RESEARCH PAPER

A CASE STUDY OF APPENDICITIS HEALED THROUGH AYURVEDA

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ABSTRACT

Appendicitis is an inflammatory condition of the vermiform appendix and is conventionally managed through surgical intervention. However, conservative management becomes necessary in patients who are unfit for surgery due to associated comorbidities. In Ayurveda, the clinical presentation of appendicitis can be correlated with *Pitta–Kapha Gulma* and *Antar Vidradhi*, where *vitiated Pitta* leads to inflammation and *aggravated Vata* produces pain.

This case report describes a 58-year-old male with type 2 diabetes mellitus and a history of coronary stenting on antiplatelet therapy who presented with right lower abdominal pain and fever. Ultrasonographic examination revealed appendicular inflammation along with gallbladder sludge and multiple tiny calculi in the gallbladder. Owing to high surgical risk, appendectomy was deferred, and conservative Ayurvedic management was initiated. Treatment was planned based on *Dosha–Dushya* assessment using formulations having *Deepana–Pachana*, *Shothahara*, and *Pitta–Vata shamana* properties, supported by strict adherence to *Pathya Ahara*.

The patient showed progressive symptomatic relief, and serial ultrasonographic evaluations demonstrated gradual regression of appendicular inflammation, ultimately revealing normalization of the appendix. Complete resolution of pain, fever, and tenderness was achieved without complications or recurrence.

This case highlights the potential role of Ayurvedic conservative management in the successful resolution of appendicitis in patients contraindicated for surgical intervention and supports further exploration of integrative approaches in such clinical scenarios.

Keywords: Appendicitis, Ayurveda, Conservative management, *Pitta–Kapha Gulma*, *Antar Vidradhi*, Case report

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Introduction

Appendicitis is an inflammatory condition of the vermiform appendix and represents the most common acute surgical emergency of the abdomen. Approximately 7% of the population is affected during their lifetime, with peak incidence observed between the ages of 10 and 30 years. [i] Despite significant advancements in diagnostic imaging and laboratory investigations, the diagnosis of appendicitis continues to rely predominantly on detailed clinical history and careful physical examination. Early diagnosis and timely intervention are crucial to prevent complications such as perforation, localized abscess, and generalized peritonitis. The mortality rate in uncomplicated appendicitis is less than 1%; however, it may rise to 5% or higher in pediatric and geriatric populations due to delayed or atypical presentation.[ii]

The exact etiology of appendicitis remains uncertain, but epidemiological evidence suggests a strong association with dietary and lifestyle factors. A higher prevalence has been reported in economically developed countries, which has been attributed to a shift from high-fiber, residue-rich diets to refined, low-fiber diets. This transition predisposes individuals to fecal stasis, reduced bowel motility, and luminal obstruction, which is considered the primary initiating factor in appendiceal inflammation.[iii]

Anatomically, the appendix is a narrow, blind-ended tubular diverticulum arising from the inferior aspect of the cecum. Its mucosa is rich in lymphoid tissue, which may undergo hyperplasia during infections, leading to luminal obstruction. The appendix commonly lies in an intraperitoneal position, most frequently anterior or retrocecal; however, in nearly 30% of individuals, it may be pelvic, retroileal, or retrocolic in position. These anatomical variations can significantly alter clinical presentation and may contribute to diagnostic delay.[iv]

The pathophysiology of appendicitis primarily involves obstruction of the appendiceal lumen by lymphoid hyperplasia, fecaliths, parasitic infestations, or rarely

neoplasms. Obstruction results in increased intraluminal pressure, venous congestion, lymphatic stasis, and compromised blood supply, ultimately leading to ischemia, necrosis, bacterial invasion, and inflammation of the appendiceal wall.[v]

From an Ayurvedic perspective, the clinical features of appendicitis closely resemble *Pitta–Kapha Gulma* and *Antar Vidradhi*. *Vitiated Pitta Dosha* is responsible for inflammatory changes, suppuration, and localized heat, while *aggravated Vata Dosha* manifests as colicky pain and distension. *Kapha Dosha* contributes to mucosal oedema and obstruction. Ayurvedic management focuses on restoring *Dosha* balance through *Shodhana Chikitsa* for elimination of *Ama* and *Shamana Chikitsa* for reducing inflammation and pain.

