

An ayurvedic management in Jalodara with special reference to alcoholic liver disease induced ascites: A case study

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Abstract

The term "Alcoholic Liver Disease" refers to the range of liver conditions caused by excessive alcohol intake, including fatty liver, alcoholic hepatitis, chronic hepatitis with liver fibrosis or cirrhosis and ascites. A 40-year-old male patient with alcoholic liver disease (ALD) visited the Kayachikitsa OPD complaining of *Udaravruddhi* (abdominal distension), *Agnimandya*, *Dourbalya* (generalised weakness), *Sakashthashwasana* (breathlessness), *Ubhayapadashotha* (oedema over the feet), as well as *Twaka Nakha Netra Mutra Pitata* (yellowish discoloration of the eyes, skin, and black urine). Treatment involves stopping drinking as well as reducing peripheral oedema and ascitic fluid volume. Ascites can relate to *Udaravyadhi* and successfully managed with *NityaVirechana* (Daily Purgation) and *Shamana Aushadhis* (Medicinal Treatment), providing notable improvements in dyspnea, anorexia, abdominal pain, and other symptoms. The outcomes were assessed by measuring liver functions through specific clinical features and laboratory parameters. Hence presenting this case is evidence to demonstrate the effectiveness of Ayurvedic treatment in ALD induced Jalodara.

Keywords: Alcoholic Liver Disease; Ascites; *NityaVirechana*; *Jalodara*; *Ksheerpana*

1. Introduction

According to *Vachaspati*, illnesses that manifest in the *Udara* are known as *UdaraVyadhi*, while illnesses that manifest in the abdominal cavity and cause abdominal distension are known as *UdaraRoga*.^[1] The acharyas of Ayurveda provided in-depth knowledge about *UdaraRoga*, which is equivalent to the current name Ascites. In *Udarapradesha*, fluid gathers between the *Saptatwacha* (seven layers of skin) and *Mamsa* (muscle).^[2] In this situation, when the *Aprakrutaaharapaka mala* is accumulating in the *Udara* and all the *Malaswaroopa* is leading to this *Ghoravyadhi* where *Mandagni*, plays a crucial part in the disease's expression. The three primary *Nidanas* are *Atiushnaamla rasa Sevana*, *Malinabhojana*, and *Mala Sanchaya*.^[3]

Jalodara can be correlated with Ascites due to similarity in their symptoms. Ascites is accumulation of fluid in the peritoneal cavity, Common cause of Ascites are hepatic cirrhosis, Viral hepatitis, Tubercular or any other bacterial infection, malignancy, cardiac failure, hypoproteinemia (Nephrotic Syndrome).^[4]

1.1. Treatment principles for *Jalodara*

- NidanaParivarjana (Avoidance of etiological factors)
- Nityavirechana- Patient of *Jalodara* should be given purgation therapy everyday.[5]
- '*Apamdosaharanyadaupraddhyatudakodare*' - At first the patient of *Jalodara* should be administered therapies which remove the defects of the liquid elements. For this purpose, patient should be given drugs having Tikshna

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properties and different types of Kshara mixed with Gomutra. Patient should be given Deepaniya (digestive stimulant) and Kaphaghnaahara. Gradually, the patient should be prohibited to take water and such other liquids.[6]

- Takra (butter milk) mixed with Trikatuchurna is beneficial in Jalodara.[7]
- Diet regimen- Patient should be made to fast after abdominal tapping then he should take Peya (thin gruel) without adding Sneha (fat) and Lavana (salt). Thereafter, he should take following diet for one year,
 - For first six months –Ksheerapana only (Milk diet).
 - For next three months - Peya+ Ksheera (milk).
 - For last three months - Cereals like ShyamakaorKordusha along with milk.

These are light for digestion and no salt should be given during this period.

In this case study efficacy of *NityaVirechana* along with *ShamanaChikitsa* are aimed to treat ALD induced Ascites with subjective and objective criteria. Here an effort was made to treat 40-year-old male with known case of Alcoholic Liver Disease induced *Jalodara* with special reference to Ascites by Ayurvedic management.

2. Material and methods

2.1. Case History

A 40-year male patient came to Kayachikitsa OPD of Sane Guruji Arogya Kendra, Malwadi, Hadapsar, Pune with following complaints *Udarvrudhi* (Distension in abdomen) for 1 month, *dourbalya* (Weakness) for 1 Month, *Sakashthashwasana* (Breathlessness) for 20 Days and *Kshudhamandya* (Anorexia) for 15 days, *Ubhayapadashotha* (oedema over feet) for 20 days along with yellowish discoloration of eyes, skin and dark urine, disturbed sleep as alcohol withdrawal symptoms.

