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Original Research Paper

Radio-Diagnosis

ROLE OF CT ENTEROGRAPHY IN EVALUATION OF SMALL BOWEL DISORDERS

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ABSTRACT

Background: Evaluation of small bowel pathology is challenging due to its length, tortuosity, and overlapping loops. Multidetector CT enterography (MDCTE) has emerged as a non-invasive, patient-friendly modality that provides high-resolution assessment of bowel wall, mesentery, and associated structures. This study aimed to evaluate the diagnostic role and accuracy of MDCTE in small bowel diseases by correlating imaging findings with clinical, surgical, and histopathological outcomes. **Methods:** This prospective, hospital-based study was conducted on 60 patients with clinically suspected small bowel disease at the Department of Radiodiagnosis, Sri Aurobindo Medical College and PG Institute, Indore, over 18 months. Bowel distension was achieved using oral iso-osmotic mannitol, followed by contrast-enhanced MDCTE. Imaging findings were correlated with clinical follow-up, FNAC, biopsy, or surgical confirmation wherever applicable. **Results:** Abdominal tuberculosis was the most common diagnosis (29/60; 48.3%), predominantly involving the ileum and ileocecal junction, with strictures, mural thickening, and necrotic lymphadenopathy as key features. Small bowel masses were identified in 13 patients (21.6%), including adenocarcinoma (n=2), GIST (n=4), carcinoid tumours (n=2), and syndromic polyposis (n=5). Crohn's disease was diagnosed in one patient with typical radiological features. Low-grade obstruction was accurately localized in 28 patients, while 12 patients showed normal studies correlating with benign outcomes. The overall diagnostic performance of MDCTE demonstrated sensitivity of 95.0%, specificity of 100%, and accuracy of 96.7%. **Conclusion:** MDCT enterography is a safe, well-tolerated, and highly accurate modality for detecting and characterizing a wide spectrum of small bowel disorders, and can be recommended as a first-line investigation in suspected small bowel disease.

KEYWORDS : CT enterography, small bowel tuberculosis, gastrointestinal stromal tumour, Crohn's disease, bowel obstruction

INTRODUCTION

Imaging of the small bowel has traditionally been considered a tedious task because of its considerable length, tortuosity, and constant peristaltic movement. Conventional techniques such as small bowel follow-through (SBFT) and barium meal follow-through (BMFT) were historically employed; however, these methods are limited by overlapping bowel loops and reduced sensitivity in identifying subtle or extra-enteric abnormalities [1]. With the advent of cross-sectional imaging, the diagnostic approach to small bowel disorders has significantly evolved, offering better visualization and comprehensive assessment of bowel wall and surrounding structures. [2]

Among modern techniques, CT enterography (CTE) has emerged as a non-invasive, robust imaging modality that combines the advantages of multidetector CT (MDCT) scanners with the use of oral and intravenous contrast agents to provide optimal visualization of the enteric mucosa and bowel wall. CTE offers excellent temporal and spatial resolution, superior multiplanar reformations, and high diagnostic accuracy, while being well tolerated by patients [3,4]. Its primary limitations are related to the use of iodinated contrast material and exposure to ionizing radiation, which remain concerns in young patients requiring repeated follow-up imaging.

In comparison, MR enterography (MRE) avoids radiation and has lower risk of contrast-related reactions, making it more suitable for younger patients with conditions such as inflammatory bowel disease. Nevertheless, MRE is associated with higher costs, longer acquisition times, and variability in image quality. Furthermore, CTE provides superior spatial resolution and is more reliable in patients unable to hold their breath [3,4]. Other diagnostic modalities such as capsule endoscopy offer superior mucosal visualization and the ability to obtain histological samples, but are limited in cases of strictures due to capsule retention and cannot evaluate extra-enteric pathology [5,6]. Fluoroscopic and endoscopic techniques like enteroclysis and capsule studies also suffer from invasiveness, operator dependency, or restricted field of view [7].

CT enterography has proven particularly useful in evaluating inflammatory bowel disease, neoplasms, ischemic disorders, strictures, and obscure gastrointestinal bleeding. It enables simultaneous assessment of bowel wall thickness, mucosal enhancement, mesenteric changes, and lymphadenopathy [8]. With its ability to depict both luminal and extra-luminal pathology, CTE has now become an essential tool in the diagnostic workup of small bowel disorders.

