



UNDERSTANDING JALODARA: ASCITES IN AYURVEDA – A COMPREHENSIVE ANALYSIS

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ABSTRACT

Jalodara is a disease afflicting Udakavaha srotas. In Ayurveda, Ascites aligns with the concept of Jalodara. Ascites, characterized by the accumulation of free fluid in the peritoneal cavity, is commonly observed in decompensated cirrhotic states. Despite contemporary medical treatments offering temporary relief, ascitic pathology remains largely unresolved. Ayurvedic approaches present a promising alternative for managing ascites, particularly through the lens of Jalodara, a subtype of Udara roga. According to Ayurveda, the management involves Nitya Virechana (purgative therapy), deepana-pachana (enhancing digestive fire), bala vridhhi (strengthening), and correction of hepatic and splenic functions, coupled with dietary regimens. Generalized abdominal distension, a hallmark of Udara roga, is attributed to imbalances in Saman vayu, Apana vayu, Pachak pitta, Ranjak pitta, and Kledaka Kapha, primarily stemming from Mandagni (weak digestive fire). Notably, the progression of Udara roga into Jalodara underscores the significance of addressing underlying factors. While liver dysfunction remains a leading cause of ascites, Ayurvedic principles emphasize the pivotal role of dietary discipline, with milk (Kshira) being advocated as a Pathya-Ahara (therapeutic food) for Jalodara. Integrating Ayurvedic strategies alongside conventional treatments may offer a holistic approach to managing ascites, providing both symptomatic relief and addressing underlying pathology.

KEYWORDS : Ayurveda, Udakavaha srotas, Udara roga, Jalodara, Ascites, Nitya virechana, Kshira.

INTRODUCTION

In Ayurveda, the concept of *Ashtamahagada* highlights eight formidable diseases, among which *Udara roga* holds prominence. *Udara roga* is characterized as a *Tridoshaja Vyadhi*, manifests as a disturbance involving all three doshas, leading to *mala prakopa* (accumulation of waste products) and *sanchaya* (accumulation) in the *udara pradesh* (abdomen). Within this abdominal region, vital organs including the *Amashaya* (stomach), *Yakrita* (liver), *Pleeha* (spleen), *Pittashaya* (gall bladder), *Agnashaya* (pancreas), and *Pakwashaya* (intestine) reside. The foundational cause of *Udara roga* lies in *Mandagni*, denoting impaired digestive fire, which results in *Ama*, the improper digestion of ingested food. This condition culminates in the manifestation of *Udara roga*. The cardinal symptom of this ailment is the generalized distension or enlargement of the abdomen. Vitiating of *Agni dosha* and subsequent *mala vridhhi* leads to the imbalance of *Prana*, *Agni*, and *Apana vayu*, culminating in the obstruction of the upward and downward channels of circulation. Consequently, *Jalodara*, a subtype of *Udara roga*, manifests as the accumulation of fluid between the layers of *twak* (skin) and *mamsa* (muscle tissue) in the abdominal region. This condition leads to a noticeable increase in abdominal girth, akin to the modern medical condition of Ascites.

The management of *Jalodara* in Ayurveda revolves around *Nidana parivarjana* (avoidance of causative factors), *Shodhana chikitsa* (purificatory therapy), *Shamana chikitsa* (palliative therapy), and *Shashtra karma* (surgical measures). Additionally, adherence to proper *Pathya-Apathya* (appropriate lifestyle and dietary guidelines) is crucial throughout the treatment process. Among the therapeutic modalities, *Nitya virechana*, a form of purificatory therapy involving regular internal cleansing, stands out as one of the most effective approaches in addressing *Jalodara*.

AIMS AND OBJECTIVES

AIM

To study the Ayurvedic treatment modalities and management strategies for effectively addressing *Jalodara*, focusing on restoring balance to the doshas and promoting overall health and well-being.

OBJECTIVE

- To discuss about *Jalodara* (Ascites) in details.



- To evaluate the significance of *Nitya virechana*, *Pathyapathya*, Role of *kshira*(milk) in the management of *Jalodara* (Ascites).

MATERIALS AND METHODS

Various Ayurvedic texts, academic journals, research papers, articles, and authentic websites are referred to study the ayurvedic concept of *Jalodara*. All principles and rules described in Ayurvedic Samhita are compared with modern medical literature to evaluate and elucidate the concept.

