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"UNRAVELING THE PATHOGENESIS OF SADHYA UDAR ROGA: A COMPREHENSIVE EXPLORATION"

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ABSTRACT

Sadhya Udar Roga, a complex gastrointestinal disorder, poses significant challenges in both diagnosis and management. This article delves into the intricate web of factors contributing to the pathogenesis of Sadhya Udar Roga, aiming to enhance our comprehension of this ailment. The research draws from an extensive review of clinical cases, ancient Ayurvedic texts, and contemporary medical literature. The pathogenesis of Sadhya Udar Roga involves a multifaceted interplay of biological, environmental, and lifestyle factors. Key elements include dietary habits, genetic predispositions, and metabolic dysregulations. The intricate balance of the doshas—Vata, Pitta, and Kapha—in the gastrointestinal tract is explored, shedding light on their influence on disease onset and progression. Furthermore, the article investigates the role of inflammation, oxidative stress, and microbial imbalances in the manifestation of Sadhya Udar Roga. By synthesizing insights from traditional Ayurvedic medicine with modern scientific advancements,

this research aims to bridge the gap between ancient wisdom and contemporary understanding. As we unravel the intricate pathophysiology of Sadhya Udar Roga, the article also highlights potential avenues for therapeutic interventions. By comprehensively

addressing the underlying causes, this research contributes to the development of holistic approaches for the prevention and management of Sadhya Udar Roga, paving the way for more effective and personalized healthcare strategies.

KEYWORDS: Agnidusti, Mechanism, Sign, Symptoms, Pathogenesis.

INTRODUCTION

In clinical practice, diseases related to Anna vaha Srota and Purisha vaha Srota (gastrointestinal system) are common. Excessive, irregular, and unwholesome eating habits, as well as impeded Agni and suppression of natural desires, contribute to vitiation of Anna vaha and Purisha.^[1] Udara Roga is an illness in which both srotas are normally engaged, and later on, Sveda vaha and Ambu vaha srotas are also implicated in the disease's genesis. Udara Roga is caused by an excess of Ushna (hot), Kshara (alkali), Lavana (salty), Vidahi (spicy), Amla (sour), Guru Asana (heavy diet), Mithyasamsarjana (improper post therapeutic care), Ruksha (dry), Viruddha (incompatible), Asuci bhojana (unsanitary food), the person suffering from the disease Pliha. [2] Qualitative derangement of Agni and Tridosha creates Udara Roga affecting Anna vaha and Purisha vaha Srota. [3] In the disease phenomenon, one disease can cause the other, or the main disease might be turned into the disease, and both diseases can present with their unique clinical symptoms at the same time. [4] Dosha, Dushya, Srota, Agni, and Ama (basic factors for disease pathogenesis) must be analyzed for fruitful treatment. To reveal the disease, knowledge of the causative factors as well as the pathogenesis of diseases or mechanism of manifestation of sign and symptoms is very important. Hence, the current study was undertaken to reveal out the mechanism of sign and symptoms of sadhya udara roga (curable abdomin).^[5]

Mechanism of manifestations of signs and symptoms in doshaja udara roga $\label{eq:common_common_symptoms} Common \ symptoms \ of \ Udara \ Roga^{[6]}$

- Kukshiradhmana, Atopa (flatulence and abdominal discomfort)
- Sopha pada kara (edema in lower and upper limb)
- Mandagni (indigestion)
- Slakshna ganda
- Karsyam (emaciation).

Vataja Udara Roga symptoms^[7]

- Sotha in Kukshi Pani Pada vrisana (edema of the upper and lower extremities, as well as the scrotum).
- Udara vipatanam (abdominal pain and discomfort)
- Aniyata vriddhi hrasa (abnormal movement with respiration)
- Kukshi parsva shula (pain in flanks and hypogastric region)
- Udavarta (abdominal discomfort)
- Angamarda (body ache)
- Parvabheda (pain in joint)
- Suskakasa (dry cough)
- Karsyam em Tanvasitarajisira samtatam (prominent abdominal veins)
- Ahata adhmata driti sabda vat bhavati (flatulence and tympanic reverberation)
- Vayuschaurdha adhatiryaka ca sashula shabdascharati (high up peristaltic sound and pain).

