Case Report

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Customized Ayurvedic management of *Agnyashaya shotha* (Subacute Pancreatitis): An experience

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Abstract:

Subacute Pancreatitis (SAP), a rapidly developing inflammatory condition, is surgically manageable. Based on the clinical presentation and symptomatology, the manifestation of SAP can be termed as *Agnyashaya Shotha* (AS). The present case report is on a year-old manifestation of untreated SAP with severe gastro-duodenitis (~*Agnyashaya shotha pradhana Grahani roga*) in a young male. The previous Ultrasonography (USG) impression of the abdomen revealed "SAP" and the Upper Gastrointestinal (UGI) endoscopy report stated "severe gastroduodenitis." The serum amylase and lipase levels were 141 U/L and 108 U/L, respectively. He was clinically treated with a customized and simple Ayurveda intervention for five days. The intervention involved oral proprietary polyherbal formulations along with the internal therapy of *Matrabasti* (~a form of unctuous enema) and *Pathya* (~wholesome dietary regimen), based on the treatment principles of *Grahani roga* (~disorders of lower gastrointestinal tract). He became asymptomatic and was discharged after five days of intervention. Furthermore, the USG impression of the abdomen revealed "no evidence of abnormalities" and his serum amylase was reduced to 59 U/L. Although at the time of discharge, the UGI endoscopy and serum lipase level could not be investigated due to the patient's unwillingness, the case seemed to be worthy of reporting. Thus, the adoption of current therapeutic intervention along with proper *Pathya* based on Ayurveda principles might have managed the present case of SAP. Although the present case had its limitations, it significantly helped in understanding SAP, its pathogenesis, and management in the view of rationalized fundamental theories of Ayurveda.

KEYWORDS: *Agnyashaya shotha*, *Grahani roga*, Subacute pancreatitis

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INTRODUCTION

As per Ayurveda, *Koshtha* is the abdominal cavity that accommodates organs of the entire digestive system. It is considered as *Agnyadhishthanam* (~seat of *Agni*). One of the biological functions of *Agni* (~digestive and metabolic factors)is to regulate the process of disintegration of the food particles facilitating into absorption and utilization by the body. *Agni* provides the required biological energy to the cells of human body.[1] *Agni* is said to play a prime part of life.[2] To be specific, *Agnyadhishthanam* refers to *Grahani* (~duodenum) as the seat and regulator of *Agni*.[3] It is believed that the strength of *Grahani* is from *Agni* itself and vice versa. Irregularities in these biological functions manifest into diseases.[1] Apparently, the *Jatharagni* is the specific metabolic factor that is located in the *Amashaya* (~stomach) and *Grahani*. This *Jatharagni* is responsible for the preservation of *Ayu* (~life) and *Ojas* (~essence of all the seven *Dhatu*) and strengthening of the *Bhutagni* (~*Agni* derived from basic elements) and *Dhatvagni* (~metabolic factors located in all major structural components of the body).[1] *Agnyashaya*

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or *Kloma* (~pancreas) is an important organ in *Koshtha,* that is, also responsible for various physiological functions.[4]

