



## Case Report

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### MANAGEMENT OF APPENDICITIS THROUGH AYURVEDIC MEDICINES: A CASE REPORT

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#### ABSTRACT

Appendicitis is inflammation of the vermiform appendix. It has an approximate incidence of 233 per 100,000 people. This is a case of a 7-year-old boy diagnosed with appendicitis and suggested appendectomy by the modern fraternity. His parents were reluctant to do surgery and took him to our Outpatient Department (OPD). The appendix was distended with a diameter of 7.3 mm in the Ultra Sono Graphy (USG) report. After detailed evaluation and dosha dushya assessment, the treatment adopted was that of Pitta Kapha Gulma and Antar vidradhi and given OP-level treatment. Pathya ahara (appropriate diet regimen) was strictly advised along with medicines. After one month of treatment, the size of the appendix was reduced to 5.3 mm. The medicines were discontinued and Charnageryadi ghrita was given for 2 months. The patient was completely recovered, and no recurrence has been observed.

**Keywords:** Appendicitis, Pitta Kapha Gulma, Varanadi kwatha, Rasasindura, Pravala bhasma, Antar vidradhi

#### INTRODUCTION

An appendix is a hollow organ located at the tip of the cecum, usually in the right lower quadrant of the abdomen. Appendicitis is a disease presentation, usually within 24 hours, but it can also present as a more chronic condition. If a perforation with a contained abscess exists, the presenting symptoms can be more severe.<sup>1</sup>

Appendicitis occurs most often between the ages of 5 and 45, with a mean age of 28. The incidence is approximately 233 per 100,000 people.<sup>2</sup> The pathophysiology of appendicitis likely stems from obstruction of the appendiceal orifice. This obstruction may be caused by lymphoid hyperplasia, infections (parasitic), fecaliths, or benign or malignant tumours. When an obstruction is the cause of appendicitis, it leads to an increase in intraluminal and intramural pressure, resulting in small vessel occlusion and lymphatic stasis. Once obstructed, the appendix fills with mucus and becomes distended, and as lymphatic and vascular compromise advances, the wall of the appendix becomes ischemic and necrotic.<sup>3</sup> In Ayurveda, the symptoms of Pitta Kapha Gulma (abdominal tumour) and Antar vidradhi (internal abscess) resemble those of appendicitis.

#### MATERIALS AND METHODS

##### Case history and patient information

The patient was a 7-year-old boy who was diagnosed with appendicitis. He was suffering from abdominal pain, fever, severe vomiting, and loss of appetite for the past two days. The parents, who have a medical background, gave him the drug Paracetamol to subside the fever. The symptoms hinted the chance of appendicitis and they rushed to a surgeon. USG was done and the vermiform appendix was distended with a diameter of 7.3 mm. There was a subsequent rise in the Erythrocyte Sedimentation Rate (ESR) and White Blood Cells (WBC) values. The case was diagnosed as appendicitis and the only option for management was surgery, according to the surgeon.

On interaction with the boy and the bystander, it was known that the boy was proactive in sports activities. He liked consuming meat, meat products, fish, and eggs. Vegetables were not much included in his diet. He occasionally experienced indigestion and constipation before the manifestation of other symptoms.

As the parents were not willing to do surgical management, they sought an alternative. Therefore, they took him to our OPD for Ayurvedic intervention.

### Clinical findings

The boy was lean with a weight of 22 kg. The temperature was normal at 98 degrees Fahrenheit (the parents gave him a Paracetamol tablet). The boy was having severe abdominal pain, especially around the umbilicus and was vomiting. The patient had not eaten meals for the past 24 hours and appeared tired. The Visual analog pain score was 8 out of 10. Inspection, palpation, percussion, auscultation, and abdominal examination were performed. His face was pale, and shortness of breath was observed. The abdomen was slightly distended. There was tenderness over the Mc Burney's point. Heart sounds – S1 S2 heard, Respiratory sounds – clear, Pulse rate – 95 beats per minute. There was no history of any previous illness. However, he was having occasional episodes of indigestion and constipation.

### Differential diagnosis

The differential diagnosis includes Crohn's ileitis, mesenteric adenitis, the inflammatory process in the caecal diverticulum, renal colic, testicular torsion, epididymitis, and other non-descript gastroenterological issues. An acute Crohn's disease, for the first time, may mimic acute appendicitis.<sup>4,5</sup>

### Diagnostic assessment

The patient was already diagnosed as acute appendicitis by the surgeon. From the presenting complaints and detailed evaluation, the diagnosis was confirmed. The case was considered as Pitta Kapha Gulma along with features of Antar vidradhi in Ayurveda.

USG Abdomen Report - The appendiceal diameter is 7.3 mm, suggestive of Appendicitis.