CONCEPT OF ASCITES

Ascites is derived from a Greek word "Askites" which means 'bag' or 'sac'. Ascites is a gastroenterological term for an accumulation of fluid in the peritoneal cavity that exceeds 25 ml. Abdominal swelling, a common manifestation encountered in clinical practice, can arise from a myriad of underlying conditions. Patients frequently report sensations of bloating or abdominal fullness, with a progressive increase in abdominal girth, evidenced by the need for larger clothing or belt sizes. This swelling can be attributed to the "5F" : Fat, Fetus, Flatus, Fluid, and Faeces. Among these, the accumulation of fluid within the abdominal cavity, known as ascites, often leads to significant abdominal distention and warrants further investigation.

Types of Ascites

Ascites are categorized into three grades :

Grade 1	Mild, detectable only on USG and CT scan.
Grade 2	Moderate, detectable with flank bulging and shifting dullness upon physical examination.
Grade 3	Severe, directly visible, and confirmed through the fluid wave/thrill test.

Pathogenesis

The pathogenesis of ascites involves a complex interplay of physiological mechanisms and pathological processes. Ascitic fluid accumulation can occur as either a transudate or an exudate, each with distinct underlying mechanisms.

Transudative ascites typically results from increased pressure within the hepatic portal vein, often exceeding 8 mmHg and commonly observed in conditions such as cirrhosis. In cirrhosis, liver dysfunction leads to portal hypertension, causing fluid to leak from the hepatic vasculature into the peritoneal cavity. Transudates are characterized by low protein levels (<30 g/L), low lactate dehydrogenase (LDH), high pH, normal glucose levels, and a sparse white cell count, typically fewer than 1 white cell per 1000 mm.

In contrast, *Exudative ascites* is actively secreted fluid due to inflammatory or malignant processes. Inflammation or malignancy disrupts the normal vascular permeability, allowing proteins and cellular components to leak into the peritoneal cavity. Exudates are characterized by high protein levels, elevated LDH, low pH (<7.30), decreased glucose levels, and a higher white blood cell count.

Clinically, the ascitic fluid-to-serum albumin gradient is a valuable measure for distinguishing between transudates and exudates. A difference of less than 1 g/dl (10 g/l) suggests an exudative process, while a higher gradient favours a transudative etiology.

Overall, understanding the pathogenesis of ascites is essential for accurate diagnosis and appropriate management of underlying conditions contributing to fluid accumulation in the peritoneal cavity.

Management of Ascites

The management of ascites involves several key strategies:

- Sodium Restriction:** Limiting sodium intake to 20-30 mEq/day helps reduce fluid retention in the body.
- Diuretic Therapy:** Oral diuretics, usually a combination of spironolactone and furosemide, promote urine production and decrease fluid accumulation.
- Water Restriction:** Water restriction is only necessary if persistent hyponatremia (low sodium levels) is present.
- Therapeutic Paracentesis:** Reserved for patients with tense ascites requiring rapid symptomatic relief, therapeutic paracentesis involves draining excess fluid from the abdominal cavity.
- TIPS (Transjugular Intrahepatic Portosystemic Shunt) :** It is an interventional radiologic technique that reduces portal pressure and maybe the most efficacious for treatment of patients with diuretic resistant ascites. This procedure consists of inserting a long metal needle from the right jugular vein into the hepatic vein. This is slowly becoming the standard of care in patients with diuretic-refractory ascites.

Overall, these interventions, including sodium restriction, diuretic therapy, and therapeutic paracentesis, form the standard medical management for ascites and are effective in approximately 95% of patients.



CONCEPT OF JALODARA

“*Yasya vata prakupitah twak mamsantaramasritah.*

Sotham sanjanayetam kukshavudaram tasya jayate” (Cha.Su.18/31)

Jalodara is a disease in which there is accumulation of fluid (*jala*) in between *twak*(skin) and *mamsa*(muscle tissue) in the *udara pradasha*.