The present study was therefore undertaken to evaluate the role of multi-slice CT enterography in assessing various small bowel diseases and to describe the characteristic imaging findings of commonly encountered pathologies, highlighting its value as a comprehensive diagnostic modality.

MATERIAL AND METHODS

This hospital-based prospective, observational, cross-sectional study was conducted in the Department of Radiodiagnosis, in collaboration with the Department of Surgery, at Sri Aurobindo Medical College and Postgraduate Institute, Indore, over 18 months (June 2023–November 2024).

A total of 60 patients of varying age and sex, presenting with clinical suspicion of small bowel disease, were included after obtaining Institutional Ethics Committee approval and written informed consent. All ethical principles, including confidentiality, autonomy, and the right to withdraw, were strictly maintained. The sample size was calculated based on an estimated diagnostic accuracy of CT enterography of ~85% from prior literature, with an absolute precision of 10%. The minimum required sample size was 50; however, to

account for potential dropouts and non-diagnostic scans, the final sample size was expanded to 60, which was feasible given the institutional case load.

Inclusion Criteria

Adult patients of either sex with clinically suspected small bowel disease.

Exclusion Criteria

Patients refusing consent for participation.
Contraindications to contrast-enhanced CT:

- Known allergy to iodinated intravenous contrast media
- Pregnancy
- Hemodynamic instability
- Renal failure
- Inability to perform adequate breath-hold
- Acute high-grade intestinal obstruction or bowel perforation
- Acute intestinal infections

Imaging Protocol

All patients underwent CT enterography using a Philips Incisive™ 128-slice multidetector CT scanner. Bowel preparation included a low-residue diet with laxative the day before and fasting on the day of the scan. Iso-osmotic mannitol served as the neutral enteral contrast medium, prepared by diluting 20% of 450 ml mannitol in water to make 1500 ml; this was consumed in aliquots every 5 minutes over 50 minutes to achieve optimal luminal distension. To reduce peristalsis, 20 mg of intravenous hyoscine butylbromide (Inj. Buscopan) was administered before scanning. Intravenous contrast consisted of 100–120 ml of non-ionic iodinated medium delivered at 4.5 ml/sec through a 20-gauge cannula using a pressure injector. Imaging was acquired in the enteric phase with a 50-second delay, covering from the dome of the diaphragm to the symphysis pubis in a single breath-hold. Axial and coronal multiplanar reformats were obtained and reviewed under standard abdominal window settings (Level: 60 HU, Width: 360 HU).

Image Evaluation

All CT enterography images were reviewed by experienced radiologists and systematically assessed for key pathological features. Evaluation included the degree of small bowel luminal distension and the presence of bowel wall thickening, defined as >3 mm in at least two planes. Segmental luminal narrowing on two or more planes was considered evidence of stenosis. Small bowel masses were identified as sessile, flat, polypoidal, or pedunculated lesions, while mesenteric stranding was diagnosed based on fat infiltration. Mesenteric lymph nodes were considered enlarged if >10 mm in short-axis diameter, with necrosis indicated by peripheral enhancement and central hypodensity. Peritoneal and visceral deposits were assessed as peritoneal nodules or hypodense hepatic lesions suggestive of metastasis. Bowel wall enhancement patterns, including mural hyperenhancement and stratification, were also carefully documented.

Reference Standard

The final diagnosis was established by clinical evaluation, surgical findings, and/or histopathological confirmation, wherever relevant, and was considered the gold standard against which CT enterography findings were compared.

Data Collection And Statistical Analysis

All demographic, clinical, imaging, and reference standard findings were recorded in a structured proforma. Data were compiled in Microsoft Excel 2010 and analyzed using IBM SPSS Statistics version 26.0. Continuous variables (e.g., age) were presented as mean ± standard deviation (SD). Categorical variables (e.g., sex, symptoms, imaging features, pathology) were expressed as frequencies and percentages. Diagnostic performance of CT enterography was assessed against the reference standard by calculating sensitivity, specificity, positive predictive value (PPV), negative predictive value (NPV), and diagnostic accuracy. Data were represented graphically using bar and pie charts wherever appropriate.