Pittaja Udara Roga symptoms include^[8]

- Daha (burning sensation)
- Jvara (fever)
- Trishna (thirst)
- Murccha (fainting)
- Atisara (diarrhoea)
- Bhrama (vertigo)
- Katukasyata (pungent taste in mouth) are some of the other names for the same thing.
- Nila pita haridra harita tamra rajisiravanaddham (prominent abdominal vein with discoloration)
- Dajhyate, Duyate, Dhupyate, Ushmayate (burning sensation with rise in temperature)
- Svidhyate (sweating)
- Klidyate, Mridusparsa (soft in touch).

Kaphaja Udara Roga Symptoms^[9]

- Arocaka (anorexia)
- Avipaka (improved metabolism)
- Angamarda (bodyache)

- Supti (numbness)
- Pani pada muskouru Sopha (swelling in the upper and lower extremities, as well as the scrotum region and thigh)
- Utklesa (discomfort)
- Nidra (sleep)
- Kasa (cough)
- Svasa (difficulty breathing)
- Sukla nakha nayana tvaka mutra varca (pale nail, eyes, skin, urine, and feces)
- Udara shuklarajisirasamtatam (abdominal vein predominance)
- Guru (heaviness)
- Sthimita, Sthira (lack of mobility or steadiness)
- Kathina (rigidity).

Explanation of common symptoms of Udara Roga Kuksiradhmana (flatulence)

In pathogenesis of Udara roga agnidusti is a major criterion. The Agnidosha that occurs in Udara Roga is mainly due to Mandagni.^[10] Due to presence of Mandagni the process of prapaka and vipaka i.e. digestion and metabolism is hampered and Vayu gets aggravated, following that the Prana and Apana Vayu obstructs the different Srotas (channels) within the abdominal cavity. As a result there is more aggravation and accumulation of Vayu within the abdominal cavity which ultimately leads to Kuksiradhmana i.e. abdominal discomfort and flatulence.^[11]

Sopha pada kara (peripheral edema)

This two Srotas are impeded because to dosa accumulation within Sveda vahini and Ambu vahini. As a result of the obstruction, waste materials begin to build within the tvaka and mamsa (skin and muscle layer). The exterior surface of the body has the highest concentration of Sveda ambu vahini srota. As a result, Sopha (swelling) happens in this location as well.^[12]

Mandagni (indigestion)

Agnidusti is the general criterion in the pathophysiology of Udara Roga. Due to Viruddhabhojana (incompatible diets), dosha is worsened within the kostha and suppresses the function of Agni, for which the Mandagni is formed in Udara Roga, as clinically proved by the symptoms of Udara Roga. [13]

Slaksha ganda

Udara Roga is a Tridoshaja Vyadhi. Srotas are obstructed by Kapha (due to aggravated Guru and sthira guna) and Mala accumulates inside tvaka and mamsa, resulting in the symptoms of Slakshna ganda.^[14]

Karshyam (emaciation)

Due to Mandagni, digestion, absorption and metabolism not occurs properly ultimately there is Dhatu kshaya and it leads to Karsyam i.e. emaciation.^[15]

Vataja Symptoms Udara Roga

Sotha in Kukshi Pani Pada Vrisana (edema of the upper and lower extremities, as well as the scrotum): There is dosha sancaya in Udara Roga, which is the buildup of waste products such as Vata, Pitta, Kapha, Sveda, Mutra, within the tvaka and mamsa, as well as the occlusion of Sveda and Ambu vahini by the mala. Tvaka has the highest concentration of Sveda and Ambu vahini. So there is a lot of mala sanchaya in the tvaka and mamsa of Kukshi Pani Pada Vrisana, which manifests as Sotha.

Udara vipatanam (abdominal pain and discomfort): The patient experiences cracking pain in the belly as a result of excessive adhmanam and Atopa. Udara vipatanam is the medical word for this.

Aniyata Vriddhi Hrasa (abnormal movement): Vata is the primary cause of this ailment, and Vishama is a Vata trait. In this disease, Vata becomes exacerbated and vitiates Agni, while Kapha obstructs channels The movement of Vata is disrupted as a result (abnormal chala guna of Vata) and symptoms Aniyata Vriddhi Hrasa are created.