Synonyms : *Dakodara, Udakodara, Jatodaka*

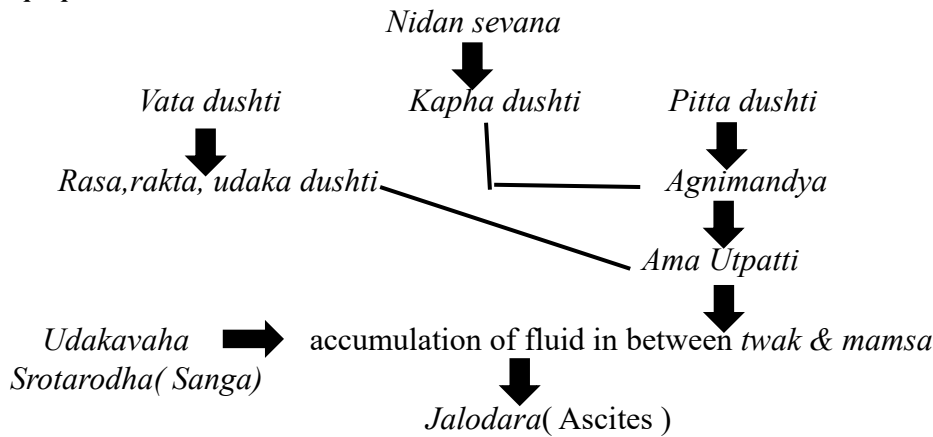
Nidana

All the diseases are manifested due to the disturbance of Agni.

Jalodara is caused by :

- *Mandagni* (sluggish digestion or low metabolism)
- *Ajeerna*(indigestion)
- *Malina anna sevana* (contaminated and incompatible food)
- *Mala sanchaya* (accumulation of unwanted wastes in the body cells and gut).

Samprapti



Excessive indulgence in causative factors such as *ati-snehpana* (excessive intake of oily or fatty foods), *ati-ambupana* (excessive consumption of liquids), *virrudhashana* (incompatible food combinations), and *samshana* (excessive consumption of spicy or hot foods) leads to the impairment of digestive fire, or *mandagni*. This results in incomplete digestion of food, leading to the formation of either improperly digested, toxic food substances known as *apakva rasa* or undigested food particles known as *Ama*.

In *udara roga*, the vitiated *Prana vayu* and *Apana vayu* disturb their normal functions, leading to obstruction (*avarodha*) in both the *urdhwa* (upper) and *adhomarga* (lower) pathways. Subsequently, the vitiated doshas accumulate in the interstitial space between the *twak*(skin) and *mamsa*(muscle tissue) of the abdomen, resulting in the manifestation of *Jalodara* (ascites).

Samprapti Ghatak

- **Dosha:** *Vata pradhan Tridosha –(Prana, Apana)*
- **Dushya:** *Rasa,, Udaka, Sweda*
- **Agni:** *Jatharagni, Dhatwagni*
- **Ama:** *Jatharagni Mandyajanya, Dhatwagni Mandyajanya*
- **Srotas:** *Rasavaha, Swedavaha, Ambuvaha*
- **Srotodusti:** *Sanga, Vimargagamana*
- **Udbhavasthana:** *Amashaya*
- **Sancharasthana:** *Udara, Twakmamsanthara*
- **Adhistana:** *Udara*
- **Roga Marga:** *Abhyanthara*
- **Vyadhi Swarupa :** *Chirakari*
- **Sadhyasadhya-** *Kasta Sadhya/Asadhya*

Purvarupa

- *Kshut nasha* - Low digestive strength
- *Swadu atisnigdha guru anna pachyate chirat* - Late digestion of food, which is sweet, excessively unctuous and heavy.



- *Bhuktam vidahyate sarva* - Vidaha of all food and drinks taken by the patient.
- *Jirna-ajirna na veti cha* - Inability to determine between the digestion and indigestion of food.
- *Sahate na ati sauhityam* - Inability to tolerate a little excess of food.
- *Isat sophascha padayo* - Slight swelling in the legs.
- *Bala kshaya* - Constant loss of strength
- *Alpapi vyayame swasa mruchhati* - Shortness of breath even with slight exercise.
- *Vridhhi purisha nichaya ruksha udavarta hetuka* - Excessive accumulation of stool because of unctuousness and udavarta.
- *Basti sandhau rug adhmana* - Pain and *adhmana*(distension) in the *basti-sandhi* (lower part of abdomen).
- *Vardhate patyate api cha-atanyate cha jatharamapi laghu alpa bhojanat* - Even if the patient takes food in small quantity, the size of his abdomen considerably increases. The patient experience bursting pain and the abdomen becomes considerably distended.
- *Raji Janma* – Appearance of network of veins.
- *Vali nasha* – Disappearance of folds in the abdomen increases due to swelling.