When the *Nidana* (~etiological factors), *Dosha* (~regulatory functional factors of the body), and *Dushya* (~that gets vitiated) combine together, it manifests into an acute condition rapidly with quick exacerbation of signs and symptoms.[5] *Agnyashaya Shotha* (AS) is one of such acute disorders that is backed by *Grahani dosha* (~improper functioning of *Grahani*) associated with recurrent *Vishtamba* (~abnormality in passing normal stools), *Trishna* (~thirst or dryness), *Ajirna* (~indigestion), *Vairasya* (~dysgeusia), and *Praseka* (~excessive salivation/nausea).[6] *Agnyashaya* relates to pancreas and *Shotha* refers to inflammation.[7] *Grahani* gets manifested due to various *Nidana*, leading to *Mandagni* (~weak digestive power). *Mandagni* further leads to the formation of *Ama* (~state of toxicity due to incomplete digestion or metabolism), the malfunctioning of *Pittadi dosha.* Eventually at the peripheral superficial vessels, the vitiated *Vata dosha* (~*Dosha* responsible for bodily movements and cognition) obstructs, debauches the *Pitta dosha and Kapha dosha* (~*Dosha* responsible for regulating body fluids and maintaining the body constituents cohesive) along with *Raktadhatu* (~*blood tissue*).[8] The aggravated *Vata dosha* in *Amapakvashaya* (~gastrointestinal tract) is considered to produce severe *Udara vedana* (~abdomen pain), excessive *Trishna*, *Shosha* (~dryness in the body especially throat and oral cavity), and *Vishtamba*.[9] Further from here, these pathological manifestations are carried out by the *Vata dosha* to the middle part of the body (*Agnyashaya* in the present case), leading to the *Shotha* (~inflammation) at the respective part.[8] The present case of AS can be considered a type of *Grahani roga* with *Pitta* or *Agni* predominance. The probable pathology of AS is illustrated in Figure 1.

Subacute Pancreatitis (SAP) is a rapidly developing inflammatory condition, leading to surgical emergencies until it is hemorrhagic. It has tendency to relapse over a period of time.[10] The condition is associated with recurrent episodes of moderate-to-severe abdominal pain, nausea, vomiting, loose stools, and indigestion. Due to its acute and emergency condition patients of SAP often prefer conventional system of medicine. Subsequently, they may choose other medical systems or conservative management.[11] The present case report is on experience of managing a year old, diagnosed case of 'SAP with severe gastro duodenitis' in a young male with a customized Ayurveda interventions for five days based on Ayurveda principles.

PATIENT INFORMATION

A 20-year-old male approached the Ayurveda Hospital on July 22, 2022, with complaints of dryness of the body, thirst, loss of appetite, and burning sensation in the epigastric region. Abdominal pain was episodic nonradiating in nature. Generalized weakness, fatigue, and diarrhea were the other symptoms persisting for a year. He had consulted gastroenterologists and general surgeons, who had diagnosed the condition as "SAP and severe gastroduodenitis." The patient was on oral antacids, laxatives along with other medicines for symptomatic management for nearly six months. Eventually, he visited to the hospital for possible management through Ayurvedaas neither patient nor his parents found any improvement in his previous symptomatic management. Eventually, he visited to the hospital for possible management through Ayurveda.

CLINICAL FINDINGS

On examination, the patient was conscious, well oriented, and cooperative. His vitals were stable; the abdomen was soft and non-tender. However, on palpation, there was a local rise in temperature with twitching, non-radiating, mild pain at the peri-umbilical region. The old Upper Gastrointestinal (UGI) endoscopy and Ultrasonography (USG) of the abdomen diagnosed the condition as "SAP" with "severe gastroduodenitis." The serum amylase and lipase were 141 U/L and 108 U/L, respectively. Other hematological investigations and urine analysis were found to be normal.

TIMELINE

The plan of the Ayurveda intervention was limited to five days in the inpatient department. This limitation was set up in the view of (a) confronting the efficacy of Ayurveda intervention in a limited period and (b) assessing the patient (symptomatically) and his prolonged illness (diagnostically) in that limited period which was an observation between the course of before and after intervention. It was intended that if the outcome had failed in either of the assessments in that limited period, he would have been referred to higher center for further management. Hence, patient was discharged on the 6th day after repeating levels of serum amylase and USG abdomen. The patient was discharged with oral medications and strict *Pathya* (~ wholesome dietary regimens) and was asked for a follow-up after 15 days [Figure 2].

