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ASSESSMENT OF AGNIDUSHTI IN GRAHANI DOSHA

Ayurveda

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ABSTRACT

Grahani dosha is caused due to impaired *Agni*. The primary role of the *Grahani* is to retain undigested food until it undergoes digestion and is then absorbed. When the *Grahani* function is disturbed, it disrupts the absorption process, leading to inadequate assimilation of essential nutrients. Hence, the present study was carried out with the aim to explore the occurrence of different types *of Agni* vitiation in the *Grahani*. To fulfill the aim a total of 86 patients displaying classical cardinal symptoms of *Grahani* were enrolled and subjected to a comprehensive assessment across various criteria. Upon statistical analysis of the gathered data, it became evident that patients exhibited *Agni* impairment, which consequently influenced the *Grahani*.

KEYWORDS

Grahani dosha, *Grahani,* Agni, Agni Dushti, Malabsorption syndrome, IBS

INTRODUCTION-

Ayurveda establishes a close-knit relationship between *Agni* and *Grahani*, where they are reliant on each other. The condition of *Agni* serves as an indicator of overall health. Any disruption in *Agni* function can give rise to a multitude of illnesses. Considering that *Grahani* serves as the dwelling for *Agni*, any disturbances in its structure or function can result in a compromised *Agni* state and vice versa. The concept of *Grahani* Dosha signifies the occurrence of such disturbances within the *Grahani*. *Acharya Charaka* has explained *Grahani* is located above the umbilical region and is supported and nourished by the strength of *Agni*[1]. *Acharya Sushruta* has explained as sixth *Kala* known as *Pittadhara Kala* situated between *Aamashaya* and *Pakwashya*[2]. *Grahani* performs a range of functions including collecting ingested food, holding, digestion, absorption, assimilation, and propelling action. It serves as the site for *Agni,* which resides within, supporting the digestion process. The role of *Grahani* is holding of incompletely digested food, ensuring proper digestion, assimilation, absorption, and excretion, facilitated by anatomical features like circular folds and villi that enhance the surface area. Additionally, its classical function involves propelling well-digested food toward the next stage for nourishment. Four functional states of *Agni* are based on predominant *Dosha* influences: (a) *Mandagni*, with suppressed Jatharagni due to kapha; (b) Tikshnagni, hyperactive Jatharagni due to pitta, facilitating rapid digestion; (c) *Vishamagni*, irregular Agni due to vata, leading to unpredictable digestion; and (d) *Samagni*, equilibrated Agni when tri doshas are balanced, ensuring consistent and harmonious digestion. *Mandagni* reflects subdued Jatharagni function impeding even modest food breakdown, Tikshnagni accelerates digestion causing intense hunger and potential discomfort, *Vishamagni* results in erratic digestion and associated issues due to *vata* influence..

AIMS AND OBJECTIVE-

- To assess different type of *AgniDushti (Mandagni, Teekshanaagni, Vishamagni)* in *Grahani Dosha.*

MATERIALS AND METHODS-

Selection of patients- A total of 86 patients with classical features of *Grahani*
were randomly selected for this study, regardless of their sex, religion, occupation, etc.

Type of study-
Clinical observational study
The study has been approved by Institutional Ethical Committee (UAU/RC/IEC/2022/PG/1-67) and is registered to CTRI (CTRI/2022/07/044156)

Inclusion Criteria-
- Male or female between the age group of 18 -60 years
- Patients fulfilling the criteria of symptoms of *Grahani.*
- Patients taking proper diet previously.

Exclusion Criteria-
- Patients below 18 years and above 60 years of age.
- Patients suffering from chronic diarrhoea.
- Known case of chronic debilitating diseases like Diabetes mellitus, Renal disorders, Liver disorders, HIV, tuberculosis, thyroid disease etc.

Criteria For Assessment-
SUBJECTIVE ASSESSMENT- Questionnaire for assessment of *Agni.*

METHOD OF DATA COLLECTION-
The data was collected by two methods: By personal Observations and questionnaires.