Rupa

- *Anannakāṅkṣā* (Anorexia)
- *Pippasa* (Excessive thirst)
- *Guda srava* (Serous discharge from anus)
- *Shoola* (Abdominal pain)
- *Swasa* (Dyspnoea)
- *Kasa* (Cough)
- *Dourbalya* (General debility)
- *Udaka druti kshoba samsparsha* (Fluid thrill)
- *Nanavarna raji sira santata* (Engorgement of vein over abdomen)

Avastha(Stages of Jalodara)

1. **Ajatodaka avastha**- Early stage of *Jalodara*, in which fluid has not yet collected – here the abdomen is red in colour, with gurgling sounds, and a network of veins is visible on the abdomen.
2. **Picchavastha**-This is second stage, in which serous fluid has started accumulating in abdomen.
3. **Jatodaka Avastha (Jalodara)**- Complete manifestation of *Jalodara* characterized by generalized abdominal distension. The skin over the abdomen is shiny and network of veins can be seen due to engorgement. Fluid thrill and Shifting dullness positive.

Upadrava

Chhardi ,Atisara, Tamaka swasa, Trishna, Sramajanya swasa ,Kasa, Hikka, Dourbalya, Parswashula ,Aruchi, Swarabheda, Mutrasanga.

Sadhyasadhya

Usually *Jalodara* is *Kasta sadhya* or *Asadhya* but if the patient is strong and early stage (*Ajatodaka Avastha*) is diagnosed which is *Achirotpanna, Anupadrava, Anudakaprapthi* then it can be considered as *Sadhya*.

- *Jalodara* with *Upadrava* is *Asadhya*.
- If the person is *Balavan, Jatambunavotthitham* is *Yathnena Sadhya*.

Chikitsa Siddhanta of Jalodara

- *Nidana parivarjana*
- All the types of *udara roga* are *tridoshaja -Tridosha samaka chikitsa*
- The main cause of *udara roga* is *mandagni-Deepana & laghu ahara sevana*

“Dosha atimatra upachayat srotamarga nirodhat

Sambhavatyudaram tasmat nityameva virechayet” (Cha. Chi. 13/61)

Udara roga is produced by excessive accumulation of doshas and obstruction to the *srotas*. To eliminate excess doshas and to clear *srota avarodha*, purgative therapy(*Nitya virechana*) should be given.

After purification by *virechana ,Peyadi samsarjana karma* should be given .*Dugdha sevana* is done for regaining the strength.

To treat Jalodara, Nirjala-Nirlavana-Niranna chikitsa is followed.

Apam doshaharanyadou pradadhyatdakodare

Mutranyuktani tikshnani vividha ksharavanti cha



Dipaniye kaphagnescha tamaharerupacharet

Dravevyascha udakadibhyo niyacheda anupurvashah (Cha. Chi. 13/93-94)

- Intake of fluid is restricted.
- *Gomutrakayukta tikshna kshara dravya* is advised.
- *Agni deepana* and *kaphahara chikitsa* is done.
- In case of excessive fluid - Ascites Tapping is done.

DISCUSSION

Nidana parivarjana

Poor dietary choices, characterized by the consumption of *Ushna* (hot), *Lavana* (salty), *Kshara* (alkaline), *Vidahi* (spicy), *Amla ahara* (sour), and *Viruddha* (incompatible) foods, can disrupt the body's equilibrium and predispose individuals to various health issues. Similarly, unhealthy lifestyle practices such as *Jalasevana* (excessive fluid intake), *Ashuchibhojana* (consumption of unclean or contaminated food), and *Vegadharana* (suppression of natural urges) can further exacerbate the imbalance of bodily doshas and weaken the body's innate resilience against diseases. Therefore, adhering to *Nidana Parivarjana* involves conscientiously avoiding these detrimental dietary and lifestyle habits to maintain optimal health and well-being.

Correction of Agni imbalance

The concept of *Agni* holds paramount importance in maintaining overall health and well-being. When the *Agni* is impaired, as a result of factors such as poor dietary choices and unhealthy lifestyle habits, it can lead to disturbances in *Jatharagni* (digestive fire) and *Dhatwagnimandya* (impairment of tissue metabolism). This impairment of *Agni*, known as *Mandagni*, is considered a primary factor in the manifestation of *Udara roga*.