2.2. History of past medical illness

Patient was chronic alcoholic that too consumption of 180 to 360 ml of alcohol per day for five days a week for 10 years and was said to be normal before two months gradually above symptoms started for which he consulted to physician and admitted to hospital there he was diagnosed as alcoholic liver disease induced Ascites and managed conservatively. But after few days to month patient again complaining same symptoms, so, for further treatment he came for Sane guruji Arogya Kendra, Pune which is an Ayurvedic Hospital.

2.3. Personal and Dietary History

- Diet- Non-vegetarian, Snacks, Fast Food During Alcohol.
- Frequency of Food - Irregular
- Appetite - Poor
- Sleep-Disturbed
- Addiction History-Chronic Alcoholic 10Yrs.

2.4. Ashtavidha Pariksha

Nadi (Pulse) was *Pittadhika Tridoshaja*, *Mala* (Stool) - once a day, hard in consistency and *Mutra* (Urine)- normal in frequency and Dark urine was observed. *Jihva* (Tongue) was *Sama* (coated) due to improper digestion. *Shabda* (Speech) was normal. *Sparsha* (Touch) was *Ruksha* (Dry), *Drika* (Eyes) – *Netra Pitavarna* (icterus in sclera). *Akriti* (appearance) was lean and thin.

2.5. Physical examination

Vitals were within normal range. No abnormality found in cardiovascular system, respiratory system, and central nervous system, per abdominal examination reveals

- Inspection-Generalized distention of abdomen – 104 cm
- Umbilicus-Transversely Stretched (Smiling)
- Dilated veins- veins are prominent on abdomen.
- Skin over the abdomen -smooth and glossy skin indicating distended abdomen
- Palpation- Non tender. spleen and liver are not palpable.
- Percussion- Shifting dullness present.

- Fluid Thrill Test – Positive.
- Weight – 60 Kg

2.6. Laboratory Investigations

Complete blood count (CBC):Haemoglobin of 10.2 gm/dL, MCV 108.7 cu micron, platelet count 113,410/cmm, white blood cell counts 6,200 /cmm, neutrophil count 70%, Haematocrit25%, RDW (Red cell distribution width) 15.5 %. Blood. Blood group is 'B' Rh positive.

Liver Function Test: Total Bilirubin- 12.0 mg/dl,Direct Bilirubin- 8 mg/dl, Indirect Bilirubin- 4 mg/dl, SGPT-68 IU/L, SGOT-128 IU/L, ALP- 106.

2.7. Treatment Protocol

As patient is known case of Ascites *Nidana Parivarjana*, *Shodhana* Chikitsa with *NityaVirechana* and only *Ksheerpana*(Milk) has been planned for the patient along with *ShamanaChikitsa*.

2.7.1. TotalDuration

3 months

2.7.2. Internal Drugs

- Nitya Virechana- Trivrutaaavleha[8]-2teaspoonful dailyearly morning at 4 am.
- Shamana Aushadhis- 1. Tab ArogyavardhiniVati 500 mg 2tablets three times a day [9]2. Punarnavasava daily 20 ml in ½ glass of koshnajalaintwicein a day.[10]

2.7.3. External Applications

- *Lepa-Hingu* and *ShunthiLepa*^[11]over abdomen for first 1 month.
- *Udara Patta bandhana*^[12]With *koshnaArkaPatra*for first 1 month.

2.7.4. Diet: Only Ksheerpana (Milk) for 6 months.^[13]

Patient was assessed after completion of one month and three months from starting of treatment. During all three-month alcohol intake was completely stopped.

3. Observations and results

Table 1 Effect of treatment

	Before Treatment	After 1 st follow up (after 1 month)	After 2 nd follow up (after 2 months)
Total Bilirubin	12 mg/dl	8.2 mg/dl	5.8 mg/dl
Direct Bilirubin	8 mg/dl	6 mg/dl	4.2 mg/dl
Indirect Bilirubin	4 mg/dl	2.2 mg/dl	1.6 mg/dl
SGPT	68 IU/L	55 IU/L	55 IU/L
SGOT	128 IU/L	102 IU/L	88 IU /L
Alk. Phosp.	106 IU/L	88 IU/L	80 IU/L
Abdominal Girth	104 cm	98 cm	92 cm
Weight	60 kg	59 kg	56 kg

In the first thirty days of treatment plan there was significant reduction in distension of abdomen, pedaloedema, breathlessness, Appetite improved, improvement in general condition of patient along with improvement in liver function test. After three month of treatment there was mild distension of abdomen and liver function test was markedly improved.