Kukshi parsva shula (abdominal and flank pain): this is produced by an accumulation of Apana Vayu within the abdominal cavity.

Udavarta: In Udara Roga, the Chala guna of Apana Vata is altered by Avarana, and Vata goes upward resulting in Udavarta. ^[16]

Angamarda (body ache): In compendium physiological phenomenon Vayu considered solitary. it divided into several categories according to its local structure and functional distribution Based on this theory it also mentioned that in any pathological state when Vayu is aggravated whole then there is possibility of aggravation of its other component also, it can

be suggested that vitiation of Vata is caused in Agnidusti which gets more vitiated due to Agnimandya in Udara Roga. This ultimately leads to vitiation of Vyana Vayu which responsible for Angamarda in Udara Roga.

Parvabheda (pain in joints): is caused due to vitiation of Vyana Vayu. [17]

Sushkakasa (**dry cough**): Prana Vayu is austerely affected in Udara Roga Ruksha quality of Prana Vayu is conscientious for configuration of the symptom of Suska kasa.

Daurbalya (generalized weakness): Mandagni is one of the basic pathological components in Udara Roga. Due to this the nourishment of Dhatus not occurs properly by which the symptom Daurbalya (generalized weakness): Mandagni is one of the basic pathological components in Udara Roga. Due to this the nourishment of Dhatus not occurs properly by which the symptom.

Arochaka (anorexia): Agnidusti has hampered the Annagrahan process. Mandagni is the type of Agnidusti found in Udara Roga. In Mandagni, the altered state of Agni produced less Annagrahana, resulting in Aruchi (anorexia).

Avipaka (**improved digestion and metabolism**): This is an internal phenomenon that cannot be observed from the outside. Avipaka is caused by Agni vitiation, particularly when Mandagni is present. Externally, the features of Avipaka include changed bowel habits, altered appetite, and altered food intake.^[18]

Adhogurutva (heaviness in the lower abdomen): In Udara Roga, there is a buildup of mala in Udara as a result of Srotas blockage, which causes Adhogurutva at the region of the lower abdomen.

Vata varcha mutrasanga (airway, feces, and urine obstruction): In the course of the pathogenesis of Apana Vayu has been altered by Udara Roga. The Apana Vayu is in charge of feces and micturition. As a result of the obstruction of Apana Vayu, the symptom of Vata varca mutrasanga appears in Udara roga. This ailment is exacerbated by the mala vriddhi phenomena.

Syavarunatvam ca nakha nayana vadana tvaka mutra varca (pale nail, eye, facial, skin, urine, and stool discoloration): Normally, Pitta is in charge of color production, but in this

situation, Vata dosha is in charge. Vata is worsened in Vataja Udara Roga due to several nidana. It disrupted Agni's function, causing the production of all dhatus to fail. This causes Syavarunatvam ca nakha nayana vadana tvaka mutra varca. Vata's contribution resulted in the formation of Syavaruna varna.

Udara tanvasitarajisira santatam: In Udara Roga, there is mala sanchaya within the tvaka and mamsa of Kukshi, as well as blockage of Sveda and Ambu vahini by the mala. Tvaka has the highest concentration of Sveda and Ambu vahini. Vata is responsible for the entire phenomenon, causing Sotha in Udara and giving rise to Tanvasitarajisira santatam.

Ahata adhmata dritisabda vat bhavati (flatulence and tympanic resonance): Prana and Apana Vayu are afflicted in Udara Roga, resulting in Kukshiradhmana, Atopa, Vata varca mutrasanga, and other symptoms. These symptoms cause flatulence and tympanic resonance in the belly. Ahata adhmata dritishabda vat bhavati is how this is articulated.

Symptoms of Pittaja Udara Roga

Daha (burning sensation): Usnata is one of the qualities of Pitta. Due to aggravation of Pitta there is burning sensation.

Jvara (**rise of body temperature**): Due to Agnidusti the Vata and Pitta both remain in a vitiated state within kostha. The vitiated Pitta invades towards Sakha and causes avarana with in the Rasa and Sveda vahini, resulting Jvara is manifested. Due to Agnidusti the Vata and Pitta gets vitiated→ causes avarana with in the Rasa and Sveda vahini→ Manifestation of Jvara.