To address *Mandagni* and restore optimal digestive function, the correction of *Agni* becomes crucial. This can be achieved through the use of *Vatanulomana Dravyas*, or substances that promote the movement of Vata dosha in the body. Examples of such substances include *Vaishwanara churna*, *Hingvastaka churna*, *Triphala Churna*, and *Haritaki with Gomutra*.

These formulations possess *deepana* (digestive stimulant) and *pachana* (digestive carminative) properties, which help to kindle and strengthen the digestive fire. Additionally, they support *Samprapti Vighatana* by aiding in the proper digestion and metabolism of food substances.

Srota sodhana

When *Srotasanga* occurs, it disrupts the normal flow of vital energies and bodily fluids, leading to various health issues, including *Udara roga*. To address this obstruction and restore the proper functioning of the channels, a therapeutic approach known as *Srota Sodhana* is recommended.

Srota Sodhana involves the cleansing and purification of the body's channels using specific therapeutic measures. In the context of *Udara roga*, the aim of *Srota Sodhana* is to remove the obstruction in the abdominal channels and promote the free flow of energies and fluids. This is achieved through the use of *Teekshna* (sharp), *Ushna* (hot), and *Kshara Yuktha* aushadhis (medicines which are alkaline in nature) that possess penetrating and cleansing properties.

These potent formulations help to dissolve and eliminate accumulated toxins, metabolic wastes, and obstructive substances from the channels, thereby restoring their normal function.

Apam Dosha Haranam

Removal of *Apya Dosha*, or accumulated toxins and impurities, from the body's channels. This purification process is typically achieved through the use of *Mutra Yukta Tikshna Ksharadi Aushadhis*, which are herbal formulations containing sharp and alkaline properties. These potent medicines help to dissolve and eliminate *Apya Dosha* from the body, facilitating detoxification and cleansing of the channels.

Furthermore, the presence of *Abaddha Asthira Kapha*, or stagnant and aggravated Kapha dosha, can exacerbate the condition of *Udara roga*. However, when combined with *Udaka* (water), this congested Kapha dosha becomes liquefied and more easily mobilized. The *Ruksha* (dry), *Tikshna* (sharp), and *Ushna* (hot) properties of *Mutra* (urine) act as catalysts in this process, breaking down the stagnant Kapha and enhancing the digestive fire, or *Agni*.



Nitya Virechana

In *Jalodara*, there are *Dosha atimatra upachayat* (excessive accumulation of Doshas) and *Srotamarga nirodhanat* (obstruction to the opening of srotas).

To address these imbalances, purgation therapy is recommended as a daily treatment regimen (*Nityameva virechayet*). This therapy aims to facilitate the elimination of accumulated toxins and restore the normal flow of bodily fluids.

For this purpose, specific medicines are administered:

- i. *Eranda taila* (castor oil) mixed with *cow's urine* or *cow's milk* is given daily for a duration of one or two months.
- ii. *Mahisha mutra* (buffalo's urine) mixed with *milk* is administered for a period of seven days.
- iii. *Gomutra haritaki prayoga*, a formulation combining *cow's urine* and *haritaki* (*Terminalia chebula*), is also advised.

Significance of Kshira(milk)

“Prayoganam cha sarvesamanu kshiram prayojayet

Doshanubandha raksharth bala sthairyarthameva cha” (Ch. Chi.13/193)

Milk plays a significant role in restoring vital capacity and balancing doshas. *Ushtra Dugdha* (camel milk) is specifically recommended for *Jalodara*, with *Godugdha* (cow milk) as an alternative. *Kshira* is a best *Jivaniya* and *Rasayana Dravya*. Its inherent properties of *Madhura rasa* (sweet taste), *Madhura Vipaka* (sweet post-digestive effect), and *Shita Virya* (cooling potency) contribute to its multifaceted benefits. *Kshira* exerts a *Srishtavinamutra* effect, acting as a diuretic and facilitating the evacuation of accumulated waste products from the body, thereby promoting detoxification. Milk is considered a complete and easily digestible food that promotes strength and vitality, particularly beneficial for patients recovering from drug-induced impairments.