This case report highlights the successful conservative management of appendicitis using Ayurvedic therapeutic principles, demonstrating the potential role of *Pitta–Vata shamana* interventions in achieving clinical and radiological resolution without surgical intervention.

Clinical Aspects

Abdominal pain is the cardinal presenting feature of acute appendicitis. The characteristic pattern of pain progression—initially vague and poorly localized, followed by localization to the right iliac fossa—is observed in a significant proportion of patients. In the early phase, pain is typically perceived around the periumbilical region and is colicky in nature, reflecting visceral involvement. As the disease advances, the pain becomes continuous, sharp, and well localized due to irritation of the parietal peritoneum.[vi]

Loss of appetite (*Aruchi*) is a consistent and early associated symptom and is considered an important supportive clinical indicator. Nausea and occasional vomiting may occur, primarily as reflex responses to visceral irritation rather than due to primary gastrointestinal pathology. Alterations in bowel habits may be observed, with constipation being more frequent, while diarrhoea is relatively uncommon. The presence of persistent vomiting, abdominal distension, or increasing severity of pain may suggest disease progression or complication.[vii]

From an Ayurvedic standpoint, the initial vague abdominal pain corresponds to *Vataja Shoola*, resulting from *Vata Dosha* aggravation. Localization and persistence of pain indicate *Vata–Pitta* involvement. Inflammatory features such as tenderness, fever, and burning sensation reflect *Pitta Dushti*, whereas anorexia, heaviness, and mild distension signify the role of *Kapha* and *Ama*. Symptoms like *Hrullasa* (nausea), *Adhmana* (distension), and *Agnimandya* (loss of digestive capacity) further indicate impaired gastrointestinal function.[viii]

Thus, the clinical presentation reflects a combined disturbance of *Vata*, *Pitta*, and *Kapha*, providing a clear rationale for Ayurvedic management aimed at *Vata–Pitta shamana*, *Ama pachana*, and alleviation of inflammatory and painful manifestations. Understanding this combined *Dosha* involvement provides a rational basis for Ayurvedic conservative management, wherein therapies are directed toward *Vata–Pitta shamana*, *Ama pachana*, reduction of inflammation (*Shothahara*), and prevention of disease progression.

Case Presentation

Patient Profile

A 58-year-old male, a known case of **Type 2 Diabetes Mellitus** on regular medication, with a significant past medical history of **coronary artery stenting** and ongoing **antiplatelet therapy**, presented with complaints of **right lower abdominal pain and intermittent fever**.

Clinical Course and Findings

At the **initial presentation (19/06/2025)**, the patient complained of **severe pain in the right lower abdomen**, associated with **mild fever and loss of appetite**. There was **no history of vomiting, diarrhoea, or altered bowel habits**. Ultrasonography (USG) of the abdomen revealed an **inflamed appendix measuring 12.2 mm in diameter**, along with **gall bladder sludge and a few tiny calculi layering along the posterior wall**. Considering the patient's **cardiac comorbidity** and **continuous antiplatelet therapy**, he was assessed as **unfit for surgical intervention (appendectomy)**, and conservative medical management was advised.

On **follow-up (16/07/2025)**, the patient reported **persistent right lower abdominal pain**, more pronounced during night hours, though the fever had subsided. A repeat USG of the abdomen demonstrated **partial regression of appendicular inflammation**, with the appendiceal diameter reduced to **10.6 mm**. However, as the **clinical symptoms persisted**, further evaluation was sought.

Subsequently, on **18/07/2025**, the patient reported to the **AYUSH Wing of a Civil Hospital** for Ayurvedic consultation. After detailed clinical examination and review of previous investigations, an Ayurvedic assessment was performed. Based on *Dosha–Dushya* evaluation, the condition was diagnosed as **Pitta–Kapha Gulma associated with features of Antar Vidradhi**. **Conservative Ayurvedic management** was initiated with the objectives of *Pitta–Vata shamana*, *Ama pachana*, reduction of inflammation, and restoration of digestive balance, along with strict adherence to *Pathya Ahara*.

