INTERNATIONAL JOURNAL OF PHARMACEUTICAL SCIENCES
[ISSN: 0975-4725; CODEN(USA):IJPS00]
Journal Homepage: https://www.ijpsjournal.com

OPEN ACCESS

Review Article

Effective Ayurvedic Treatment For Alcohol- Related Liver Diseases- A Case Study

Neeraj K. Pathak*, Gyan P. Sharma, Achala R. Kumawat

PG Scholar, HOD & Associate Professor, Assistant Professor, PG Department of Panchkarma, PGIA, DSRRAU, Jodhpur, India

ARTICLE INFO

Received: 08 Feb 2024
Accepted: 11 Feb 2024
Published: 12 Feb 2024

Keywords:
Yakrit vridhi, hypatotoxicity, Infiltration, Nityavirechana, Chirayata Churna, Syrup Liv 52, FLD

DOI:
10.5281/zenodo.10650349

ABSTRACT

Liver disease is primarily caused by alcohol. The liver, synthesizes proteins, detoxifies a variety of metabolites, and produces a range of biochemical's required for digestion. Liver inflammation is the ailment known as alcoholic liver disease. Extended periods of excessive alcohol consumption are the cause of it. When consumed in larger doses, alcohol is toxic because it contains polyunsaturated fatty acids (PUFA), which cause oxidative stress, hepatotoxicity. Alcoholic liver disease is a broad term that includes vary in severity from mild steatosis to severe cirrhosis .Over 80%-90% of people who drink on a regular basis and binge drink also have fatty liver. Even though anyone who drinks a lot of alcohol over an extended period of time will eventually develop fatty liver, this process is temporary and can be reversed with prompt treatment. In Ayurveda it can be correlate with Yakritdalyodara or Yakrit Vridhi. The treatment protocol mentioned in ayurveda mainly Nityavirechana for this disease along with various oral medications. In this case study patient was given a combination of Kutaki Churna 3gm and Chirayata Churna 3gm at bed time for Nityavirechana, Chandraprabha Vati 2tab twice daily and Syrp Liv 52 2tsf twice daily. So, Panchkarma procedures along with internal medications show good results in the management of overall symptoms in this case of Yakrit vridhi.

INTRODUCTION

Chronic liver disease (steatosis, steatohepatitis, fibrosis, and cirrhosis) and acute involvement (alcoholic hepatitis) are two possible manifestations of ALD. The degree of severity and the fate of liver disease brought on by alcohol is dependent upon alcohol consumption- its quantity, consistency and length ingestion, in addition to liver presence nutritional status, diet, inflammation, and genetics personal tendency of a person.(1) Alcohol is metabolized almost exclusively in the liver. Initially, it is transformed

***Corresponding Author:** Neeraj K. Pathak
Address: *PG Scholar, HOD & Associate Professor, Assistant Professor, PG Department Of Panchkarma, PGIA, DSRRAU, Jodhpur, India*
Email : pathakniraj21@gmail.com

Relevant conflicts of interest/financial disclosures: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