DIAGNOSTIC ASSESSMENT

Ashtavidha pariksha (~eight-fold of examination)

Nadi (~pulse) was 72 beats per min, *Mala* (~excreta) was with *Sama* associated with on and off loose stools, *Mutra* (~urine) was normal, *Jihwa* was dry, *Shabda* (~sound)

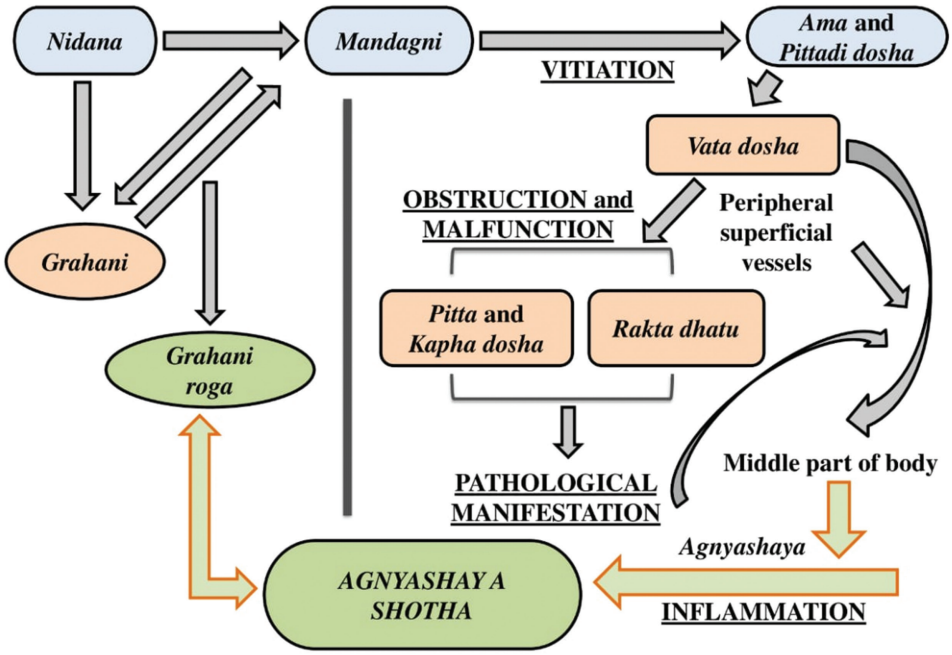

Figure 1: Probable pathogenesis of *Agnyashaya shotha*

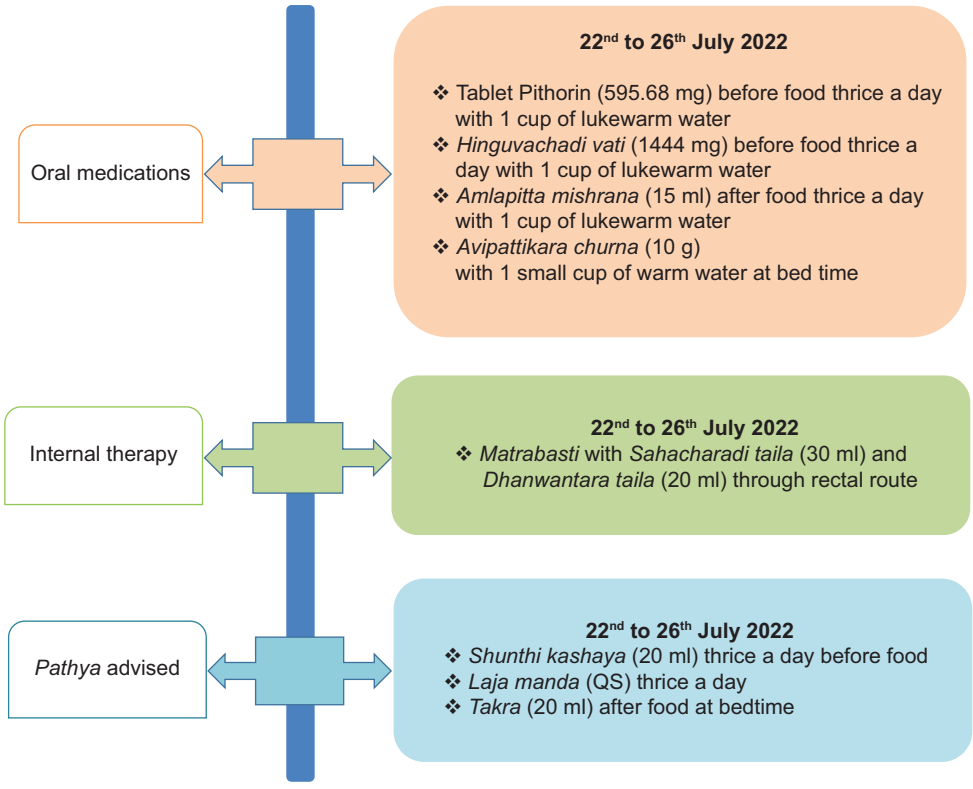

Figure 2: Timeline of treatment schedule

was clear, *Sparsha* (~touch) was normal, *Drik* (~eyes and eyesight) was normal, and *Akriti* (~form) was *Madhyama* (~moderately built).

Dashavidha pariksha (~ten-fold examination)

Prakriti (~physical constitution) was *Pitta-Kaphaja, Vikriti* (~morbidity) was *Tridoshaja*; *Sara* (~excellence of *Dhatu*);

Samhanana (~compactness of tissues or organs) and *Pramana* (~measurement of body constituents) were impaired; *Satmya* (~homologation) was medium; *Satwa* (~psychic condition) was medium; *Ahara shakti* (~power of intake and digestion of food) and *Vyayama shakti* (~power of performing physical activities) were decreased; while *Vaya* (~age)was *Yuva* (~young age). Considering the presentation of the symptoms, the case is compared and considered as "*Agnyashaya shotha pradhana Grahani roga.*"

THERAPEUTIC INTERVENTION

Customized Ayurveda management was planned and scheduled from the first day of his admission into the hospital. The intervention included oral administration of polyherbal formulations, *Matrabasti* (~a form of unctuous enema therapy) and specific *Pathya* (~wholesome) during and after discharge [Figure 2]. The patient did not report any inconveniency or new symptoms during the period of therapeutic intervention.

FOLLOW-UP AND OUTCOME

During the intervention, there was a gradual decrease in the symptoms including epigastric burning sensation, episodic abdominal pain, on and off loose stools, and generalized fatigue. He became asymptomatic after the intervention. The USG of the abdomen revealed "no evidence of abnormalities" and serum amylase level had come down to 59 U/L. The serum lipase value and UGI endoscopy could not be assessed due to the patient's refusal. At the time of discharge, he was subjectively asymptomatic and reported good and regular appetite. He did not report any episodic and nonradiating abdominal pain for two days before discharge. The bowels became regular and normal with reduced general weakness and fatigue. He was advised to continue oral medicines [Figure 2] and asked for a follow-up after 15 days. As informed by his mother, the patient had firmly adhered to prescribed oral medications, but was not following the *Pathya.* The serum amylase was found to be 81 U/L (normal limits 30–110 U/L). He was advised to follow the *Pathya* and was directed to continue the oral medications for the next another 15 days. Although advised for a follow-up after this period, the patient was lost for follow-up. However on telephonic communication, he reported his asymptomatic status without any relapses of previous or new symptoms.