After approximately two weeks of Ayurvedic intervention, at the **next follow-up (05/08/2025)**, the patient reported **marked reduction in abdominal pain**, improvement in appetite, and absence of fever. A repeat USG revealed a **minimally inflamed appendix measuring approximately 6.5 mm**, indicating significant improvement and near-resolution of inflammation.

At the **final follow-up (19/08/2025)**, ultrasonographic evaluation showed the **appendix within normal physiological limits**, with no evidence of residual inflammation or fluid collection. Clinically, the patient was **completely asymptomatic**, with no abdominal pain, tenderness, or fever.

Outcome

The patient remained **clinically stable throughout the treatment period**, showing **progressive and complete recovery** from appendicitis through **conservative Ayurvedic and supportive management**. No complications or recurrence were observed during follow-up. This case highlights the potential role of **integrative, non-surgical Ayurvedic intervention** in the management of appendicitis in patients contraindicated for surgery.

Timeline of Clinical Events (Table-1)

Date	Clinical Events & Findings	Investigations	Management / Outcome
19/06/2025	Severe right lower abdominal pain, mild fever, loss of appetite; no vomiting or bowel disturbance	USG abdomen: Inflamed appendix (12.2 mm), gall bladder sludge with tiny calculi	Assessed unfit for appendectomy due to coronary stenting and antiplatelet therapy; conservative medical management advised
16/07/2025	Persistent nocturnal right lower abdominal pain; fever subsided	Follow-up USG: Partial regression of inflammation (appendix 10.6 mm)	Continued conservative approach; further evaluation planned
18/07/2025	Persistent symptoms; AYUSH consultation	Review of previous USG reports	Ayurvedic diagnosis: *Pitta–Kapha Gulma* with *Antar Vidradhi*; conservative Ayurvedic treatment initiated
05/08/2025	Marked reduction in pain; appetite improved; no fever	USG: Minimally inflamed appendix (~6.5 mm)	Continued Ayurvedic management with dietary regulation
19/08/2025	Completely asymptomatic	USG: Appendix within normal physiological limits	Declared complete clinical and radiological recovery

Treatment Course

First Visit (18/07/2025)

The patient presented with persistent right lower abdominal pain, more pronounced during night hours, despite prior conservative allopathic management. Based on Ayurvedic assessment, a therapeutic regimen aimed at *Pitta–Vata shamana*, *Ama pachana*, and reduction of inflammation was initiated.

The patient was prescribed *Pudina Arka*, *Nagarmotha Choorna*, *Paripathaadi Kashaya*, and *Bhunimba Kwatha* in appropriate doses and schedules. These formulations were selected for their *Deepana–Pachana*, *Shothahara*, and *Pitta–Kapha shamana* properties.

Dietary and lifestyle advice included consumption of light, easily digestible food such as boiled and green leafy vegetables without spices. The patient was advised to avoid oily, spicy, fermented, and heavy foods. Adequate hydration, light physical activity, and general *Pathya–Apathya* guidelines related to *Agni deepana* and *Pitta–Vata* balance were explained in detail**.**

Second Visit (25/07/2025)

On follow-up, the patient reported overall improvement in abdominal discomfort, though mild symptoms of hyperacidity were noted. To address this, Parwal Panchamrit Ras and Parwal Pishti were added to the existing treatment regimen for *Pitta shamana*. All previously prescribed medicines were continued. A follow-up ultrasonographic evaluation was advised to assess the inflammatory status.

Third Visit (05/08/2025)

Repeat ultrasonography revealed the appendix to be mildly inflamed, indicating significant regression of the disease process. Clinically, the patient reported marked relief from pain, absence of fever, and normal appetite. The same Ayurvedic medications were continued, and dietary instructions were reinforced.