into acetaldehyde, primary by the mitochondrial enzymes, alcohol dehydrogenase and oxidase enzyme of smooth endoplasmic reticulum.(2) Additionally, the way in which they progress is determined by the pattern of alcohol consumption during meals, which lowers the risk of liver disease than consumption other times, sporadic, uncontrollably drinking is less more hazardous than consuming alcohol continuously, The increased synthesis of triglycerol by hepatocytes and poor excretion are two main causes of fatty changes. Alcohol liver disease manifests clinically as Encephalopathy, ascitis, jaundice, abdominal pain, loss of appetite and hepatomegaly.(3) A dangerous condition known as cirrhosis alters the structure of the liver, making it unable to function normally. Reduced blood flow through the liver due to cirrhosis makes it more likely for the body to become poisoned by toxins that would otherwise be eliminated. Other potential causes of this illness include toxic substances, inadequate protein intake, and past viral or bacterial infections that damaged and inflamed the liver. The intestinal and stomach lining cells that regulate nutrient absorption are destroyed by alcohol. Alcohol significantly boost the absorption of lead. Low level of lead can interfere with the hepatobilary system's regular biochemical processes framework. Due to this exposure its lead to enlargement of liver cells or hyperplasia, which start the development of liver tumours, liver cells die more quickly and are replaced by fatty deposits. In Ayurveda, Fatty Liver Disease is equivalent to Yakrat Vridhi or Yakratdalyudar. According to acharya Yogratnagar says that foods that obstruct the channels and food that are spicy eventually reaches Rakta- Kapha Dushti from which it may travel to Yakrtodara. So, FLD is equivalent to Kaphavrit Pitta condition in the Liver. In addition to causing pathological damage, the hidden Pitta or fire within the Kapha envelope also alters the liver inflammatory composition, The Pitta and Kapha blocking the Vayu or aggravating it as a result of the Liver destructive process tends to obliterate liver cells, resulting in the fibrosis and liver diseases(4). Yakratvridhi clinical characteristics include Apaka (Indigestion), Aruchi (Anorexia), Dorbalaya(Weakness), and Varcha Sangha (Retention of stool), Jwar (Pyrexia), Mandagni(Weak metabolisms), Karshya (Malnutrition), pain from colic and wind induced diversion of the Kostha Vata Shula (Digestive tract)(5)

CASE PRESENTATION-

A 37-year-old male patient from Jodhpur presented to the OPD of Panchkarma department of Post Graduate Institute Of Ayurveda, DSRRAU, Jodhpur , Rajasthan India. On 20/10/2023 OPD no.-68894 with chief complaint of tremors in upper limbs, anorexia, weakness, stomach ache, slightly abdominal distension. The pain was aggravated by taking spicy foods.

Personal History-

Patient has history of intake of alcohol since last 2 years. Sleeping pattern was disturbed. Anorexia. There was no significant family history.

On Examination-

General Examination revels patient was medium built with stable vitals. He was non anaemic, non-icterus. Pulse rate was 78/minute, Blood Pressure 130/78 mmHg and respiratory rate 16/minute with normal body temperature .On inspection slightly abdominal distension was observed. On palpitation mild tenderness in right hypochondria.

Past History-

Patient had history of tremors in bilaterally upper limbs since 20 days. He was known alcoholic and consuming 200ml-300ml alcohol daily since 2 years. He could not withdraw from alcohol consumption; his family members get worried about him and finally came to Panchkarma OPD as ayurvedic treatment as the ray of last hope. This

condition is compared with Yakriddalyudar in Ayurveda.

Diagnosis-

It is evident from the patient prior medical records that they consumed an excessive amount of alcohol and spicy food ;like Katu,Amla, Virudha(6) attribute leads to Pitta vitiation, and due to this Rakta Dhatu is vitiated by an excess of Pitta , and this excess Pitta(7)and vitiated blood seated between the bodys Twak and Mansa Dhatus because Rakta Dhatu (8)vitiated and impure makes it Yakritdalyodar (liver enlargement)(9)

TREATMENT ADOPTED-

Table : 1 (Treatment given)