RESULTS

The study included 60 patients, comprising 28 males (46.7%) and 32 females (53.3%), with an age range of 16–70 years and a mean age of 31.03 years. The majority of patients belonged to the 21–30 years age group (40%), followed by the 31–40 years group (20%), while other age categories had fewer patients. The most common clinical presentation was abdominal pain (76.7%), followed by sub-acute intestinal obstruction (53.3%) and anorexia (53.3%). Optimal luminal distension was achieved more frequently in the ileum compared to the jejunum. The ileal loops were optimally distended in 56 patients (93.3%), whereas jejunal loops achieved optimal distension in 44 patients (73.3%). [Table 1]

Table 1: Demographic Profile, Clinical Presentation, And Bowel Distension In Study Patients (n=60)

Parameter	Frequency (n)	Percentage (%)
Sex Distribution		
Male	28	46.7
Female	32	53.3
Age Distribution (years)		
16–20	6	10.0
21–30	24	40.0
31–40	12	20.0
41–50	8	13.3
51–60	6	10.0
61–70	4	6.7
Mean Age	31.03	–
Clinical Presentation		
Abdominal pain	46	76.7
Sub-acute intestinal obstruction	32	53.3
Anorexia	32	53.3
Optimal Bowel Distension		
Ileal loops	56	93.3
Jejunal loops	44	73.3

Multidetector CT enterography in 40 patients demonstrated that **bowel wall thickening** was present in nearly 70% of cases, predominantly involving the ileum and ileocecal (IC) junction. The thickened segments most often showed hyperenhancement, with mural stratification in about one-third. Strictures or stenosis were observed in approximately 60% of patients, and multiple strictures (2–3) were more common than solitary ones. The majority of strictures were located in the ileum and IC junction, with occasional extension to the caecum and ascending colon. Associated findings included enteroliths in ~25%, dilated bowel loops in ~20%, and intussusception in ~10% of cases. Less frequent but clinically relevant features were fistulous tracts with faeces sign (~5%), mesenteric hypervascularity (~5%), polyps (~5%), and sclerosing encapsulating peritonitis (~2–3%). Rare intraluminal or extraluminal mass lesions were also noted in the caecum, duodenum, and jejunum.

CT enterography revealed abdominal tuberculosis in 29 out of 60 patients (48.3%). Small bowel involvement was observed in all of these patients (n=29), while additional large bowel involvement was seen in 7 patients (11.6%). The affected bowel loops showed circumferential wall thickening in 21 patients (35.0%), mural hyperenhancement in 27 patients (45.0%), matting of bowel loops in 3 patients (5.0%), and strictures in 25 patients (41.6%). A total of 54 strictures were identified, measuring 7–14 mm in thickness with a mean thickness of 9.6 mm. [Table 2]

Table 2: MDCT Enterography Findings: Gastrointestinal Tract Involvement In Study Patients (n=60)

Feature / Finding	Frequency (n)	Percentage (%)	Remarks
Abdominal tuberculosis	29	48.3	–
Bowel involvement			
– Small bowel involvement	29	100 (of TB pts)	Ileum most common site
– Additional large bowel involvement	7	11.6	IC junction, caecum, proximal colon
Bowel wall changes			
Circumferential wall thickening	21	35.0	Ileum, IC junction predominance
Mural hyperenhancement	27	45.0	With mural stratification in 5 cases
Matting of bowel loops	3	5.0	Localised
Strictures	25	41.6	Multiple in some patients
– Total number of strictures	54	–	Thickness: 7–14 mm, Mean: 9.6 mm
Other associated findings			
Enteroliths	7	11.6	Often with strictures
Intussusception	4	6.6	Jejunal and ileal involvement
Fistula / small bowel faeces sign	2	3.3	Associated with strictures
Sclerosing encapsulating peritonitis	1	1.6	Localised
Mesenteric hypervascularity	3	5.0	Seen with mural stratification
Mesenteric lymphadenopathy (necrotic)	13	21.6	Central hypodensity with rim enhancement
Peritoneal/visceral deposits	5	8.3	Hepatic hypodense lesions, peritoneal nodules