Table- 1 Agni Assessment Questionnaire [3]

QUESTIONS	Mandagni	Vishamagni	Samaagni	Teekshnagni
Amount of diet as compared to previous non diseased state	Less	Uncertain	Same	More
Ability to digest meal	Unable to digest even small quantity	Varying	Able to digest all sort of food consumed in appropriate quantity	Able to digest all food items even in large quantity
Desire to eat after having meal	After about 8 hours	Keep varying	6-8 hours after having meal	Before 6 hours
Effects observed on digestion due to disturbance in lifestyle (irregular eating habits, disturbed sleep, emotional disturbance)	Digestion disturbed due to slight variation in lifestyle	Disturbed due to appreciable disturbance	Not affected	Initially disturbed then get adapted
Frequency of meal in a day	< 2 meals	1-4 meals	2-3 meals	>3 meals
Ability to bear hunger	>2 hours	Sometimes bearable (up to 1 hour) sometimes unbearable (<1 hour)	1-2 hours	Difficult to bear

Capacity to digest heavy meals on basis of time	longer than normal	Varying	Normal time	quickly than normal
Bowel habit	Tendency for constipation	Consistency sometimes hard sometimes soft	Normal	Tendency for loose stool
Eating habits	Generally, have food after scheduled time	Have food either before or after the scheduled time	Have food exactly on time	Before scheduled time
Feeling after complete digestion	Heaviness in abdomen and body	Occasionally feel slight heaviness	Mostly feel lightness	Feel lightness quite early after having meal
Feelings that develop after looking at food items you like	Do not feel like eating even if hungry	Sometimes feel like eating and sometimes do not	Feels like eating	Feels like eating any food item irrespective of whether like it or not
	- /11	- /11	- /11	- /11

Percentage of *Agnibala* –

Score obtained from individual *Agnibala* × 100
Total score of individual *Agnibala*(11)

Agni of the individual was considered on the basis of the highest percentage out of four types.

Grading For Status Of *Agni*-

Grading was given to the above questions from diminution to accentuation i.e., 1 for questions of *Mandagni*, 2 for questions of *Vishamagni*, 3 for questions of *Samagni* and 4 for questions of *Teekshnagni*.

Table No. – 2 Grading For *Grahani* Symptoms-

S.NO.	SYMPTOMS	GRADING	INTERPRETATION
1.	Muhurbadham Muhurdravam malapravruti	0	Normal
		1	1-3 times
		2	4-6 times
		3	7-10 times
2.	Udar Gaurav	0	No Heaviness
		1	Occasionally feels heaviness
		2	Frequently feels heaviness
		3	Mostly feels heaviness
3.	Aruchi	0	Normal desire for food
		1	Desire for food at least twice in a day
		2	Desire for food at least once in a day
		3	No desire for favourite food
4.	Ajeerna	0	Able to digest heavy food
		1	Occasionally prolonged after heavy meal
		2	Consistently prolonged after heavy meal
		3	Consistently prolonged after light meal
5.	Daurgandhit malapravruti	0	No foul smell
		1	Occasionally
		2	Frequently
		3	Mostly
6.	Apakwa malapravruti	0	Normal
		1	Occasionally sticky with foul smell
		2	Frequently sticky with foul smell
		3	Mostly sticky with foul smell
7.	Trishna	0	Rarely
		1	Occasionally
		2	Frequently
		3	Mostly