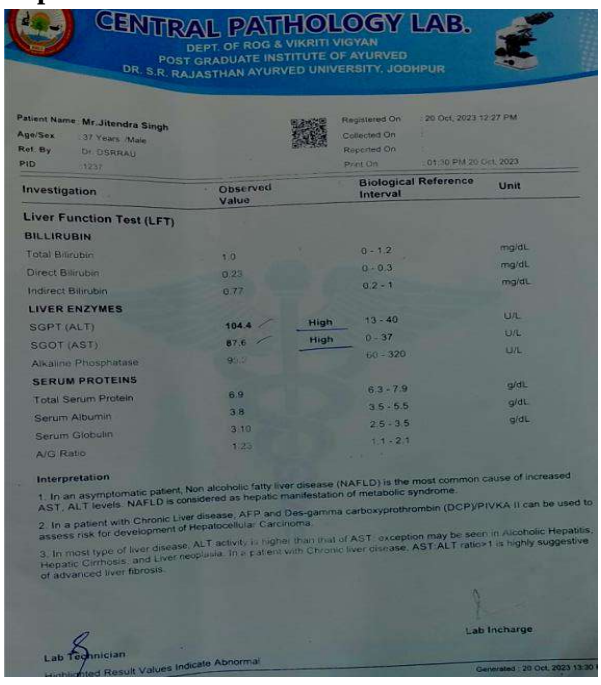
Saman chikitisa	Dose	Anupana	Duration
Bhumyamalaki churna	2 gm	Luke warm water	15 days
Avippatikar churna	3gm		
Sankh bhasma	250 gm		
Tinduk vati	125 mg		
1*2			
Chandraprabha vati	2 BD	Luke warm water	15 days
Syrp Liv 52	2 tsf BD	Luke water	15 days
Kutaki Churna	2gm	Luke warm water	15 days
Chirayata Chirna	3 gm HS		

OBSERVATION-

Table : 2 (Showing Liver Function Test Report Before and After)

Liver function test	Before treatment	After treatment
S .Bilirubin total	1.0mg/dl	0.78 mg/dl
Direct Bilirubin	0.23mg/dl	0.24 mg/dl
Indirect Bilirubin	0.77mg/dl	0.54 mg/dl
SGPT	104.4 U/L	36.2 U/L
SGOT	87.6 U/L	33.1 U/L
Alkaline phosphate	95.2 U/L	85.9 U/L
Total Serum protein	6.9 g/dl	6.5 g/dl
Serum Albumin	3.8 g/dl	4.0 g/dl
Serum Globulin	3.10 g/dl	2.50 g/dl
A/G ratio	1.23 g/ dl	1.60 g/dl

Report of liver function test Before treatment and After Treatment -


CENTRAL PATHOLOGY LAB.
DEPT. OF ROG & VIKRITI VIGYAN
POST GRADUATE INSTITUTE OF AYURVED
DR. S.R. RAJASTHAN AYURVED UNIVERSITY, JODHPUR

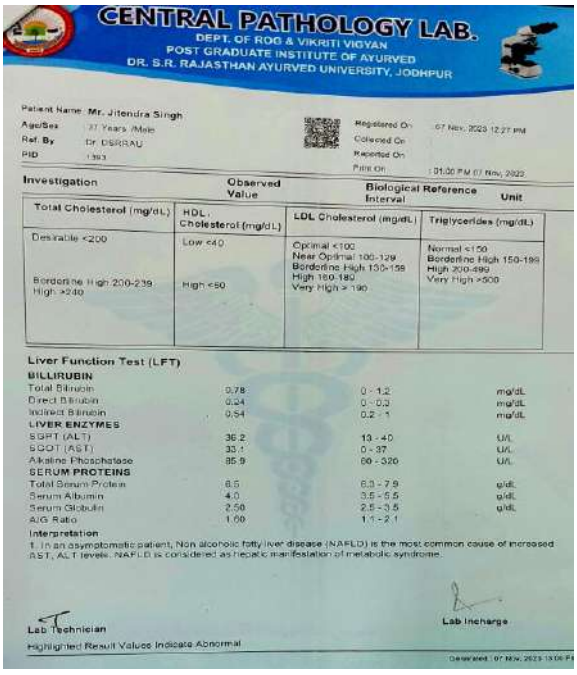
Patient Name: Mr.Jitendra Singh
Age/Sex: 37 Years /Male
Ref. By: Dr. DSRRAU
PID: 1237
Registered On: 20 Oct, 2023 12:27 PM
Collected On:
Reported On:
Print On: 01:30 PM 20 Oct, 2023