In this study of 60 patients, CT enterography was most valuable in diagnosing abdominal tuberculosis, which was seen in 29 patients (48.3%), predominantly involving the ileum (25 cases) and ileocecal junction (23 cases). Strictures were demonstrated in the majority, with 54 strictures overall, and associated features included mesenteric lymphadenopathy in 25 patients (of which 15 were necrotic), ascites in 15 patients, and hepatosplenomegaly in 7 patients. Small bowel dilatation was noted in 16 patients. [Table 3]

Table 3: Distribution Of Tuberculosis-related Findings (n = 29/60)

Finding	Frequency (n)	Percentage (%)
Ileocecal junction strictures	23	79.3
Ileal strictures	25	86.2
Jejunal strictures	4	13.8
Duodenal strictures	2	6.9
Small bowel dilatation	16	55.2
Lymphadenopathy	25	86.2
– With necrosis	15	51.7
Ascites	15	51.7
Hepatosplenomegaly	7	24.1
Pulmonary findings	5	17.2
Psoas abscess	1	3.4

Small bowel masses were detected in 13 patients (21.6%), including adenocarcinoma (n=2), GIST (n=4), carcinoid tumours (n=2), and polyposis (n=5), all of which were confirmed histopathologically or by surgery. One patient had features of Crohn's disease with classical skip lesions, mural thickening, and comb sign. [Table 4]

Table 4: Small Bowel Masses On CT Enterography (n = 13/60)

Pathology	Frequency (n)	Remarks
Small bowel adenocarcinoma	2	Ileal intraluminal mass, confirmed surgically
Gastrointestinal stromal tumour	4	Duodenal (2), Jejunal (2) – FNAC/Histopathology proven
Small bowel carcinoid	2	Terminal ileum, PET-CT positive, confirmed surgically
Polyposis	5	2 Peutz–Jegher's, 2 Gardner's, 1 nonspecific jejunal polyposis
Crohn's disease	1	Skip lesions, mural stratification, comb sign

Negative CT enterography findings were reported in 12 patients, who remained clinically stable on follow-up. Low-grade obstruction was seen in 28 patients, while isolated rare cases included gallstone ileus (n=1) and ileal perforation (n=1).

CT enterography showed caecal wall thickening. FNAC revealed adenocarcinoma. Comparison of CT enterographic diagnosis and final diagnosis is summarized in Table 5.

Table 5: Follow-up And Final Diagnosis In Patients Undergoing CT Enterography (n = 60)

CT enterography diagnosis	Type of follow up	Duration of follow up	Final diagnosis	Result
Small bowel TB	Clinical	6 months	Small bowel TB	True +ve
Small bowel TB with polyposis	Clinical/Surgical	6 months	Small bowel TB with polyposis	True +ve
Duodenal GIST	Surgical	2 months	Duodenal GIST	True +ve
Abdominal TB	Clinical	9 months	Abdominal TB	True +ve
Normal study	Clinical	3 months	Normal	True –ve
Abdominal TB	Clinical	9 months	Abdominal TB	True +ve
Small bowel TB with intussusception	Clinical	9 months	Small bowel TB	True +ve
Abdominal TB	Clinical	9 months	Abdominal TB	True +ve
Normal study	Clinical	3 months	Normal	True –ve
Abdominal TB	Clinical	9 months	Abdominal TB	True +ve