No further investigations were done as it was a pre-diagnosed and confirmed case of appendicitis. The manifestation of the disease, complications, the relevance of surgery in the condition, etc., were well taught to his bystander. As a caution, it was noted in the case sheet that "the parents were not willing to for surgical management" and got it signed by his mother.

After getting consent from the parents, medicines were prescribed.

**Ethical consideration:** The case study was conducted as per ICMR National Ethical Guidelines for Biomedical and Health Research Involving Human Participants.

**Informed consent:** Informed consent was obtained from the patient's bystander for the study as the patient was a child.

**Table 1: List of medicines prescribed**

Day	Name of the medicine and Dose
Day 0	Varanadi kwatha 96 ml bis-in-die (b.i.d.)
	Rasasindura 100 mg + Pravala bhasma 200 mg bid with honey
	Guluchyadi Kashaya Paneeya (1 litre)
	Guggulu panchapalam churna 5 grams bid with honey
	Dhanyamla dhara externally over the abdomen
Day 7	Dhanyamla dhara was stopped.
Day 8	Dasamoola Kashaya Paneeya (1 litre) was added instead of Guluchyadi Kashaya Paneeya
Day 33	All the previously given internal and external medicines were stopped
	Charngeryadi ghrita 2.5 ml was given at bedtime

### Therapeutic intervention

Details are given in Table 1.

### Timeline

Day 0 (27-04-2017) –Day 7 (04-05-2017)

Rasasindura – 100 mg + Pravala bhasma – 200 mg per day, along with honey in divided doses  
Guluchyadi Kashaya churna – 10 grams boiled in 1 litre of water and was given as Paneeya kalpana (medicated drinking water).  
Varanadi kwatha – 60 ml twice daily before food.  
Guggulu panchapalam churna – 1 teaspoon of honey twice daily before food.

### External application

Dhara (continuous pouring of liquid for a specified time) with Dhanyamla for 10 minutes over the abdomen.

The diet was changed to liquid foods and fruit juices like pineapple, orange, and grapes for the time being and was advised to take complete bed rest at home.

Also, the patient was given instructions to report the daily events related to his condition.

After one-week, light foods like peya (rice porridge), mudga yusha (green gram soup), vegetable soups and khada (a preparation using takra/buttermilk) were suggested.

Day 1 (28-04-2017) – Fever completely subsided. Slight relief was found in abdominal pain. The score was 4.

Day 2 (29-04-2017) – Vomiting was stopped completely. Moderate relief in abdominal pain observed and the score was 2.

Day 3 (30-04-2017) – Good relief in abdominal pain. The pain score was 1.

Day 7 (04-05-2017) – The pain was subsided entirely. The pain score was 0.

From Day 8 (05-05-2017) up to day 30 (27-05-2017)

Dhanyamla dhara was discontinued. Dasamoola Kashaya paneeya kalpana in the dose of 1 litre was given instead of Guluchyadi kashaya paneeya kalpana. Other medicines were continued in the same dosage for 1 month.

The patient was advised to have a regular vegetarian diet devoid of breads, jam, papad, Kulatha (horse gram), Kalaya (chana dal), dal, spices, excess salt, pickles, and masala.

Day 30 (27-05-2017) – The patient was found healthy and cheerful. He reported that he has a good appetite. So, advised the patient for a USG abdomen.

Day 31 (28-05-2017) – The USG was taken.

**Impression:** The appendiceal diameter is 5.3 mm.

Based on the report, the appendix appears normal in size and texture. However, the patient was referred to the surgeon for further opinion. After examining the patient, the surgeon advised not to perform appendectomy in this case.

Day 33 (30-05-2017) - Day 90 (26-07-2017) – Charngeryadi ghrita – 2.5 ml once daily at bedtime, along with warm water for 2 months. A regular vegetarian diet was advised.

### Follow-up and outcome

The USG report on Day 31 (28-05-2017) showed that the appendiceal diameter is 5.3 mm. Therefore, the medicines given

were intended for the complete recovery of the patient and preventing relapse of the condition.

The patient came on Day 91 (27-07-2017). He was feeling comfortable and healthy. No symptoms were present. So, all the treatments were discontinued, and patients was advised to take a healthy diet devoid of junk foods.