Investigation	Observed Value		Biological Reference Interval	Unit
Liver Function Test (LFT)				
BILLIRUBIN				
Total Bilirubin	1.0		0 - 1.2	mg/dL
Direct Bilirubin	0.23		0 - 0.3	mg/dL
Indirect Bilirubin	0.77		0.2 - 1	mg/dL
LIVER ENZYMES				
SGPT (ALT)	104.4	High	13 - 40	U/L
SGOT (AST)	87.6	High	0 - 37	U/L
Alkaline Phosphatase	95.2		60 - 320	U/L
SERUM PROTEINS				
Total Serum Protein	6.9		6.3 - 7.9	g/dL
Serum Albumin	3.8		3.5 - 5.5	g/dL
Serum Globulin	3.10		2.5 - 3.5	g/dL
A/G Ratio	1.23		1.1 - 2.1	

Interpretation

1. In an asymptomatic patient, Non alcoholic fatty liver disease (NAFLD) is the most common cause of increased AST, ALT levels. NAFLD is considered as hepatic manifestation of metabolic syndrome.
2. In a patient with Chronic Liver disease, AFP and Des-gamma carboxyprothrombin (DCP)/PIVKA II can be used to assess risk for development of Hepatocellular Carcinoma.
3. In most type of liver disease, ALT activity is higher than that of AST. exception may be seen in Alcoholic Hepatitis, Hepatic Cirrhosis, and Liver neoplasia. In a patient with Chronic liver disease, AST:ALT ratio>1 is highly suggestive of advanced liver fibrosis.

Lab Technician
Lab Incharge
Highlighted Result Values Indicate Abnormal
Generated : 20 Oct, 2023 13:30


CENTRAL PATHOLOGY LAB.
DEPT. OF ROG & VIKRITI VIGYAN
POST GRADUATE INSTITUTE OF AYURVED
DR. S.R. RAJASTHAN AYURVED UNIVERSITY, JODHPUR

Patient Name: Mr. Jitendra Singh
Age/Sex: 37 Years /Male
Ref. By: Dr. DSRRAU
PID: 1393
Registered On: 07 Nov, 2023 12:27 PM
Collected On:
Reported On:
Print On: 01:30 PM 07 Nov, 2023

Investigation	Observed Value		Biological Reference Interval	Unit
Total Cholesterol (mg/dL)	HDL Cholesterol (mg/dL)		LDL Cholesterol (mg/dL)	Triglycerides (mg/dL)
Desirable <200	Low <40		Optimal <100 Near Optimal 100-129 Borderline High 130-159 High 160-189 Very High >190	Normal <150 Borderline High 150-199 High 200-499 Very High >500
Borderline High 200-239 High >240	High <60			
Liver Function Test (LFT)				
BILLIRUBIN				
Total Bilirubin	0.78		0 - 1.2	mg/dL
Direct Bilirubin	0.24		0 - 0.3	mg/dL
Indirect Bilirubin	0.54		0.2 - 1	mg/dL
LIVER ENZYMES				
SGPT (ALT)	36.2		13 - 40	U/L
SGOT (AST)	33.1		0 - 37	U/L
Alkaline Phosphatase	85.9		60 - 320	U/L
SERUM PROTEINS				
Total Serum Protein	6.5		6.3 - 7.9	g/dL
Serum Albumin	4.0		3.5 - 5.5	g/dL
Serum Globulin	2.50		2.5 - 3.5	g/dL
A/G Ratio	1.60		1.1 - 2.1	

Interpretation

1. In an asymptomatic patient, Non alcoholic fatty liver disease (NAFLD) is the most common cause of increased AST, ALT levels. NAFLD is considered as hepatic manifestation of metabolic syndrome.

