of encephalopathy. The prognosis for patients of cirrhosis with ascitis is poor and some studies have shown that <505 of patients survive 2 years after the onset of ascitis.so, there should be consideration for liver transplantation in patients with the onset of ascitis. Thus, to avoid repeated paracentesis and also transplantation, it was planned to use the Ayurvedic medicine for such disease; also it was observed that by taking 'Guduchyadi kwatha' for this disease, patients are surviving for 5-10 years or more. Among the ingredientsof Guduchyadi kwatha, Guduchi is used in the diseases of Yakrit and pleeha, Amalaki is told as agnideepaka, Tridoshahara and kledashoshaka. It is also used for virechana. Haritaki is virechaka and it is directly indicated in the diseases like kamala and udara roga. Besides these actions mentioned above all these drugs are Rasayana and hence they were selected for the treatment in ALD. Regarding Katuka which is only used in patients with high bilirubin levels,is mentioned that it eliminates the waste from the gut without getting absorbed.

Probable mode of action

Guduchi – The plant extract is used as immunomodulator in immune supression of obstructive jaundice and hepatic fibrosis. Guduchi reduced levels of bilirubin and alkaline phosphatase. The plant extract showed in vitro inactivating activity in hepatitis B surface antigen in 48-72 hours.

Amalakai – ascorbic acid present in Amalaki prevents hepato toxicity. The fruits are reported to activate trypsin activity and found to be effective in acute viral hepatitis.

Haritaki – the fruits showed hepato protective activity against CCL4 and paracetamol liver injury in rats.

Katuki- P.lurroa is mainly used as a cure for liver diseases. The drug exhibited definite action in the process of clearance of hepatitis much faster than its placebo control. It is also reported to exhibit potent immune-modulatory activity and is considered as immunomodulatory agent. Picroliv, a standardisation fraction from the alcoholic extract of root and rhizome of this plant showed significant protection against hepatic damage and found to be more potent than silymarin, a known hepatoprotective agent.

CONCLUSION

The disease ALD can be compared with Sannipataj Udara according to Ayurveda on the basis of similarity between causes and symptoms. The formulation Guduchyadi kwatha was found an excellent remedy for the alcoholic liver disease. It showed significant results on weight gain, pedal oedema and abdominal enlargement. The formulation also significantly reduced the levels of SGPT, SGOP and bilirubin.

REFERENCES

1. Ravidatta Tripathi, Charakasamhita with Vidyamanorama Hindi commentary, chaukhamba Sanskrit pratishthan, Delhi, 2009; 13/34: 296.
2. Ravidatta Tripathi, Charakasamhita with Vidyamanorama Hindi commentary, chaukhamba Sanskrit pratisthan, Delhi, 2009; 13/33: 295.
3. Kasper DL, Braunwald E, Fauci AS, Hauser SL, Jameson JL, Loscalzo J.
4. Harrison's principles of internal medicine. New York: McGraw-Hill Medical publishing Divison, 1192.
5. G.A.Phadake, Dravyagunashastra, 1960; 149.

6. G.A.Phadake, Dravyagunashastra, 1960; 332.
7. G.A.Phadake, Dravyagunashastra, 1960; 194.
8. Rajwade et.al, Indian J Pharmacol, 1989; 21,50.
9. Rao et al, Indian J pharmacol, 1989; 21,52.
10. Ramesh chander et al, Indian J Med. Res, 1990; 923,34.
11. Anonymous. The wealth of India. Vol. 3, National Institute of Science communication and information resources, CSIR, New Delhi, 311.