## DISCUSSION

The appendix was thought to be an evolutionary remnant of little significance to normal physiology; this structure has more recently been identified as an essential component of mammalian mucosal immune function, particularly B-lymphocytes and extrathymically derived T-lymphocytes. This structure helps in the proper movement and removal of waste materials in the digestive system and contains lymphatic vessels, which aid in the defence mechanism of the body, especially in young children.<sup>6</sup> Appendicitis is when the appendix becomes sore, swollen, and diseased. This happens when the appendix is blocked.<sup>7</sup> This may be due to various infections such as viruses, bacteria, or parasites. Pain, vomiting and temperature, known as Murphy's triad, are the typical symptoms of appendicitis. This condition also happens when the stools get obstructed in that region or due to any space occupying lesions near the appendix. This may obstruct the blood supply, eventually damaging the appendix, occasionally leading to a burst appendix, resulting in the leakage of blood and pus to the walls of the abdomen, leading to the fatal condition called peritonitis. Even antibiotics IV will not be able to save the patient in this condition. Therefore, it is referred to as an emergency surgical condition. Many surgical conditions mimic acute appendicitis, so it is vital to take a detailed medical history of the patient.<sup>8</sup>

In Ayurveda, appendicitis can be compared to Pitta Kapha Gulma or Antar vidradhi. Overuse of ruksha anna pana (dry foods and beverages) is a nidana (pathology) of the condition. The boy had a habit of taking bread and meat regularly. He also had occasional constipation. The Gulma is manifested majorly at five sites according to Ayurveda, viz., vasti (urinary bladder), nabhi (umbilicus), hridaya and two parshwas. The other symptoms of Pitta Kapha Gulma are Jwara, Trishna, Shoola, Vadananga raga and Aruchi. The treatment prescribed in the texts comprises of Langhana, Vamana, and Swedana, followed by Virechana and Vasti.<sup>9</sup> Antar vidradhi is a deep abscess affecting internal structures and is much more painful and fatal than Bahyavidradhi.<sup>10</sup> The location of Abhyantara vidradhi or Antar vidradhi in Sushruta Samhita and Madhava Nidana are 10. They are guda (anus), bastimukha, nabhi (umbilicus), kukshi (abdominal cavity), vankshana (groin), vrikka (kidney), yakrit (liver), pleeha (spleen), hridaya (heart) and kloma (lungs and thorax).<sup>11</sup>

Varanadi kwatha is Kapha medohara, indicated in mandagni, Gulma and Antar vidradhi.<sup>12</sup> Rasasindura is sarvarogahara (suitable to manage all diseases), and with specific anupanas, it yields better results in a broad spectrum of diseases.<sup>13</sup> Anupana (adjuvants) mentioned is madhu (honey) in ajirna (indigestion) and Guduchi in Jirna Jwara.<sup>14</sup> Pravala bhasma is Pittaghna (the one which pacifies pitta), deepana (carminative), pachana (digestive), laghu (light in consistency) and kshara (alkaline) in nature.<sup>15</sup> Combining Rasasindura and Pravala bhasma with honey may have antipyretic action. Guluchyadi kashaya churna was administered in the form of Paneeya kalpana, which also suits to be an ideal anupana for Jirna Jwara to Rasasindura. Apart from that, Guluchyadi kashaya is indicated in Pitta Sleshma Jwara (fever), charddi (emesis), daha (burning sensation), trishna (thirst) and agnimandya (improper digestion). These properties of

Guluchyadi kashaya may also significantly mitigate the symptoms of Pitta Kapha Gulma. Dasamoola kashaya paneeya kalpana was given after one week, as it would be an effective alternative in this condition. Guggulu panchapala churna is a formulation mentioned in Ashtanga Hridaya and Bhagandara Pratisheha. It is indicated explicitly in Kushta (skin disorders), Bhagandara (fistula and perianal abscess), Gulma and Nadi vrana (fistula).<sup>16</sup> Charngeryadi ghrita is a formulation which is helpful in the management of Grahani. It is usually administered in small doses in the management of Arsas (haemorrhoids), Grahani (duodenal ulcers), Gudabhramsa (rectal prolapse) and Anaha (flatulence).<sup>17</sup> In this case, the combined action of these drugs along with pathya ahara may have helped to control the problem and prevented its recurrence. The Dasamoola ksheera is said to be the best among shoolaghna (pain reliever). So, initially, Dhanyamla and later Dasamoola ksheera (Vata Pitta samana) can be selected for dhara over the abdomen.

## CONCLUSION

Appendicitis is almost always considered as a disease with a surgical emergency. We can see the features of Pitta Kapha Gulma and Antar vidradhi in most cases of appendicitis. The internal medicines were the Varanadi kwatha, Rasasindura, Pravala bhasma, Guggulu panchapala churna, and Guluchyadi kashaya paneeya kalpana. Dhanyamla dhara was done externally over the abdomen in the first week. After 1 month, Charngeryadi ghrita was given for 2 months. Pathyahara was advised to the patient and also to follow a regular vegetarian diet, devoid of spices and curds, in the follow-up period. Thus, we could save the patient from surgical intervention. Ayurveda not only cured the condition effectively but also prevented its recurrence.

## Patient perspective

The patient and the parents were happy with the Ayurvedic intervention, and the fear of surgery was allayed. The success of this patient referred a few cases of appendicitis for Ayurvedic intervention.

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