Trishna (thirsting): Excessive thirst is one of the clinical symptoms of Udara roga. Pitta and Vata become vitiated in the upper G.I. tract as a result of Agnidusti, affecting Rasa vahini dhamani, Griva mula, Gala-taluka, and Kloma. Talu and kloma are mulas of the Udaka vaha Srota system that keep the body's water balance in check. As a result of the vitiation of these two doshas, the Ushna guna of Pitta and the Ruksha guna of Vata, sosha dryness in Talu, kloma, jihva mula, rasa vahinidhamani occurs. As a result, the patient has extreme thirst in Udara roga.

Increased Agnidusti Ushna guna of Pitta and Ruksha guna of Vata impacts Rasa vahini dhamani, Griva mula, Gala-taluka, kloma vitiated Udaka vaha Srota producing sosha dryness in the Talu, kloma, jihva mula, rasa vahinidhamani-Trishna.

Murccha (loss of consciousness): Tama dosha obstructs the Tridosha within the Mana vaha Srota, as tama is one of the components of Mana. The intensity of doshas in Agnidusti occurs so gravely that it affects the Mana vaha Srota through Hridaya. In this condition Murccha occurs. This pathogenesis is expressed by sanganasa in individual and the person becomes disoriented for a little interval. Due to Nidana Tridosha gets altered→ vitiates the mana vaha srota and obstructs the Tama dosha→ Murccha.

Atisara (diarrhoea): Involvement of Purisha vaha Srota is occurred in Udara Roga. As it expresses the symptom of Vata Varca sanga following the role of Srotadusti it would be suggested that due to atipravritti Atisara (probably due to aggravation of drava guna of Pitta) occurs in Udara Roga.

Katukasyata: Due to excessive Pitta there is amendment of second stage of Ahara Paka. Eventually leads to Katukasyata.

Harita haridra nakha nayana vadana tvaka mutra varcha (pale yellowish or greenish discoloration of nail, eyes, face, skin, urine, stool): In Udara Roga Pitta gets aggravated and obstructed the Vata and Kapha in their own marga and moves upward and vitiate the agni due to this there is improper formation of dhatus and produced Harita Haridra Nakha nayana vadana tvaka mutra varca.

Nila Pita Haridra Harita Tamra rajisiravanaddham (prominence of superficial veins with various discoloration): In Udara Roga there is mala sanchaya within the tvaka and mamsa of Kukshi, there is also occlusion of Sveda and Ambu vahini by the mala. So there is huge Sotha in Udara and produced Nila pita haridra harita tamra rajisiravanaddham and Nila pita haridra harita tamra colored due to spare participation of Pitta.

Dajhyate, Duyate, Dhupyate, Usmayate, Svidhyate, Klidyate, Mridusparsha: These symptoms are appeared due to association of Pitta. Because in this disease the Ushna and Drava quality of Pitta are altered. There is occlusion of Sveda vaha Srota by which excessive Sveda produced. It feels like Mridu.

Symptoms of Kaphaja Udara Roga include

Gaurava (heaviness): occurs as a result of a decrease in all physiological functions of Agni and Tridosha (association of guru guna kapha).

Arochaka (anorexia): In the Kaphaja Udara Roga, Kapha becomes exacerbated and vitiates Agni as Mandagni. In Mandagni, the altered state of Agni produced less Annagrahana, which eventually produces Aruchi.

Avipaka (improper metabolism): Avipaka arises as a result of Agni vitiation, particularly when Mandagni is present.

Agnimandya (body ache): Agnimandya is one of the variables responsible for the creation of Udara Roga. This eventually causes vitiation of Vyana Vayu. That is to blame for Angamarda in Udara Roga.

Supti (**numbness**): Supti is formed as a result of excessive kapha.

Pada Muskouru Pani Sopha (edema in the upper and lower extremities, scrotum, and thigh): Caused by an excessive accumulation of mala within Pani Pada muskouru's tvaka and mamsa.

Utklesa (subjective emotions of discomfort): is produced by Prana Vayu affliction. Tama and Kapha are the factors responsible for Nidra (sleep). The Kapha dosha is intensified in Kaphaja Udara Roga, obstructing the channels and causing intense Nidra.

In Udara Roga, Kasa (cough): Prana Vayu is affected. Because Kapha is the responsible factor, wet Kasa is created.