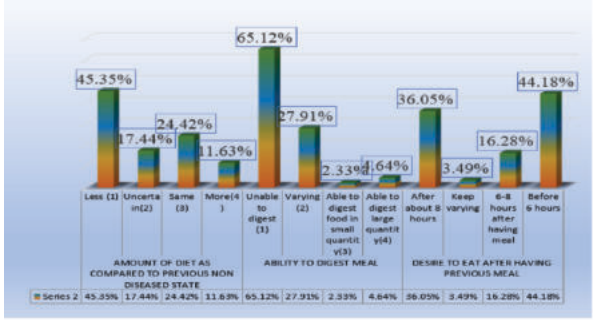
Statistical analysis-

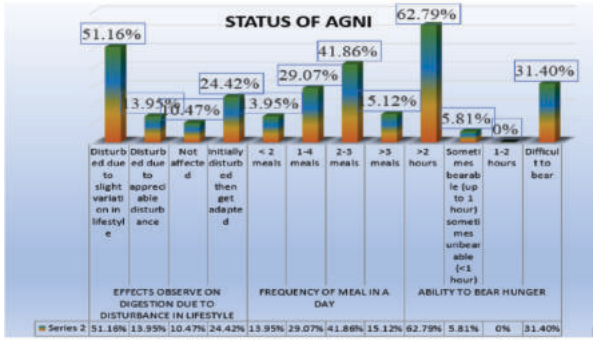
Karl Pearson correlation method was used to check correlation between two parameters and the obtained results were interpreted as- Strong relation- r => 0.8, Significant correlation- r= 0.3 to 0.7, Poor correlation-r=< 0.3, No relation r= 0

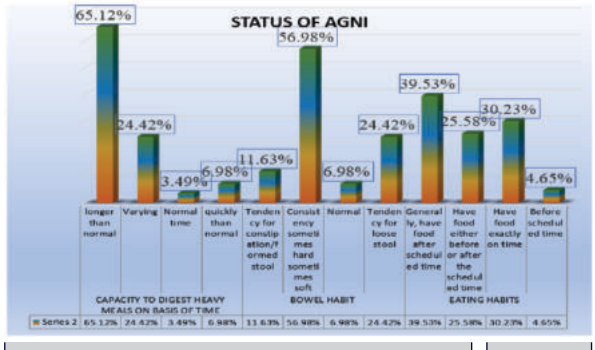
OBSERVATIONS-

The maximum number of patients i.e. 46.5% belonged to age group of 33-46 years, followed by 31.4% to 16-30 years, 22.1% patients belonged to 47-60 years age group. A clear pattern of male predominance was observed, with 64% of the patients being male, while the remaining 36% of patients were female. Maximum i.e. 61.6% were graduate, 15.1% were post graduate, 11.6% were senior secondary educated, 7% were high school educated and 5% were middle school educated 4.7%. that 43% patients belonged to professional category, 23.3% were housewives, 10.5% were student, 9.3 % were laborer and 4.7% were unemployed. maximum number of patients belonged to middle class category with the percentage of 55.8% followed by 23.3% in upper middle class, 16.3% in lower middle class and 4.7% were in poor category. "*Lavana*" is the most dominant *Rasa*, taken by 100% of patients, followed by "*Madhura"* (89.5%) and "*Amla"*(69.8%). "*Katu,"Tikta,"and Kashaya*" are less prevalent, consumed by 52.3%, 23.3%, and 11.6% of patients, respectively.

Table No-3.1 Status Of Agni







In the current study, the prevalence of Mandagni was observed in 56.98% of patients, making it the most common condition. Teekshnagni was present in 22.9% of patients, while Vishamagni was reported in 20.93% of patients.

Assessment Of Status Of Agni And Grahani Symptoms

Parameter	Sample size	P*	r*	Correlation
Status of Agni and Grahani symptoms severity	86	8.747E-022 (<0.05)	-0.817	Significant negative correlation

r*= Karl Pearson correlation coefficient

The data presented above indicates that there is a strong and significant negative correlation (-0.817) between Status of Agni and the severity of Grahani symptoms. This correlation, calculated using the Karl Pearson correlation coefficient, suggests that as the Agni status diminishes, the intensity of Grahani symptoms increases demonstrating the clear association between Agni Dushti and Grahani Dosha. The p-value of 8.747E-022 (much less than 0.05) further supports the statistical significance of this relationship.

DISCUSSION-

Through the application of the Karl Pearson correlation test, it was established that the progression of Agni towards a state of diminution coincides with an escalation in the severity of Grahani. This observation states that while all three variants of Agni Dushti coexist within the Grahani, the intensification of severity is closely aligned with the manifestation of Mandagni. This phenomenon can be attributed to the inadequacy of Mandagni to effectively metabolize ingested meal, consequently leading to the formation of Aama. This stands in contrast to Vishamagni and Teekshnagni, where, owing to the erratic nature of Vata and the Ushana guna intrinsic to Pitta, facilitate a certain level of digestion.

