

Elucidating Medhya role of Lashuna (*Allium sativum* L) through In-silico method with special reference to Alzheimer's disease

Dr. Jigneshkumar Varu ^{1*}, Dr. Ajay P Kale ²

¹Final Year PG Scholar, Department of Shalya Tantra, KAHER's Shri B M Kankanwadi Ayurveda Mahavidyalaya, Shahpur, Belagavi, Karnataka, India.

Email:ID: jigneshvaru7187@gmail.com

ORCID of author – 0009-0003-0116-9406

²Associate Professor (General Surgery), USM-KLE IMP, KLE CCH, Yellur Road, Belagavi, Karnataka, India

Email:ID: drajaykale21@gmail.com

Corresponding Author

Dr. Jigneshkumar Varu

Final Year PG Scholar, Department of Shalya Tantra, KAHER's Shri B M Kankanwadi Ayurveda Mahavidyalaya, Shahpur, Belagavi, Karnataka, India.

Email:ID: jigneshvaru7187@gmail.com

ORCID of author – 0009-0003-0116-9406

ABSTRACT

Background: Ileal perforation is general surgical emergency that typically results from gastrointestinal disease in developing nations and surgery is the standard treatment. In selected cases with sealed perforation and no signs of diffuse peritonitis, conservative management can be effective.

Case Presentation: 38-year-old man patient reported having sudden abdominal pain. Clinical examination tenderness was elicited in the umbilical region and right iliac fossa. The terminal ileum's thickening and small extraluminal air pockets on an abdominal CT scan could be signs of sealed perforation. He had conservative therapy, which included intravenous fluids, bowel rest, intravenous antibiotic, and continuous medical supervision. Significant progress was made, and the patient discharged in a stable state.

Conclusion: when exact selection criteria are fulfilled and close monitoring is maintained, conservative therapy for suspected ileal perforation can be helpful in this rare case. This case illustrates the need of individualized patient care based on imaging and clinical assessment.

Keywords: Ileal perforation, Conservative treatment, Peritonitis, CT Abdomen

INTRODUCTION

In India, Ileal perforation is a prevalent surgical emergency that primarily affects men in their 30s (incidence ratio 2.68:1)^[1]. Surgery remains the standard treatment, In rare cases without sepsis or peritonitis may benefit from conservative management. The primary causes include ischemia, infection, erosion and physical-disruption^[2]. Initial management involves bowel rest, IV fluids, broad-spectrum antibiotics and close monitoring^[3]. Advances in imaging, early diagnosis, and critical care have enabled non-operative approaches in selected patients. This report describes a rare instance of an ileal perforation that was successfully treated conservatively that is without surgery. That's why this case is unique and no case reported.

Case Report

A married 38-year-old man has been complaining of acute abdominal pain since three days. The pain started slowly and got worse over time. The patient reported a history of fever approximately three weeks prior to presentation, as well as a recent episode of food poisoning ten days ago. There was no associated history of vomiting. The patient was a newly diagnosed known case of diabetes type II, but not a case of HTN. The patient's personal history was significant for chronic alcohol consumption for the past 20 years, along with a history of regular tobacco chewing and smoking. On clinical examination, tenderness was elicited in the umbilical region and the right iliac fossa, accompanied by localized guarding; there was no generalized rigidity and generalized peritonitis. From above clinical findings we suspected provisional diagnosis for this case as an Appendicitis and Enteric Enterocolitis.

USG of abdomen and pelvis demonstrated there is Grade I fatty liver. Wall thickening that affects the mid and distal ileum, ileocecal junction, ascending colon, and hepatic flexure. Enlarged lymph nodes and widespread dangerous fat stranding are observed- Infective/ inflammatory etiology. Suggested CECT Abdomen and Pelvis for further evaluation.