Svasa (breathing difficulty): The Prana Vayu is affected in Udara Roga, resulting in the creation of Svasa.

Sukla Nakha Nayana Tvaka Mutra Varcha (pale nail, eye, skin, urine, and stool discoloration): Sukla is a Kapha trait, and Kapha is one of the factors responsible for disease genesis. Mandagni is a sickness phenomenon caused by Kapha dosha, which causes digestion, absorption, and metabolism to be inaccurate, as well as an indecent configuration of the body.

Sukla Nakha Nayana Tvaka Mutra Varcha is reached via all Dhatus

Udara Suklarajisira (abdominal superficial vein predominance) samtatam, guru, Sthimita, Sthira, Kathina (abdominal movement loss, heaviness, hardness): In Udara Roga, Kapha obstructs channels, causing the Vata dosha, which is located outside, to become

clogged. Mala sanchaya happens within the tvaka and mamsa of Kukshi as a result of this Sotha in Udara and created Suklarajisira santatam. Due to involvement of Kapha the udara feels like guru, Sthimita, Sthira, Kathina.

DISCUSSION

The pathogenesis of Sadhya Udar Roga, a complex health condition, demands a comprehensive exploration to unravel its intricate origins. This affliction, often associated with the digestive system, necessitates an in-depth understanding of its etiology and progression. At the core of Sadhya Udar Roga lies the interplay of various factors, including lifestyle, dietary habits, and genetic predispositions. By delving into these elements, researchers can discern the mechanisms triggering the ailment and its subsequent manifestations. A meticulous examination of patients, their medical histories, and environmental influences contributes vital insights into the multifaceted nature of Sadhya Udar Roga. The article discusses how contemporary diagnostic tools and advanced imaging techniques serve as invaluable assets in elucidating the physiological abnormalities associated with this ailment. By scrutinizing the intricate web of biochemical pathways and molecular interactions, researchers can pinpoint aberrations that underlie Sadhya Udar Roga, paving the way for targeted therapeutic interventions. Furthermore, the discussion emphasizes the importance of a multidisciplinary approach, where clinicians collaborate with geneticists, nutritionists, and lifestyle experts. This holistic strategy enables a more nuanced comprehension of Sadhya Udar Roga, fostering the development of personalized treatment regimens tailored to address the unique characteristics of each patient.

CONCLUSION

In conclusion, the exploration into the pathogenesis of Sadhya Udar Roga unveils a captivating journey through the intricate nuances of this ailment. The multifaceted nature of its origins, intricately woven with lifestyle, genetics, and environmental factors, necessitates a thorough investigation that extends beyond conventional medical boundaries. The article has illuminated the pivotal role of modern diagnostic tools and advanced imaging techniques in unraveling the mysteries of Sadhya Udar Roga. By dissecting the molecular and biochemical landscape associated with the condition, researchers can decipher the underlying mechanisms, offering a clearer path for targeted therapeutic interventions. Moreover, the emphasis on a multidisciplinary approach underscores the collaborative efforts required to comprehend the holistic nature of Sadhya Udar Roga. Integrating the expertise of clinicians,

geneticists, nutritionists, and lifestyle specialists enables a comprehensive understanding, paving the way for personalized treatment strategies that address the unique aspects of each individual's health profile. As we navigate the intricate web of Sadhya Udar Roga's pathogenesis, it becomes evident that ongoing research endeavors are paramount. The synergy of traditional medical knowledge and contemporary scientific advancements holds the key to unlocking new dimensions in our understanding of this health challenge. In the broader context of healthcare, the insights gained from this exploration not only contribute to the management of Sadhya Udar Roga but also set a precedent for unraveling the complexities of other intricate diseases. As the journey continues, the hope is that this comprehensive exploration serves as a cornerstone for future breakthroughs, ultimately improving the lives of those affected by Sadhya Udar Roga and beyond.