DISCUSSION

Although there are limited resources available on SAP and AS, the present case significantly gives an experience in understanding them, its pathogenesis, and the management in view of theories of Ayurveda. The symptoms presented in the patient including dryness, thirst, loss of appetite, burning sensation in the epigastria, abdominal pain, loose stools, generalized weakness, and fatigue correlate with the classical features of *Grahani roga.*[12] *Grahani roga* is commonly caused due to *Mandagni* (~diminution of digestive fire) that vitiates the *Grahani,*[13] resulting in various digestive and metabolic disorders [Figure 1].[14] The treatment protocol adopted in the present case was followed on the principles of *Grahani roga chikitsa* including *Deepana-Pachana* (~enhancement of digestion and metabolism) and *Shodhana* (~biocleansing therapy) for the metabolism of *Ama* and modification of vitiated *Agni* and *Pitta dosha* respectively.[15]

In the present study for *Deepana-Pachana*, tablet Pithorin (595.68 mg), tablet *Hinguvachadi vati* (1444 mg), and syrup *Amlapitta mishran* (1399.99 mg in each 10 mL) were given as the oral medications [Table 1]. These Ayurvedic polyherbal formulations have *Pitta shamaka* (~pacifier of vitiated *Pitta*), *Deepana-Pachana* and *Vibandhahara* (~relieves constipation), *Shothahara* (~reduces inflammation), *Lekhana* (~therapeutic scraping), *Srotoshodaka* (~cleanses the microchannels), and *Rasayana* (~rejuvenator) property. *Avipattikara churna* is another polyherbal classical formulation, which has anti-secretory and anti- ulcerogenic effect.[16] It also has the bioactive components of antioxidant mechanism that inhibits the pathogenic growth of *Ama* (~free radicals) and eliminates it form the body as *Mridu virechana* (~mild purgative therapy).[17] In the present case, the lodged aggravated *Vatadosha* in *Amapakvashaya* at *Grahani* and *Agnyashaya* had produced severe *Udaravedana*, excessive *Trishna*, *Shosha*, abnormality in passing normal stools and *Shotha*. These symptoms were relived through the action of *Mridu virechana* by Avipattikar churna and by the action of internal therapy of *Matrabasti.*

Matrabasti is a particular form of medicated enema therapy that target and pacify the manifested *Vatadosha.* Further, the *Matrabasti* acts at the level of increasing *Bala* (~strength) and *Snehana* (~nourishment) of weakened *Dhatu* (~major structural components of the body).[18] As *Matra basti* is targeted for preventive and curative action of vitiated *Vata dosha* lodged in *Amapakvashaya*, the *Sahacharadi* and *Dhanwantara taila* were the two distinct *Snehadravya* used in the present study. Both the *Sahacharadi taila*[19] and the *Dhanwantara taila*[20] have the properties of pacifying the vitiated *Vata*, where the latter is considered as best *Sarvavatavikarajit* (~ideal medicated *Taila* for the treatment of all type of *Vata* disorder).[20]

The aim of *Pathya* in *Grahani dosha* is to improve the *Agni* through *Deepana-Pachana,* improve bowel habits,