4. Discussion

The pathophysiology of Udara is mostly influenced by *Agnimandya*, which necessitates the vitiation of *Vata* and *Pitta* for fluid to accumulate in the peritoneal cavity. [14] Alcohol abuse is a major factor in the vitiation of *Agni*, liver injury, and the accumulation of fluid in the peritoneal cavity. As instructed by all *Acharyas* to *NityaVirechana* in *UdaraRoga* as '*NityamenamVirechayeta*' the patient was treated using an integrated Ayurvedic therapeutic method, including *Shodhana* and *Shamana* (Ascites). *Virechana*, a therapeutic purgation, is recommended for many ailments where there is severe *Pitta* vitiation, such as *Kamala* (jaundice related to the hepatobiliary system) and *Udara*. Due to *Virechana*'s four-fold effects on the eradication of *PittaDosh*, *RakthaPrasadanaVathanulomana*, and *Agnideepana*[15]. *Malasanchaya* and *Strotorodha* are the main causative factors for *samprapti* of *UdaraVyadhi* so *Virechana* performs the *Sampraptibhanga* of *UdaraVyadhi* and achieves the desired outcome.

4.1. Probable mode of action of drugs

Trivruttavlehais used in the treatment of liver and spleen disorders for *NityaVirechana* (daily purgation) as it contains *Trivrutta*[16] (*Operculinaturpethum*) as *Virechaka* drug. *Virechana* also helps in reduction of fluid from peritoneal cavity. So *Trivruttas* having *laghu*, *ruksha* properties and it is *Pitta-Kaphasanshodhaka* and supposed to be good *Rechakadravya* (having good purgative properties), its purgative properties are due to Turpethin glycosides in *Trivrutta*.

ArogyavardhiniVati with *Katuki*[17] as main ingredient is *Anulomaka* and *Saraka*. *Katuki* is *Pitta Rechaka* that helps in improving the function of *Ranjaka Pitta* and ultimately improves the quality of hemoglobin. *Katuki* has *Tikta Rasa* and *Hridya*, *Dipana*, *Bhedana* and *Jwaraghna Guna*. It relieves *Aruchi*, and *Udarashula* by its *DeepanaGuna*. *Bhedana* and *RukshaGuna* may help in chelating overloaded iron and prevent *Yakritvridhi*. Its hepatoprotective activity [18] maintain SGOT, SGPT and Alkaline Phosphate that may increase in this disease.

Punarnava[19] in *Punarnavasava* acts as *Mutrala* drug (diuretic) helps in reduction of excessive fluid from body. *Punarnavasava* is well known Hepato-protective medicine containing, *Triphala*[20], *Trikatu*[21], which helps in correction of vitiated *Agni*, *Punarnava*, *Gokshura*[22], having *mutrala* effect removes excessive fluid from body.

Dugdhapana / *Ksheerapana* (Milk) having *Balavridhikara*, *Sarvadhatuvridhikara* and *virechaka* properties it must be practised in *Udaravyadhi*. It improves *Bala* and improve *dhatukshaya* which is caused by *Tikshna*, *Ruksha*, *Ushnadravya* as to treat *Udara Vyadhi*.

Hingu[23] and *Shunthi*[24] are the *Tikshna*, *Ushnadravya* having *Vatashamana* properties on external applications which is used to prevent *Vataprakopa* due to *NityaVirechana*.

ArkaPatra[25] due to its *Tikshna* and *Ushnaguna* induces *MruduSswedana* and ultimately prevents *vataprakopa* caused by *virechana*, so, it is used as *Pattabandhana* (abdominal binder).

5. Conclusion

The causative factor responsible for the *Udaravyadhi* was excessive intake of alcohol which leads to reduced status of *Agni* and *Malasanchaya* in peritoneal cavity. *Udara* is *TridoshajaVyadhi* caused by *Strotodushti*, *Maladushti* and *MalaSanchaya*. [13] *NidanaParivarjana*, *NityaVirechana* (*ShodhanaChikitsa*), *ShamanChikitsa* (Palliative Therapy) is the main line of treatment helps to remove accumulated *doshas* from the body and helps in *Strotasashodhana* which ultimately leads to *Sampraptibhanga* of *UdaraVyadhi*. *Niranna*, *Nirjala*, *Nirlavanachikitsa* is proved to be very beneficial in this disease.

In this case study, with the help of above given ayurvedic treatment there was significant improvement in abdominal girth, appetite, strength, and reduction in weight. There is marked improvement in laboratory investigations too. All drugs show no any side effect during treatment course so it is safe to use and beneficial in alcohol liver disease induced *UdaraVyadhi*.

Key message

Alcohol induced *UdaraVyadhica* uses high morbidity and mortality among adult males. Quality of life hampers due to its chronic nature. Ayurvedic drugs are helpful to improve their quality of life.

Compliance with ethical standards

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Disclosure of conflict of interest

The authors declare no conflict of interest regarding the publication of this article.

Statement of informed consent

Informed consent was obtained from all individual participant included in the study.

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