Abdominal TB	Clinical	6 months	Abdominal TB	True +ve
Abdominal TB	Clinical/FNAC	9 months	Abdominal TB	True +ve
Caecal mass	Clinical/FNAC	3 months	Adenocarcinoma	True +ve
Adenocarcinoma	Surgical	3 months	Adenocarcinoma	True +ve
Ileal perforation	Surgical	2 months	Small bowel TB with ileal perforation	True +ve
Abdominal TB	Clinical	6 months	Abdominal TB	True +ve
Small bowel polyposis	Surgical	2 months	Peutz–Jegher's syndrome	True +ve
Abdominal TB + Chiladiti's	Clinical	6 months	Abdominal TB with Chiladiti's syndrome	True +ve
Normal study	Clinical	3 months	Normal	True –ve
Carcinoid	Surgical/biopsy	6 months	Carcinoid	True +ve
Abdominal TB	Clinical	6 months	Abdominal TB	True +ve
Abdominal TB	Clinical	6 months	Abdominal TB	True +ve
Polyposis + desmoid	Clinical/histology	3 months	Gardner's syndrome	True +ve
Abdominal TB	Clinical	9 months	Abdominal TB	True +ve
Jejunal GIST	Surgical/histology	4 months	Jejunal GIST	True +ve
Normal study	Clinical	4 months	Normal	True –ve
Normal study	Clinical	3 months	Normal	True –ve
Normal study	Clinical	3 months	Normal	True –ve
Crohn's disease	Clinical	9 months	Crohn's disease	True +ve
Gall stone ileus	Surgical	3 months	Gall stone ileus	True +ve
Abdominal TB	Clinical	6 months	Abdominal TB	True +ve
Abdominal TB	Clinical	9 months	Abdominal TB	True +ve
Abdominal TB	Clinical	6 months	Abdominal TB	True +ve
Normal study	Clinical	3 months	Normal	True –ve
Small bowel adenocarcinoma	Surgical	4 months	Adenocarcinoma	True +ve
Jejunal polyposis	Surgical	2 months	Peutz–Jegher's syndrome	True +ve
Abdominal TB	Clinical	6 months	Abdominal TB	True +ve
Carcinoid	Surgical/histology	6 months	Carcinoid	True +ve
Abdominal TB	Clinical	9 months	Abdominal TB	True +ve
Normal study	Clinical	3 months	Normal	True –ve
Abdominal TB	Clinical	6 months	Abdominal TB	True +ve
Jejunal GIST	Surgical	3 months	Jejunal GIST	True +ve
Abdominal TB	Clinical/FNAC	9 months	Abdominal TB	True +ve
Crohn's disease	Clinical	6 months	Crohn's disease	True +ve
Abdominal TB	Clinical	6 months	Abdominal TB	True +ve
Abdominal TB	Clinical	9 months	Abdominal TB	True +ve
Normal study	Clinical	3 months	Normal	True –ve
Abdominal TB	Clinical	6 months	Abdominal TB	True +ve
Small bowel polyposis	Clinical/surgical	3 months	Gardner's syndrome	True +ve
Ileal perforation	Surgical	2 months	TB with ileal perforation	True +ve
Normal study	Clinical	4 months	Normal	True –ve
Abdominal TB	Clinical	9 months	Abdominal TB	True +ve
Adenocarcinoma	Surgical	3 months	Adenocarcinoma	True +ve
Abdominal TB	Clinical	6 months	Abdominal TB	True +ve
Carcinoid	Surgical	6 months	Carcinoid	True +ve
Abdominal TB	Clinical	9 months	Abdominal TB	True +ve
Normal study	Clinical	3 months	Normal	True –ve
Abdominal TB	Clinical	6 months	Abdominal TB	True +ve
Jejunal GIST	Surgical	4 months	Jejunal GIST	True +ve
Normal study	Clinical	3 months	Normal	True –ve

The overall diagnostic performance of CT enterography in small bowel disease showed sensitivity of 95.0%, specificity of 100%, positive predictive value of 100%, negative predictive value of 87.5%, and diagnostic accuracy of 96.7%.

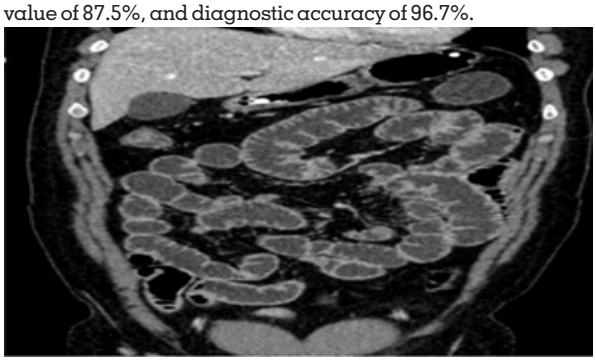

Figure 1: Optimal Distension Of The Jejuno-ileal Loops.