Table 1: Details of Polyherbal formulations used in the study

	Dose
Ingredients of Tablet Pithorin (595.68 mg)	
Extracts of	
Lashuna (*Allium sativum* Linn.),	166.7 mg
Maricha (*Piper nigrum* Linn.),	66.67 mg
Kalmegh (*Andrographis paniculata* Nees.),	42 mg
Katuka (Picrorhiza kurroa Royle ex Benth.),	42 mg
Badarashma (*Bhasma* of *Hajrul*),	41.67 mg
Varuna (*Crataeva nurvala* Roxb.),	41.67 mg
Gomutra Shilajih (Ashphaltum),	33.33 mg
Shunthi (*Zingiber officinale* Roscoe.),	33.33 mg
Pippali (*Piper longum* Linn.),	33.33 mg
Arjuna (*Terminalia arjuna* Wight and Arn.),	33.33 mg
Punarnava (*Boerhavia diffusa* Linn.),	33.33 mg
Pashanabheda (*Bergenia ligulata* Wall.),	13.33 mg
With additional extracts of	8.33 mg
Varuna (*Crataeva nurvala* Roxb.),	3.33 mg
Pashanabheda (*Bergenia ligulata Wall.*),	3.33 mg
Shunthi (*Zingiber officinale* Roscoe.)	Quantity Sufficient
Excipients	
Ingredients of Hinguvachadi vati (1444 mg)	
Powders of	
Hingu (*Ferula asafetida* Linn.),	32 mg
Vacha (*Acorus calamus* Linn.),	32 mg
Vijaya (*Terminalia chebula* Retz.),	32 mg
Pasugandha (*Cleome viscose* L.),	32 mg
Dadima (*Punica grantum* Linn.),	32 mg
Deepyaka (*Apium graveolens* L.),	32 mg
Dhanyaka (*Coriandrum sativum* Linn.),	32 mg
Patha (*Cyclea peltata* Hooks and Thoms.),	32 mg
Pushkaramoola (*Inula racemosa* Hook.),	32 mg
Sati (*Curcuma zedoaria* Rosc.),	32 mg
Hapusha (*Sphaeranthus indicus* Linn.),	32 mg
Agni (*Plumbago zeylanica* Linn.),	32 mg
Ksharayuga (Two alkalies),	64 mg
Dwipatu (Two salts),	64 mg
Shunthi (*Zingiber officinale* Roscoe.),	32 mg
Maricha (*Piper nigrum* Linn.),	32 mg
Pippali (*Piper longum* Linn.),	32 mg
Ajaji (*Cuminum cyminum* Linn.),	32 mg
Chavya (*Piper brachystachyum*),	32 mg
Tintirika (*Tamarindus indicus* Linn.),	32 mg
Vetasamla (*Cissus repens* Lam.),	32 mg
With aqueous extract of	708 mg
Deepyaka (*Apium graveolens L.*)	
Ingredients of Amlapitta mishrana (1399.99 mg in each 10 ml)	
Extracts derived from	
Vasa (Adhatoda vasica Nees.),	100 mg
Guduchi (Tinospora cordifolia Willd Miers.),	100 mg
Nimba (Azadirachta indica Linn.)	100 mg
Parpata (Fumaria parviflora Lam.)	100 mg
Kiratatikta (Swertia chirata Buch-Ham.)	100 mg
Bhringaraj (Eclipta alba Hask.)	100 mg
Patola (Trichosanthes dioica Roxb.),	100 mg
Yashti (Glycyrrhiza glabra Linn.)	100 mg
Shouktik (Bhasma of Oyster shell)	500 mg
Haritaki (Terminalia chebula Retz.)	33.33 mg
Bibhitaki [*Terminalia bellirica* (Gaertn.) Roxb.]	33.33 mg
Amalaki (Embilica officinalis Gaertan.)	33.33 mg
Excipients	Quantity Sufficient

and provide overall nutrition and minimization of complications.[21] To serve this purpose, a simple *Pathya* was advised for the patient as a part of course of the treatment and also during the follow-up after his discharge from the hospital. The *Shunthi kashaya* (~medicated decoction for cleansing made out of *Shunthi* (*Zingiber officinale* Roscoe) has the properties of *Snigdha* (~unctuousness), *Ushna* (~hotness), *Rochana* (~taste enhancer), and *Deepana-Pachana*.[22] *Laja manda* (~liquid portion of gruel of parched grain) has exclusive properties of *Laghu* (~lightness) and *Agnideepaka* or *Deepana-Pachana*.[23] *Takra* (~buttermilk) is classically indicated by Acharya Charaka as *Deepana-Pachana* for *Grahi* (~absorptive), *Laghu,* and *Tridoshaghna* (~pacifier of all the three vitiated *Dosha*).[22]

The probable mode of action of the present intervention might have acted in two ways. One is regulation of the abnormal *Agni* and *Pittadi dosha* as a main action of pacifying the *Ama*, and the other is the expulsion of the obstructed *Pittadi dosha* as a part of *Shodhana chikitsa*. The polyherbal formulations and *Matra basti* might have acted as both. The adoption of strict *Pathya* might have improved the *Agni* through *Deepana-Pachana,* regulation of the bowel habits, providing overall nutrition and minimization of complications produced by abnormal *Agni*. This adoption of proper *Pathya* might have acted as adjuvant therapy to the main therapeutic intervention in managing the present case of SAP "(AS *pradhana Grahani roga*)."