Mandagni and its association with Grahani were investigated. The study revealed that 56.98% of patients exhibited Mandagni, a condition resulting from the influence of various nidana that disturb Kapha Dosha. Kapha possesses qualities such as Sheeta (cold), Snigdha (unctuous), Guru (heavy), Manda (dull), and Shlakshana which contrast with the qualities of Agni- Ushana (hot), Ruksha (dry), Laghu (light), Teekshana (sharp), and Khara (rough). An excess of Kapha Dosha leads to Agni vitiation and subsequent reduction. Vishamagni and its connection to Grahani were also explored. The evaluation revealed that 20.93% of patients exhibited Vishamagni, indicating a dominant influence of Vata Dosha. Vishamagni represents an irregular digestive fire caused by Chala guna of Vata, leading to inconsistent digestion. Exposure to factors that aggravate Vata results in Vishamagni, which alternates between effective and ineffective digestion. The irregularity of Vishamagni implies that at times it aids in complete digestion, while at other times, it fails to do so.4 Influence of Vata on intestinal peristaltic movements further contributes to alterations in gut transit time. Teekshnagni and its relationship with Grahani were studied. Among the assessed patients, 22.09% displayed Teekshnagni, characterized by Pitta predominant influence on jatharagni. Pitta Guna, such as hot, sharp, light, and liquid, influence Agni function. When Pitta's Drava Guna increases, it opposes Agni's Ruksha Guna, leading to reduced digestive function. Conversely, increased Ushana Guna of Pitta accelerates digestion, potentially compromising nutrient content when consuming small quantities of food. Given that Grahani serves as seat of Agni, imbalances in Agni lead to Grahani Dosha. Agni states depend on Dosha-Bala bheda, with the dominant Dosha determining the Agni Dushti type. The study demonstrated that imbalances in the three Doshas within Grahani result in fluctuations in Agni, manifesting as Grahani Dosha. The imbalance of the three Dosha in the Grahani, leads to its cardinal symptom, "Muhurbadham Muhurdravam". This aligns with Aacharya Charaka statement saying that except Samagni other three types i.e, Mandagni, Vishamagni and Teekshangni are responsible for Grahani Dosha.5

All the enzymes and microbiomes accountable for the process of digestion can be concluded as Agni. Just as Agni is located in the pitta dhara kala, the microbiota also takes residence within the intestines. This microbiota, commonly referred to as gut flora, contributes significantly to the digestion and absorption of nutrients. Any alterations in the composition or quality of these elements directly influence factors such as gut motility, visceral sensitivity, the permeability of the intestines, and the integrity of the mucous membrane.6 Under normal physiological conditions, the gut microbiota participates in the fermentation of dietary fibers, generates enzymes to facilitate the breakdown of food, and improves the solubility and accessibility of essential minerals such as Iron and Zinc, thereby aiding in their absorption. Furthermore, it interacts with the epithelial cells lining the intestine to uphold the integrity of protein junctions, pivotal for sealing intercellular gaps. This maintenance is crucial for the effective absorption of nutrients. A decrease in transit time can precipitate the emergence of Small Intestinal Bacterial Overgrowth (SIBO), a condition characterized by an elevation in bacterial quantities surpassing 105 CFU/mL, signifying an imbalance in the microbial ecosystem and a disruption in the gut. 7

CONCLUSION-

This study comprehensively assessed the relationship between Agni Dushti and Grahani Dosha, shedding light on their interdependence and impact on health. The strong negative correlation established between Agni status and the severity of Grahani symptoms underscores the significance of this association. The prevalence of Mandagni, Teekshnagni, and Vishamagni among patients highlights the diversity of Agni imbalances within the context of Grahani dysfunction. These findings emphasize the intricate connection between Agni and Grahani, where disruptions in Agni contribute to Grahani Dosha, leading to malabsorption and related symptoms. Promoting the optimal functionality and preservation of Agni can markedly diminish the probability of Grahani manifestation. Cultivating the vitality and equilibrium of Agni allows individuals to shield themselves against the initiation of digestive ailments and the consequent complexities. The insights of study contribute to a deeper understanding of Ayurvedic principles, paving the way for more targeted interventions for Grahani-related disorders. Further research in this direction holds the potential to refine therapeutic strategies and enhance holistic approaches to gastrointestinal health.

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