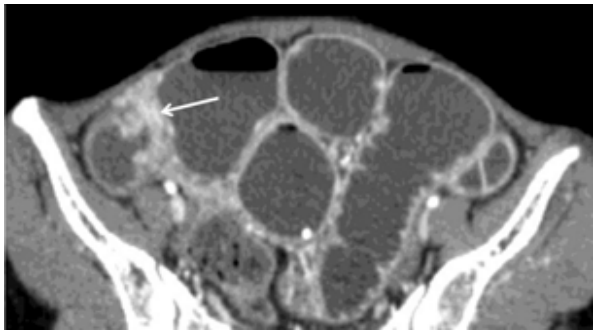

Figure 2: Segmental Thickening Of The Ileal Wall With

Contrast Enhancement And Associated Luminal Narrowing, Indicative Of A Tubercular Stricture

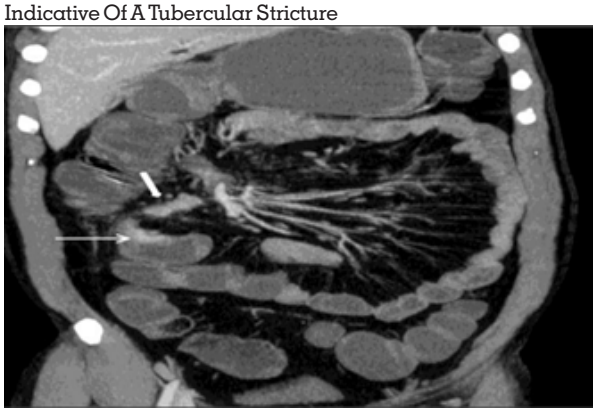

Figure 3: Focal enhancing lesion in the ileal wall (thin arrow) representing a small bowel carcinoid, accompanied by mesenteric lymphadenopathy (thick arrow).

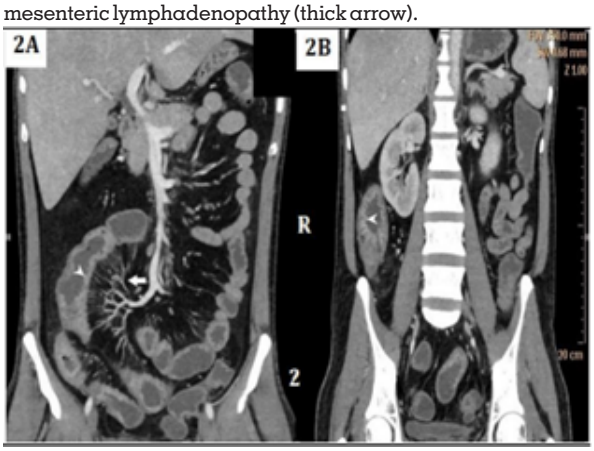

Figure 4. Coronal CT enterography images (2A & 2B) demonstrate prominence of the vasa recta, producing the characteristic comb sign (arrows), along with perienteric fat stranding along the mesenteric aspect of the thickened bowel (arrowhead in 2A). Image 2B further shows mural hyperenhancement with a layered (stratified) enhancement pattern (arrowhead), findings consistent with Crohn's disease.

DISCUSSION

This prospective study reaffirms the diagnostic utility of multidetector CT enterography (MDCTE) in evaluating a wide range of small bowel disorders. Sixty patients were examined using oral iso-osmotic mannitol, which was well tolerated without significant discomfort. Adequate bowel distension was critical for diagnostic accuracy and was achieved in 93.3% of ileal loops and 73.3% of jejunal loops, consistent with Paulsen SR et al., who reported no significant difference between nasojejunal intubation and oral intake of large fluid volumes [9].

Out of 60 patients, CT enterography detected pathology in 48 and excluded disease in 12, highlighting its dual role as both a sensitive and reliable negative diagnostic test. In 13 cases, CT enterography identified abnormalities undetected by clinical evaluation and ultrasonography, confirming its superiority as a comprehensive tool for abdominal imaging [10].

