REVIEW ARTICLE

Role of Kshira in the management of Jalodara (Ascites) - A Brief review

¹Ekta D. Patel, ²Shailly Maurya, ³Naoko Kamemori, ⁴T.S. Dudhamal

^{1,2,3} PG Scholar ⁴Associate Professor.

Dept. of Shalya Tantra, IPGT&RA, Gujarat Ayurved University, Jamnagar, India

ABSTRACT:

Jalodara is common *Udarroga* in today's area can correlate with ascities. Most common cause of ascites is liver dysfunction due to parenchymal changes which can be correlated with *Jalodara*. Lolimbaraja boldly stated that only medicines have limited role if *Pathya* is followed correctly. In *Samhitas Kshira* (milk) has been considered as a *Pathya-Ahara* for *Jalodara*. This review study was aimed to highlight the role of *Kshira* in the management of the *Jalodara*. For this the classical texts, other literature related to the subject, research papers and material available on the websites were referred to collect the data. In transudate type of ascites, it creates hypoproteinemia which leads to decrease osmotic pressure intra-vascularly so the accumulation of fluid is occur in peritoneal cavity. *Kshira* is a best *Jivaniya* and *Rasayan Dravya*. By menace of *Madhura rasa*, *Madhur Vipaka* & *Shita Virya Kshira* passes *Srishtavinamutra* effect that also act as diuretics and evacuation of collected waste product from the body it turns into detoxification. It also helps to improve the immunity of an individual by its *Guna*. *Kshira* is also called as complete food in Indian continent. Narration of *Kshira* as a *Pathya-ahara* in management of *Jalodara* seems having synergetic effect with the line of treatment as mentioned in classical text.

Keywords: Ayurveda, Ascites, *Jalodara*, *Kshira*, Milk

INTRODUCTION

The liver is a vital organ having a wide range of functions, including detoxification, protein synthesis, and production of enzymes necessary for digestion. As there is currently no way to compensate for the absence of liver function.^[1] Ascites is a gastroenterological term for an accumulation of fluid in the peritoneal cavity that exceeds 25 ml.^[2] It is one of the most common complication of liver dysfunction

which cause the remarkable damage to health and lives. End stage of most chronic liver diseases represents as hepatic cirrhosis, which can remain compensated for many years.^[3] Decompensated cirrhosis can be characterized by the development of major complications like jaundice, variceal haemorrhage through oesophageal varices, ascites or encephalopathy.^[4] Among these complications ascites is the most common. Approximately 50% of patients with compensated cirrhosis develop ascites over a period of 10

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*Corresponding Author:

Dr. Ekta D. Patel

PG Scholar. Dept. of Shalya Tantra, IPGT & RA, Gujarat Ayurved University, Jamnagar, India

Email : ekta2810patel@gmail.com

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years.^[5] Approximately 15% of patients with ascites die within the first 12 months after diagnosis and 44% with in first 5 years.^[6] In *Ayurveda*, ascites can be correlated with *Jalodara*, one of the *Udara Roga*. Among *Tridosha*, the *Prakupita Vata* (aggravated *Vata*) gets accumulated in *Udara* between *Twaka* (skin) and *Mamsa* (muscles tissue) leading to *Shotha* (swelling); this is being termed as *Jalodara* can be correlate with ascities.^[7] Along with the aggravated *Vata*, *Agni* (digestive fire) which is *Manda* (low) also involved in manifestation of *Jalodara*.^[8] Over eating, very hot, salty, spicy, acidic food, taking dry and impure diet, negligence of the treatment of severe diseases and suppression of natural urges are also the causative factors of *Jalodara*. Hence, there are multiple factors involved in the causation of *Jalodara*. In general *Ahara* (diet) significantly affect one's overall health. According to Acharya *Kashyapa* there is no medicine like the *Ahara* on the earth.^[9] This indicates the medicinal value of diet. In *Ayurveda Ahara*, *Nidra* and *Brahmacharya* are considered as three sub pillars.. For the management of *Jalodara* along with medical treatment and surgical procedures, diet restriction also plays an important role for early recovery. *Kshira* (milk) is described under the *Gorasa varga* (milk products) and *Pey Darvya* (liquid food). It is having a property like *Jivaniya* (increase vitality), *Balya* (Strengthening), *Bhruhania*, *Rasaniya* (increase rejuvenation power).^[10] In today's era milk is regarded as a complete food. It is a whitish liquid containing milk proteins, fats, lactose, and various vitamins and minerals. The nutritional value of milk is particularly high due to the balance of the nutrients that compose it [Table-1].^[11] So, here for the purpose of increasing *Agni* and to maintain nutritional status, *Kshira* is selected as a *Pathya ahara* (choice of food) along with *Ayurvedic* management. Aim & objectives of the Study was to evaluate the role of *Kshira* in the management of the *Jalodara* (Ascites).