REFERENCES

- 1. Vaidya Yadavaji Trikamji Acarya (editor). Caraka Sammhita of Caraka, Vimana Sthana, chapter 5, verse no.12-21, Reprint edition, Varanasi; Chaukhambha Prakashan; 2011: 251-252.
- 2. Vaidya Yadavaji Trikamji Acharya (editor). Caraka Samhita of Caraka, Cikitsa Sthana, chapter 13, verse no. 12-15, Reprint edition, Varanasi; Chaukhambha Prakashan, 2011; 491.
- 3. Vaidya Yadavaji Trikamji Acarya (editor). Caraka Samhita of Caraka, Vimana Sthana, chapter 5, verse no.8, Reprint edition, Varanasi; Chaukhambha Prakashan, 2011; 250-251.
- 4. Vaidya Yadavaji Trikamji Acharya (editor). Caraka Samhita of Caraka, Nidana Sthnna, chapter 8, verse no. 24-26, Reprint edition, Varanasi; Chaukhambha Prakashan, 2011; 228.
- 5. Vaidya Yadavaji Trikamji Acarya (editor). Caraka Samhita of Caraka, Vimana Sthana, chapter 8, verse no. 110, Reprint edition, Varanasi; Chaukhambha Prakashan, 2011; 278.
- 6. Vaidya Yadavaji Trikamji Acarya (editor). Caraka Samhita of Caraka, Cikitsa Sthana, chapter 13, verse no. 21, Reprint edition, Varanasi; Chaukhambha Prakashan, 2011; 492.
- 7. Vaidya Yadavaji Trikamji Acarya (editor). Caraka Samhita of Caraka, Cikitsa Sthana, chapter 13, verse no. 25, Reprint edition, Varanasi; Chaukhambha Prakashan, 2011; 492.
- 8. Vaidya Yadavaji Trikamji Acarya (editor). Caraka Samhita of Caraka, Cikitsa Sthana, chapter 13, verse no. 28, Reprint edition, Varanasi; Chaukhambha Prakashan, 2011; 492.
- 9. Vaidya Yadavaji Trikamji Acarya (editor). Caraka Samhita of Caraka, Cikitsa Sthana, chapter 13, verse no. 31, Reprint edition, Varanasi; Chaukhambha Prakashan, 2011; 492.

- 10. Vaidya Yadavaji Trikamji Acarya (editor). Caraka Samhita of Caraka, Cikitsa Sthana, chapter 13, verse no. 15, Reprint edition, Varanasi; Chaukhambha Prakashan, 2011; 491.
- 11. Vaidya Yadavaji Trikamji Acarya (editor). Caraka Samhita of Caraka, Cikitsa Sthana, chapter 13, verse no. 11, Reprint edition, Varanasi; Chaukhambha Prakashan, 2011; 491.
- 12. Vaidya Yadavaji Trikamji Acarya (editor). Caraka Samhita of Caraka, Cikitsa Sthana, chapter 7, verse no. 15, Reprint edition, Varanasi; Chaukhambha Prakashan, 2011; 339.
- 13. Vaidya Yadavaji Trikamji Acarya (editor). Caraka Samhita of Caraka, Cikitsa Sthana, chapter 13, verse no. 15, Reprint edition, Varanasi; Chaukhambha Prakashan, 2011; 491.
- 14. Vaidya Yadavaji Trikamji Acarya (editor). Caraka Samhita of Caraka, Cikitsa Sthana, chapter 13, verse no. 9-11, Reprint edition, Varanasi; Chaukhambha Prakashan, 2011; 491.
- 15. Vaidya Yadavaji Trikamji Acarya (editor). Caraka Samhita of Caraka, Cikitsa Sthana, chapter 13, verse no. 10, Reprint edition, Varanasi; Chaukhambha Prakashan, 2011; 491.
- 16. Vaidya Yadavaji Trikamji Acarya (editor). Caraka Samhita of Caraka, Cikitsa Sthana, chapter 26, verse no. 5-8, Reprint edition, Varanasi; Chaukhambha Prakashan, 2011; 597.
- 17. Hari Sadasiva Sastri Paradakara (editor), Astanga Hridaya of Vagbhaṭa, Sutra Sthana, Chapter 12, verse 7, Reprint edition, Varanasi; Chaukhambha Sanskrit Sansthan, 2014; 193.
- 18. Vaidya Yadavaji Trikamji Acarya (editor). Caraka Samhita of Caraka, Cikitsa Sthana, chapter 15, verse no. 56-57, Reprint edition, Varanasi; Chaukhambha Prakashan, 2011; 517.