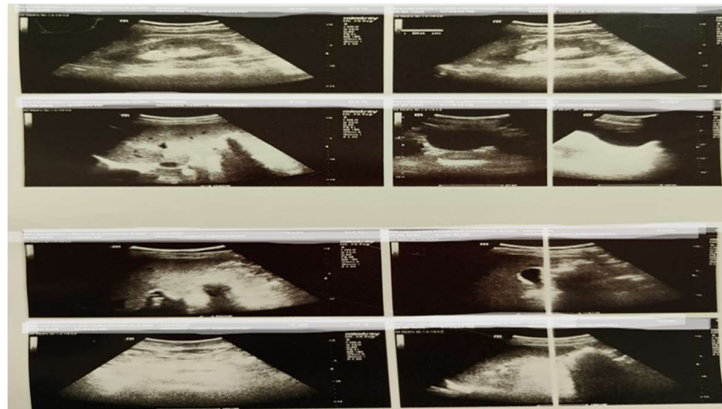


Fig.1. USG – abdomen and pelvis

For further confirmation, CT Abdomen + Contrast was done. which suggest that there is Medium segment circumferential mural thickening of terminal ileum is noted over an approximate length of 8 cm up to the IC junction - suggestive of inflammatory / tuberculous enteritis. A few punctate extraluminal air loculi in bilateral anterior subphrenic spaces - may suggest tiny hollow viscus perforation, likely at distal ileal loop. There are multiple enlarged mesenteric lymph nodes in the lower right quadrant. No evidence of small bowel obstruction. No evidence of free fluid



Fig.2. CT Abdomen + Contrast



Fig.3. CT Abdomen + Contrast

Table 1. Urine routine and microscopic

TEST	RESULT
GLUCOSE*	PRESENT (++)

Table 2. HbA1C

TEST DESCRIPTION	VALUE	NORMAL RANGE	UNIT
HbA1C	10	<5.6 Normal 5.7-6.4 Pre-diabetic >6.5 Diabetic	%

At the time of admission, patient advised for CBC, RFT, WIDAL, Sr. Lipase and Amylase, Chest X-ray and ECG. All investigation reports were within normal limits. After confirmation of CT Abdomen and Contrast report, we have diagnosed this case as Ileal Perforation.

3. Management-

Treatment is primarily surgical, but with consider clinical future or radiological finding we decided to treat patient conservatively.

Conservative Management Protocol

1. NBM for 1 day then orally liquid food allowed.
2. TPR/BP/IO charts
3. Monitor abdominal girth
4. IV Fluids : 0.9%NS and Ringer lactate was given up to 7 days
5. IV antibiotics : Inj. Sinitaz 4.5 gm IV TID × 7 days
Inj. Metronidazole IV TID × 7 days
Inj. L-Cin 500 mg IV OD × 5 days
6. Antacids : Inj. Esozane 40 mg IV BD × 7 days
7. Antiemetics : Inj. Onsat 4mg IV BD × 5 days
8. Antipyretics : inj. Paracetamol 1gm given SOS

No surgical intervention performed

By day three, the patient's symptoms were significantly improved, with peristalsis restored and localized discomfort resolved. Bowel function returned to normal by day 4, and oral hypoglycaemics were used to maintain glycaemic control. During hospitalization, the patient showed no symptoms of peritonitis or vomiting, remaining afebrile. On day seven, they were discharged with their following medication.

1. Tab. Zorica 500 mg 1 OD × 10 days
2. Tab. Esozane 40 mg 1 OD × 10 days
3. Tab. Grovital 1 OD × 10 days
4. Tab. Calpol 650mg SOS
5. Tab. Glycomet GP 1 OD × 1 month
6. Tab. Vilnip 50 mg BD × 1 month

The patient was clinically evaluated as asymptomatic and hemodynamically stable at the 15-day follow-up.

Discussion-

Surgery is still the principle treatment for intestinal perforation^[4], conservative management is favoured when there is no generalized peritonitis or when imaging demonstrates spontaneous sealing then surgery is not recommended^[5].

In this case, 38-year-old man who had radiological and clinical signs of a sealed perforation was effectively treated without surgery. A conservative approach was made possible by the absence of peritonitis symptoms on clinical examination and imaging results that pointed to localized than widespread disease. The patient hemodynamic stability, the lack of free fluid, and no any obstruction must all be taken into account while choosing non-operative treatment.

Levofloxacin, metronidazole and piperacillin-tazobactam were administered intravenously to the patient, offering broad-spectrum antibiotic protection. Tazobactam, which inhibits β – lactamase, and piperacillin, which inhibits the development of cell walls, both improve the antibacterial spectrum^[6]. While metronidazole degrades DNA structure, resulting in strand breakage and cell death in anaerobic species^[7], levofloxacin inhibits DNA gyrase, which impacts bacterial DNA replication and causes cell death^[8]. Gram-positive and gram-negative anaerobic bacteria that are commonly linked to gastrointestinal perforations are effectively prevented by this combination^[9].

Conclusion

This case study shows that conservative treatment can be a safe and efficient substitute for surgery in properly chosen patients who have minor or tiny ileal perforation. successful non-operative treatment requires a multidisciplinary strategy that includes close monitoring, specific antibiotic administration, and early imaging. To create precise criteria for conservative care of intestinal perforation, more prospective studies are required.

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