CONCLUSION

The present case significantly helps in understanding SAP, its pathogenesis, and management through Ayurveda treatment modalities. It also gives an experience of efforts in managing such acute conditions when treated with planned intervention. SAP is rapidly developing inflammatory condition that has no exact correlation in Ayurveda classical texts. Based on the signs and symptoms in the patient, SAP is correlated with *Agnyashaya Shotha* (AS) a type of *Grahani roga* which is *Agni* or *Pitta* predominant disorder. The polyherbal formulations and *Matra basti* with *Sneha dravyas* and the adoption of *Pathya* for five days have shown beneficial effect in the management of AS. Prolonged medication with proper follow-up may show more significant results. The present case is suggestive of adopting rationalized Ayurveda therapeutic interventions along with proper *Pathya* in the management of such acute conditions.

Limitations observed in the study

a. The new reports of USG abdomen and UGI endoscopy just before the initiation of the present intervention could not be carried out due to constraints with the patient. Hence, the present intervention was planned on the existing eight months old reports of serum amylase, serum lipase, UGI endoscopy, and

USG abdomen. Furthermore, post intervention the comparative reports of the samewith the old one were of two different laboratories.

b. Postintervention, UGI endoscopy and serum lipase levels could not be revaluated due to the refusal by patient. Hence, both (a and b) partially lacks the effective claim of the present intervention absolutely on an 8-month-old report of "SAP with severe gastro duodenitis".
c. Patient did not appear after first follow-up (after August 19, 2022) and hence his current status could not be reviewed clinically
d. As the present case report is on a single subject, more comprehensive, randomized, and detailed studies through large samples are needed to decipher the present study as a validated research trial.

Declaration of patient consent

The authors certify that they have obtained patient consent form, where the patient has given his consent for reporting the case along with the images and other clinical information in the journal. The patient understands that his name and initials will not be published and due efforts will be made to conceal his identity, but anonymity cannot be guaranteed.

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Declaration of the author

Though the intervened polyherbal formulations might have brought the therapeutic effect in the present study, its authenticity is not guaranteed by the author. However, comprehensive research studies on these formulations might accomplish the proposed validation.

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Nil.

Conflicts of interest

There are no conflicts of interest.