Shastra Karma(Abdominal tapping)

Abdominal tapping is a therapeutic procedure where the left side of the abdomen 4 angula below the umbilicus is punctured using *Vrihimukha shastra* (a specialized instrument). The depth should be of the length of half finger. Subsequently, the accumulated fluid is drained out using *Nadi yantra* (a device for fluid drainage). Once the fluid has been successfully drained, the abdomen is securely bound with a cloth bandage to provide support and prevent further accumulation of fluid. The opening should later be applied with *taila* and *lavana* and later should be cauterized with fire.

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. The dietary regimen typically includes a gradual introduction of milk, starting with :

- ***Ksheeravritti*** (only milk) for **six months**.
- Followed by ***Peya*** (a rice-based recipe) and ***Ksheera*** (milk) for **three months**.
- Then transitioning to a whole diet comprising ***Jeernashyamaaka, Kodrava, Aalpasneha-lavana*** with ***Paya/ Phalaamla/ Jangala mamsa*** for the **remaining three months**.

Additionally, buffalo milk can be consumed for one week, and cereals should be avoided. *Camel milk* with *Trikatu* is advised for one month to reduce sodium retention and water retention. This dietary regimen helps in promoting strength, aiding recovery, and managing symptoms of *Jalodara*, while also considering individual variations in digestive capacity.

Takra

Takra (butter milk) mixed with *Trikatu curna* is beneficial in *Jalodara*.

Ayurvedic formulations mentioned in *Jalodara*(Ascites) :

<i>Rasa</i>	<i>Vati</i>	<i>Churna</i>	<i>Kwatha</i>	<i>Asava/Arista</i>	<i>Lepa</i>	<i>Rasayan</i>
<i>Jalodarari rasa</i>	<i>Arogyavardhini vati</i>	<i>Narayan churna</i>	<i>Punarnavadi kwatha</i>	<i>Kumaryasava Punarnavasava</i>	<i>Devadarvyadi lepa</i>	<i>Pippali vardhaman rasayan</i>
<i>Icehabhedi rasa</i>	<i>Abhaya vati Katuki vati</i>	<i>Hapushadya churna</i>	<i>Dashamooladi kwatha</i>	<i>Arjunarista Abhayarista</i>		<i>Haritaki rasayan</i>
<i>Varishoshana rasa</i>		<i>Patolamuladya churna</i>	<i>Punarnavastak kwatha</i>	<i>Rohitakarista</i>		<i>Shilajit rasayan</i>
<i>Naracha rasa</i>		<i>Punarnavadi churna</i>				<i>Guggulu rasayan</i>
<i>Hridayarnava rasa</i>						<i>rasayan</i>
<i>Yakritplihari rasa</i>						
<i>Loknath rasa</i>						

Single herb

Gokshura-Punarnava-Jaiphala-Katuki-Manjistha-Markandika-Makoya-Kasani-Mishi-Munakka

**Other medicaments include**

Punarnava mandura, Eranda taila with Gomutra, Eranda taila with Godugdha, Aswagandha churna with Gomutra, Narayan churna with takra.

PATHYA : (Ahara-vihara)

Rakta Sali- yava- mudga - kodrava- Jangala mamsa rasa- takra- ustra kshira- gomutra- madhu- draksha-sidhu-sura-dadima-trikatu- ajamoda- jeeraka- lasuna- ardraka- ela- patola- karavellaka-punarnava-shigru-haritaki-kulattha- upavasa- nitya kostha suddhi- udaravastrapatt bandhan

APATHYA: (Ahara-vihara)

Anupa mamsa-Patrasaka- pistanna- vidahi-guru anna-abhisyandi drava-tila- snehapana- usna/ lavana/ amla dravya- dushita jala-ati ambu pana- vyayama- divaswapna-dhoomapana-adhwagamana.

CONCLUSION

Udara roga in Ayurveda revolves around key principles such as Nidana Parivarjana (avoidance of causative factors), Agnivardhana (enhancement of digestive fire), Srotashodhana (cleansing of bodily channels), and Nitya Virechana (daily purgation therapy). When these therapeutic approaches are combined with Shaman Chikitsa (palliative therapy) and Shodhana Chikitsa (purificatory therapy), and supported by appropriate dietary and lifestyle modifications (Pathya), they synergistically promote Srota Sodhana, the purification of bodily channels, and elimination of doshas from the body. This comprehensive approach leads to rapid improvement in the condition of Udara roga. However, it is essential to acknowledge that managing Udara roga can be challenging due to its complex nature and potential complications.

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