Fourth Visit (19/08/2025)

A subsequent ultrasonographic examination showed the appendix within normal physiological limits, with no evidence of residual inflammation or fluid collection. Clinically, the patient remained afebrile, pain-free, and had normal bowel habits and appetite. The condition was declared clinically and radiologically resolved, and medicines were gradually tapered**.**

Treatment Timeline (Table-2)

Visit Date	USG Findings /	Medicines Prescribed	Dosage & Timing	Remarks / Observations

	Clinical Status			
18/07/2025	Appendix inflamed; nocturnal abdominal pain	Pudina Arka	½ tsp with water, TDS	Initiated for *Agnideepana* and relief of abdominal discomfort
		Nagarmotha Choorna	3 g, TDS	For *Pachana* and *Amashodhana*
		Paripathaadi Kashaya	15 ml with lukewarm water, HS	Anti-inflammatory, *Pitta shamana*
		Bhunimba Kwatha	10 ml with water, TDS after food	*Shothahara* and *Pitta–Kapha* pacifying
25/07/2025	Pain reduced; mild hyperacidity	Parwal Panchamrit Ras	1 tablet, TDS	Added for *Amlapitta* and *Pitta shamana*
		Parwal Pishti	250 mg, BD	Cooling and gastric mucosal protection
05/08/2025	Appendix mildly inflamed; symptoms improving	Continued same medicines	—	Marked clinical improvement
19/08/2025	Appendix within physiological limits	Continued for short duration, then tapered	—	Complete clinical and radiological resolution

Fig 1. Usg evaluation of Appendicitis Resolution

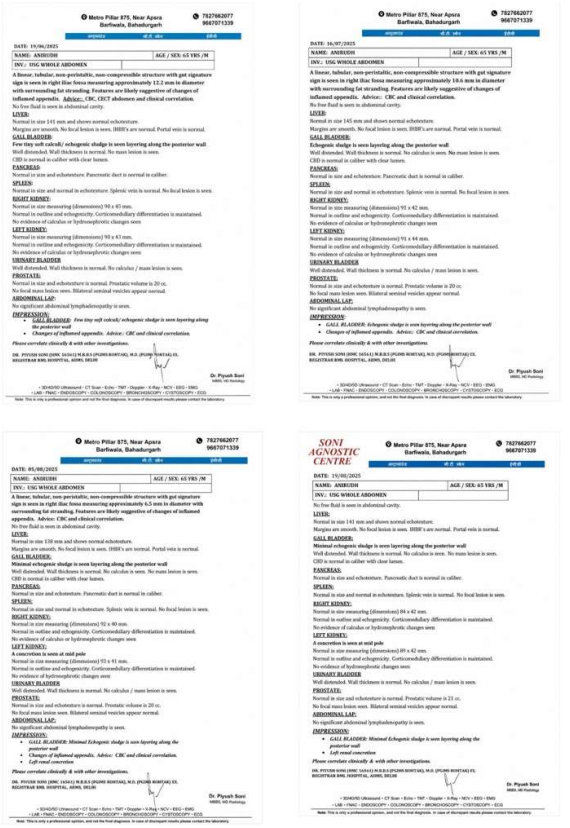

Figure 1. Longitudinal USG Evaluation of Appendicitis Resolution.

Discussion:

Earlier, the vermiform appendix was considered a vestigial organ with minimal physiological relevance; however, recent evidence has established its role in **mucosal immune function**, particularly due to the presence of **B-lymphocytes and extrathymically derived T-lymphocytes**, contributing to intestinal immune surveillance and host defense. The appendix also contains lymphatic tissue that aids in maintaining gut homeostasis.[ix]

Appendicitis occurs when the appendix becomes inflamed, most commonly due to **luminal obstruction**, which may result from infections, fecaliths, or adjacent space-occupying lesions. Obstruction leads to impaired drainage, compromised blood supply, ischemia, and progressive inflammation. If untreated, this may culminate in perforation and peritonitis, a potentially fatal complication, hence appendicitis is conventionally regarded as a surgical emergency.[x,xi,xii] Nevertheless, selected cases—especially in surgically unfit patients—may be managed conservatively under strict clinical and radiological monitoring.