METHODS

Classical texts along with available commentaries, other literature related to the subject, research papers, and information available on websites have been referred and critically analysed with the aim to review of role of *Kshira* in the management of *Jalodara*.

RESULT AND DISCUSSION

In transudate type of ascites, the hydrostatic pressure is increased and there is decrease of the osmotic pressure

intravascularly due to hypoproteinaemia which leads to extravascular increase of osmotic pressure along with increased lymphatic pressure. As a result of this, fluid inside the cell comes to the extracellular space thereby increases the collection of fluid in peritoneal cavity. Content of ascites fluid are: RBC (Red blood cell), WBC (White blood cell) from <100 to 5000 cell/mm³, high protein content >2.5 gm/dl.^[12] In *Jalodara* Charaka mentioned the use of *Nityavirechaniya Dravya* (routine use of laxatives). *Virechana* is a process which helps to eliminate *Vikrita Doshas* (visiated *Dosha*) through *Adhobhagharana* hence, both *Mutravirechaniya* (diuretics) and *Malvirechaniya* (purgatives) can be consider under this title. For break up the *Sanga* of all *Dosha* and remove the excessive fluid, *Virechana* is necessary. *Virechana* also decreases abdominal girth and edema by decreasing fluid in the abdominal cavity.^[13] *Mandagni* is the chief causative factor for *Jalodara*, hence for *Agnideepana* (increase the digestive fire) diet and water intake is restricted and the patient is kept only on milk diet. It works as *Nidana Parivarjana* (avoid causative factors).^[14] *Kshira* having properties like *Madhura Rasa* (sweet taste), *Mridu*(soft), *Slakshana Guna* (soft and unctuous nature), *Shita Virya* (cold potency), *Madhura Vipaka* and also having *Srishtavinamootra* property works as a diuretic^[15] and purgative. It helps to reduce the extracellular fluid from the cavity. *Kshira* is a best *Jivaniya* (increased vitality) and *Rasayan Dravya* (rejuvenating) which helps to increase the *Oja* (immunity). In contemporary medicine there is indication of usage of spironolactone and furosemide as a diuretic to decrease the fluid level by inhibiting aldosterone antagonist receptor, but this drug is having side effects like hyponatremia, painful gynecomastia and cause the hypotension.^[16] While the milk is having high amount of proteins helps to increase intravascularly protein amount ultimately increase intravascular osmotic pressure. This may happen as fluids is moves from low concentration to high concentration in the body due to osmotic gradient. Due to this, the fluid outside in the extracellular space travels into intracellular space thus the amount of ascites fluid in the peritoneal cavity is decreased. Milk also works as a diuretic which helps in excreting extra fluid from the body and treats hyponatremia. It is having good nutritive value which helps to nourish the whole body of person without intake of normal food which is not digestible due to mandhagni.

CONCLUSION:

Only milk as a diet that acts on root of pathology of ascites. So, narration of *Kshira* as a *Pathya-Ahara* in *Jalodara Chikitsa* seems having synergetic effect with the line of treatment as mentioned in classical text.

ABBREVIATIONS: Not Applicable

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Table 1. Average composition and distribution of milk proteins

Milk protein	Mean absolute (g / L)	Averages (g / L)
Crude protein	34	100
Protein	32	94
Insoluble proteins or whole casein	36	82
soluble protein	6	18
α -lactoglobulin	2.7	45
B-lactalbumin	1.5	25
Serum albumin	0.3	5
immune globulins	0.7	12
protein peptones	0.8	13
Non-protein nitrogen substances	2	6