REFERENCES

1. Agrawal AK, Yadav CR, Meena MS. Physiological aspects of Agni. Ayu 2010;31:395-8.
2. Pandeya G, editor. Charaka Samhita of Agnivesha, Chikitsa Sthana; Grahanidosha Chikitsa Adhyaya. Ch. 15, Ver. 4. Varanasi: Chaukhambha Sanskrit Sansthan; 2012. p. 377.
3. Pandeya G, editor. Charaka Samhita of Agnivesha, Chikitsa sthana; Grahanidosha Chikitsa Adhyaya. Ch. 15, Ver. 56. Varanasi: Chaukhambha Sanskrit Sansthan; 2012. p. 388.
4. Pandeya G, editor. Charaka Samhita of Agnivesha, Chikitsa Sthana; Sharirasankhyashaarir Adhyay. Ch. 7, Ver. 10. Varanasi: Chaukhambha Sanskrit Sansthan; 2012. p. 808.
5. Available from: https://www.ncbi.nlm.nih.gov/books/NBK507838/. [Last accessed on 2023 Oct 24].
6. Pandeya G, editor. Charaka Samhita of Agnivesha, Chikitsa Sthana; Grahanidosha Chikitsa Adhyaya. Ch. 15, Ver. 53-4. Varanasi: Chaukhambha Sanskrit Sansthan; 2012. p. 388.
7. Available from: https://www.cstt.education.gov.in/sites/default/files/pan-indian-terms-medical-sciences-1996.pdf. [Last accessed on 2022 Dec 25].
8. Pandeya G, editor. Charaka Samhita of Agnivesha, Chikitsa Sthana; Shwayathu Chikitsa Adhyaya. Ch. 12, Ver. 8. Varanasi: Chaukhambha Sanskrit Sansthan; 2012. p. 294.
9. Pandeya G, editor. Charaka Samhita of Agnivesha, Chikitsa Sthana; Vatavyadhi Chikitsa Adhyaya. Ch. 28, Ver. 27-8. Varanasi: Chaukhambha Sanskrit Sansthan; 2012. p. 695.
10. Macnab I. Subacute pancreatitis. Br Med J 1949;1:568-71.
11. Prakash VB, Prakash S, Sharma S, Tiwari S. Impact evaluation of Ayurvedic treatment protocol on three hundred nineteen. Cases of different variants of pancreatitis. Pancreat Disord Ther 2018;8:196.
12. Pandeya G, editor. Charaka Samhita of Agnivesha, Chikitsa sthana; Grahanidosha Chikitsa Adhyaya. Ch. 15, Ver. 55. Varanasi: Chaukhambha Sanskrit Sansthan; 2012. p. 388.
13. Pandeya G, editor. Charaka Samhita of Agnivesha, Chikitsa Sthana; Grahanidosha Chikitsa Adhyaya. Ch. 15, Ver. 57. Varanasi: Chaukhambha Sanskrit Sansthan; 2012. p. 388.
14. Available from: https://ccras.nic.in/content/etiopathogenesis-and-prevention-grahani-roga [Last accessed on 2023 Oct 24].
15. Pandeya G, editor. Charaka Samhita of Agnivesha, Chikitsa Sthana; Grahanidosha Chikitsa Adhyaya. Ch. 15, Ver. 75. Varanasi: Chaukhambha Sanskrit Sansthan; 2012. p. 391.
16. Gyawali S, Khan GM, Lamichane S, Gautam J, Ghimire S, Adhikari R, *et al.* Evaluation of anti-secretory and anti-ulcerogenic activities of avipattikar churna on the peptic ulcers in experimental rats. J Clin Diagn Res 2013;7:1135-9.
17. Kaushik U, Lachake P, Shreedhara CS, Aswatha Ram HN. *In-vitro* antioxidant activity of extracts of avipattikar churna. Pharmacologyonline 2009;3:581-9.
18. Pandeya G, editor. Charaka Samhita of Agnivesha, Siddhi Sthana; Snehavyapasiddhir Adhyay. Ch. 4, Ver. 54. Varanasi: Chaukhambha Sanskrit Sansthan; 2012. p. 931.
19. Pandeya G, editor. Charaka Samhita of Agnivesha, Chikitsa Sthana; Vatavyadhi Chikitsa Adhyaya. Ch. 28, Ver. 145. Varanasi: Chaukhambha Sanskrit Sansthan; 2012. p. 714.
20. Sharma R, Sharma S, editors. Sahasrayogam; Dhanvantara Taila. Ch. 5, Delhi: Chaukhambha Sanskrit Pratishthana; 2007. p. 74.
21. Pandeya G, editor. Charaka Samhita of Agnivesha, Chikitsa Sthana; Grahanidosha Chikitsa Adhyaya. Ch. 15, Ver. 215-6. Varanasi: Chaukhambha Sanskrit Sansthan; 2012. p. 409.
22. Kulkarni M, Sabarwal G, Rai A, Mahto RR. A case report on role of pathya – Apathya in the management of grahani roga. J Ayurveda Case Rep 2021;4:163-6.
23. Pandeya G, editor. Charaka Samhita of Agnivesha, Chikitsa Sthana; Grahanidosha Chikitsa Adhyaya. Ch. 15, Ver. 143. Varanasi: Chaukhambha Sanskrit Sansthan; 2012. p. 400.