From an Ayurvedic standpoint, appendicitis closely correlates with **Pitta–Kapha Gulma** and **Antar Vidradhi**. *Vitiated Pitta* is responsible for inflammatory changes, suppuration, and fever; *Kapha* contributes to obstruction and localized swelling; and *Vata* plays a central role in the manifestation of pain (*Shoola*).

Etiological factors such as impaired digestive fire (*Agnimandya*), accumulation of *Ama*, and intake of *ruksha*, *guru*, or *abhishyandi ahara* are considered contributory.[xiii,xiv,xv,xvi]

In the present case, conservative Ayurvedic management was planned with the objectives of *Pitta–Vata shamana*, *Ama pachana*, and *Shothahara*. The medicines selected demonstrate congruence between classical Ayurvedic principles and modern pharmacological actions.

Pudina Arka (Mentha species), indicated for *Hrullasa* and *Agnimandya*, possesses **antispasmodic, carminative, and mild analgesic properties** due to menthol and volatile oils, which relax gastrointestinal smooth muscle and reduce visceral hypersensitivity, thereby alleviating abdominal pain.[xvii]

Nagarmotha (Cyperus rotundus) is described as *Deepana–Pachana* and *Tridoshahara*. Modern studies demonstrate its **anti-inflammatory, antioxidant, and analgesic activities**, mediated through suppression of pro-inflammatory mediators, supporting its role in reducing appendicular inflammation and abdominal discomfort.[xviii]

Paripathaadi Kashaya, a classical formulation indicated in inflammatory and febrile disorders, exhibits **anti-inflammatory, antimicrobial, and digestive-stimulant effects**, facilitating *Ama pachana* and supporting resolution of localized inflammation.[xix]

Bhunimba (Andrographis paniculata) is well recognized for its *Tikta rasa* and *Pitta-Kapha shamana* properties. Its active constituent, **andrographolide**, has been shown to exert **potent anti-inflammatory, antipyretic, immunomodulatory, and antimicrobial effects** through inhibition of NF-κB signaling and pro-inflammatory cytokines, which may directly contribute to regression of appendicular inflammation.[xx]

Parwal Panchamrit Ras and Parwal Pishti were introduced to manage *Amlapitta* during therapy. Pravala-based formulations are described as *Pittaghna*, *Sheeta*, and *Deepana*. From a modern perspective, calcium-based preparations exhibit **acid-neutralizing and gastric mucosal protective effects**, improving tolerability and preventing treatment-related hyperacidity.[xxi]

The **synergistic action** of these formulations, along with strict adherence to *Pathya Ahara*, likely contributed to reduction of inflammation, relief of pain, restoration of digestive function, and **complete clinical and radiological resolution** of appendicitis in this surgically high-risk patient. This integrated rationale supports the potential role of **Ayurvedic conservative management** in selected cases of appendicitis.

Conclusion and Clinical Implication

Appendicitis is conventionally managed as a surgical emergency; however, this case demonstrates that **conservative Ayurvedic management** can be a viable therapeutic option in carefully selected patients who are contraindicated for surgery due to associated comorbidities. The clinical presentation closely corresponded to **Pitta–Kapha Gulma with features of Antar Vidradhi**, and treatment directed toward *Pitta–Vata shamana*, *Ama pachana*, and *Shothahara*, supported by strict *Pathya Ahara*, resulted in complete clinical and radiological resolution of appendicular inflammation. **Clinical implication:** This case suggests that Ayurveda may offer an effective non-surgical alternative in select cases of appendicitis, emphasizing the importance of individualized assessment, close monitoring, and integrative decision-making. Further systematic clinical studies are required to validate these observations and define clear guidelines for conservative Ayurvedic management in appendicitis.

Patient Perspective

"I was informed that I was not suitable for surgery because of my previous heart procedure and the medications I am taking. This made me anxious about my condition and future treatment options. After starting Ayurvedic management, my abdominal pain gradually reduced, my fever subsided and appendix came back to normal condition without the need for an operation. I also found the dietary guidance and overall approach reassuring. I am relieved that my condition improved without surgery and feel satisfied with the treatment and care I received."

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