Lab Technician
Lab Incharge
Highlighted Result Values Indicate Abnormal
Generated : 07 Nov, 2023 13:06

DISCUSSION-

In current study, Bhumyaamlaki possesses hepatoprotective, antiviral, antioxidant and anti-inflammatory activities.(10)(11)(12) Flavonoids and polyphenols are among the phytochemicals found in Bhumyaamlaki, which exert antioxidant and hepatoprotective effects. Avipattikar Churna is a herbo mineral compound formulation having clinical significance in the treatment of amalpitta. Majority of drugs in Avipattikar Churna are possessing Kattu, Tikta, Madhura Rasa, Laghu,Ruksha, Ushna Sheeta Virya, Madhura and Kattu Vipaka. The main ingredient of this Churna is Trivrut. It has Bhedana, Rechana, and Shothahara properties leading to Pitta Virechana and useful in Yakritdalyodara.(13)(14) Conch shell makes up Shankh Bhasma, which is recommended for digestive issue where Pitta vitiation is present beause it helps treat Pitta dosha related disorders. It is beneficial for ailments like stomach discomfort, gastritis, and diarrhoea. Sankh Bhasma mainly contains calcium, magnesium and iron. These ingredients are useful in hyperchlorhydria, colic and hepatosplenomegaly.Shankh Bhasma hepatoprotective qualities help treat jaundice, calm the liver, regulate bile secretion, and impacts on digestion related enzymatic activities.(15)(16)(17)(18) Tinduk Vati , this drug is used to decrease Vata dosha and to treat tremors in digital part of hands. Chandraprabha Vati, it is used in the management of metabolic syndrome and Prameha. The main ingredients in the formulation are Vacha, Bhunimba, Amruta, Haridra, and Pippalimoola, Amalki, Shunthi, Maricha, Haritaki, Vibhitaki, and Chitraka as well as Pippali. These components lessen the signs and symptoms of indigestion and stop the development of metabolic disorder so preserve the digestive systems normal functioning.(19) This ancient formulations of Ayurveda is victimization for hundreds of years with claimed effectively and safety in treatment of jaundice and alternative liver and skin disorders.(20) Kutaki a well-known medical plant, is used many different herbal drug formulations. Its attributes include Yakrutottejaka, Pittavirechaka, Deepan, Lekhan, Bhedan and Kaphpittahar.The bhedan property aids in the bodys detoxification. Yakrutottejaka characteristic enhances liver function by stimulating the liver. Glucosides including cucurbitacin, picrorrhizin, benetic acid, vanillic acid, and kutkisterol are found in picrorhiza root, and many of them also aid in lowering lipids levels, it has been reported that flavonoids , tritepenes, alkaloids and coumarinsare the ingredients which may possess the antioxidant and hepatoprotective effects.(21)(22)(23)

CONCLUSION-

Ayurvedic treatment was found to significantly improve clinical and objective parameters in the present case study. There is a remarkable improvement in SGPT and SGOT report and no any adverse effect noted in the patient with giving treatment. So, it has been demonstrated that Ayurvedic medicine is a safe, affordable, and effective way to treat alcohol Liver disease (Yakriddalyodar or Yakrid vridhi).

REFERENCES

1. Bruha R, Dvorak K, Petrtyl J. (2012). Alcoholic liver disease, World journal of hepatology, 27;4(3):81. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3321494/.
2. Davidson, Principle and practice of medicine, edited by Haslett Christopher, chilvers Edwin R.etal. Ninteenth edition, 2002; 866.
3. Davidson, Principle and practice of medicine, edited by Haslett Christopher, chilvers Edwin R.etal. Ninteenth edition, 2002; 867.
4. Shastri SB, editor. Yoga Ratnakar, Commentary by Vaidya Sri Laxmipati Shastri. Udara Rogachikitsa: Ver. 17. Varanasi: Chaukhamba Prakashan; 2009; 104.