Abdominal tuberculosis emerged as the most common diagnosis, seen in 29 patients (48.3%). The ileum and ileocecal junction were the most frequently affected sites, with strictures observed in 25 and 23 patients respectively. A total of 54 strictures were identified, ranging from 7–14 mm in thickness (mean 9.6 mm). These findings align with Leder RA et al., who reported ileocecal involvement in 90% of cases [11], while our study demonstrated nearly universal involvement (100%). Strictures were the most consistent feature, noted in 86.2% of cases, corroborating the findings of Nagi B et al. (62.7%) [12]. Other associated findings included bowel wall thickening, mural stratification, hyperenhancement, bowel dilatation, enterolithiasis, and fistula formation. Extramural manifestations such as mesenteric lymphadenopathy (41.6%, necrotic in 15 cases), ascites (25%), hepatosplenomegaly (11.6%), and psoas abscess (1.6%) were also well demonstrated. The sensitivity and specificity for abdominal tuberculosis were 93.1% and 100% respectively, confirming the reliability of CT enterography.

Crohn's disease was diagnosed in one patient, where characteristic findings included skip lesions in the terminal ileum, mural stratification, fibrofatty proliferation, hyperenhancement, and the "comb sign." These results are consistent with Hara AK et al., who showed CT enterography to be more than twice as sensitive as small bowel follow-through (SBFT) [13]. Wold PB et al. also reported superior accuracy of CT enterography, detecting 10 of 13 Crohn's cases compared to 8 of 13 with SBFT [14].

Small bowel masses were identified in 13 patients (21.6%), including adenocarcinoma (n=2), gastrointestinal stromal tumours (n=4), carcinoid tumours (n=2), and syndromic polyposis (n=5). The sensitivity of CT enterography in detecting small bowel tumours was 86%, similar to Pilleul F et al. (84.7% sensitivity, 96.9% specificity) [15]. Carcinoid tumours, known for their small size at presentation, were visualized as hyperenhancing nodules in the terminal ileum, findings that align with Anzidei M et al., who stressed the importance of optimal bowel distension [16]. Coulier B et al. also emphasized the arterial phase in detecting small, vascular tumours and defining their relationship with mesenteric vessels for surgical planning [17]. This study's findings corroborate these observations.

Although rare (3–6% of gastrointestinal neoplasms) [18], small bowel tumours were effectively detected in this cohort, including adenocarcinomas, GISTs, carcinoids, and polyposis syndromes, underscoring CT enterography's value in early diagnosis and management.

Low-grade small bowel obstruction was another major diagnostic category, observed in 28 patients (46.6%). CT enterography was able to clearly depict the site, level, and cause of obstruction in all cases, achieving 100% sensitivity and specificity. Zhang LH et al. similarly demonstrated the superiority of CT enterography (sensitivity 89%, specificity 100%) over conventional CT (50% and 94%) in partial obstruction [19]. Classic CT features such as proximal bowel dilatation >2.5 cm, distal collapse, and presence of a transition zone were evident in these cases [20–22].

Overall, CT enterography demonstrated excellent diagnostic performance, with sensitivity of 95.0%, specificity of 100%, positive predictive value of 100%, negative predictive value of 87.5%, and accuracy of 96.7%. These values are in line with prior studies, which reported sensitivities ranging from 78% to 100% for small bowel disease [21–25].

Although the study provided valuable insights into the role of CT enterography in small bowel disorders, its limitations include a relatively small, single-center sample size and lack of comparison with other advanced modalities such as MR enterography or capsule endoscopy. Larger multicentric studies are warranted to strengthen and validate these findings.

CONCLUSION

Multidetector CT enterography has emerged as a transformative imaging modality in the evaluation of small

bowel disorders, offering a unique combination of excellent luminal distension, multiplanar capability, and comprehensive assessment of bowel wall as well as extra-intestinal structures. In this prospective study of 60 patients, CT enterography not only identified abdominal tuberculosis—the most frequent pathology, predominantly involving the ileum and ileocecal junction—but also accurately depicted strictures, mural enhancement, mesenteric lymphadenopathy, and associated complications. Beyond tuberculosis, it demonstrated high reliability in diagnosing small bowel neoplasms such as adenocarcinoma, GIST, carcinoid, and syndromic polyposis, as well as classic features of Crohn's disease and low-grade obstruction. Negative findings correlated with benign clinical outcomes, underscoring its specificity. With an overall sensitivity of 95%, specificity of 100%, and diagnostic accuracy of 96.7%, CT enterography stands out as a safe, patient-friendly, and diagnostically superior technique that should be advocated as a first-line investigation for suspected small bowel diseases.

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