5. Sharma R.K., Dash Bhagwan, Charak Samhita, Chakrapani,vol.3, chowkhamba Sanskrit series office, Varanasi, reprint edition, 2005; 523.
6. Acharya YT, editor. (2002). Charaka Samhita of Agnivesha, Chikitsa Sthana, Udara ChIikitsa, Chapter 16, verse 7, Rastriya Sanskrit sansthana; New Delhi: reprint,495.
7. Acharya YT, editor. (2002). Charaka Samhita of Agnivesha, Chikitsa Sthana, Udara ChIikitsa, Chapter 16, verse 10, Rastriya Sanskrit sansthana; New Delhi: reprint;495.
8. Acharya YT, editor. (2002).Charaka Samhita of Agnivesha, Chikitsa Sthana, Udara ChIikitsa, Chapter 13, verse 36, Rastriya Sanskrit sansthana; New Delhi: reprint;495.
9. PandeyGS, editor. (2004) Bhavaprakasha Nighantu of Bhavamishra, Guduchyadivarga 10, Choukhamba Bharti Acedemy,Varanasi, 422.).
10. Bhattacharjee R., Sil P.C. Protein isolate from the herb, Phyllanthus niruri L. (Euphorbiaceae), plays hepatoprotective role against carbon tetrachloride induced liver damage via its antioxidant properties. Food Chem. Toxicol. 2007;45(5):817–826. doi: 10.1016/j.fct.2006.10.029. [PubMed] [CrossRef] [Google Scholar]
11. Manjrekar A.P., Jisha V., Bag P.P., Adhikary B., Pai M.M., Hegde A., et al. Effect of Phyllanthus niruri Linn. treatment on liver, kidney and testes in CCl4 induced hepatotoxic rats. Indian J. Exp. Biol. 2008;46(7):514–520. [PubMed] [Google Scholar]
12. Venkateswaran P.S., Millman I., Blumberg B.S. Effects of an extract from Phyllanthus niruri on hepatitis B and woodchuck hepatitis viruses: in vitro and in vivo studies. Proc. Natl. Acad. Sci. U.S.A. 1987;84(1):274–278. doi: 10.1073/pnas.84.1.274. [PMC free article] [PubMed] [CrossRef] [Google Scholar]
13. . Sri Bhavamishra, Bhavaprakash Nighantu, Commentary by K C Chunekar, edited by G S Pandey, Choukamba Bharati Academy, Varanasi: Revised & Enlarged ed. 2010; p. 39-40.
14. . Sri Bhavamishra, Bhavaprakash Nighantu, Commentary by K C Chunekar, edited by G S Pandey, Choukamba Bharati Academy, Varanasi: Revised & Enlarged ed. 2010; p. 166
15. Bhatt AD, Bhatt NS Indigenous drugs and liver disease. Indian J Gastroenterol, 1996; 15: 63-67
16. Thyagarajan SP, Jayaram S,Gopalakrishnan V, Hari R, JeyakumarP, et al. Herbal medicines for liver diseases in India.J GastroenterolHepatol, 2002; 17: S370-S376.
17. Adewusi EA, Afolayan AJ A review of natural products with hepatoprotective activity. J MedPlants Res., 2010; 4: 1318-1334.
18. Navaneethan U, Venkatraman J Herbal drugs in liver disease: how safe are they? Eur JGastroenterol Hepatol, 2008; 20: 224-226.) .
19. Kulkarni DA. Rasa Ratna Samuchchya. 14th edition. New Delhi. Meharchand lachhman das publication, 1998; 94-95.
20. Singh, R., Gautam, N., Mishra, A., & Gupta, R.(2011). Heavy metals and living systems: An overview. Indian journal of pharmacology, 43(3), 246.).
21. Latha P, Suja S, et.al., Rajasekharan S, Pushpangadan P. Hepatoprotective effects of
22. Ixora coccinea flower extract on rats. J Trop Med Plant. 2004 ;4:33-8.
23. Suja S, Rajasekharan S, Pushpangadan P. Antihepatotoxic activity of Spilanthes ciliata. Pharm Biol. 2003 ;41:536-41.
24. . Suja S, Latha P, et.al. Assessment of hepatoprotective and free radical scavenging effects of Rhinacanthus nasuta (Linn.) Kurz in Wistar rats. J Nat Rem. 2004;4:66-72.

HOW TO CITE: Neeraj K. Pathak, Gyan P. Sharma, Achala R. Kumawat, Effective Ayurvedic Treatment For Alcohol- Related Liver Dieases- A Case Study, Int. J. of Pharm. Sci., 2024, Vol 2, Issue 2, 279-284. https://doi.org/10.5281/zenodo.10650349