

Approach to CT Findings in Non-Neoplastic Bowel Wall Abnormalities

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Introduction

Abnormal bowel wall pattern is a common CT finding; ability of interpretation of the available imaging data to reach a specific diagnostic etiology entails a prime consideration in most of clinical sittings as it may encounter use of further intervention or not.

Aim of the work

The aim of this study was to assess the role of multi-detector computed tomography in detection of non-neoplastic bowel wall lesions.

Patients & Methods

Twenty-eight patients diagnosed with abnormal bowel pattern due to non-neoplastic causes by multi-detector CT machine were included. Full history taking, thorough clinical examination and laboratory investigation were done. MDCT and CT entero-colonography were performed. The resulting image data set is then displayed on a specific workstation with complex image analysis software to produce 3D and MIP images.

Results

Among the examined patients, 60.7% were female and 39.3% males with a mean age of 53 years. 35.4% of patients suffered vascular insults (Figure 2), with IBD (Figure 1) as well as infections each presented in 14.3% of patients, other conditions including diverticulitis, drug induced enteritis presented collectively in 35.4% of cases.

Conclusion

This review shows algorithmic approach used to help in characterization of non-neoplastic bowel abnormalities.

Table (2): Distribution of studied patients according to the etiology of abnormal bowel wall pattern.

Type of abnormality	Gender		Total
	Male	Female	
Inflammatory	1	3	4
Vascular	5	5	10
Infective	3	1	4
Other	2	8	10
Total	11	17	28

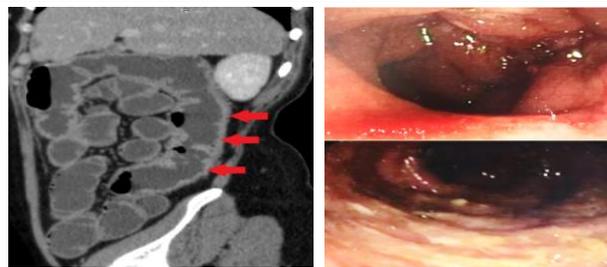


Figure 1. A case of Crohn's disease. Sagittal CT view showing mild diffuse mucosal circumferential thickening of the ascending colon (red arrows). Ileo-colonoscopy revealed loss of normal mucosal vascular pattern as well as multiple serpiginous, aphthoid mucosal ulcers.

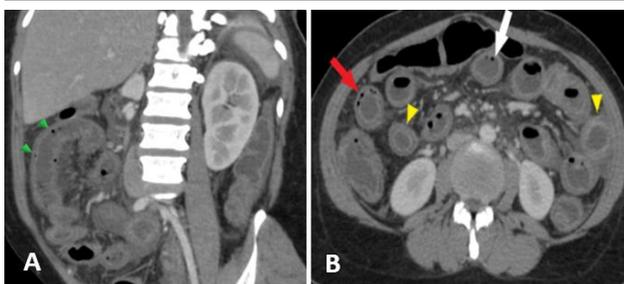


Figure 2. (A) Coronal CT showing segment of ileal bowel loop showing few foci of pneumatosis (green arrowheads). (B) Axial CT showing diffuse ileal submucosal edema (target sign/water halo) (yellow arrowheads), few mural air foci (pneumatosis) (red arrow) compared to pseudo-pneumatosis (white arrow).

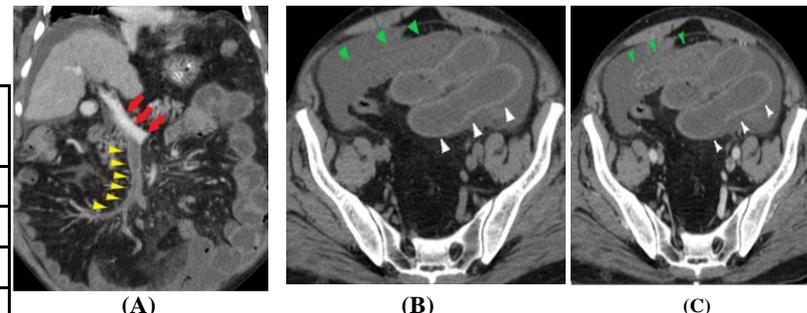


Figure 2. (A) Coronal CT view showing partially thrombosed PV with total thrombosis of the SMV. (B) Non-contrast (C) venous phase showing the initially hyperdense non-enhancing mucosa of distended ileal bowel loops (white arrowheads) compared to adjacent bowel hypo-enhancing ileal bowel loop (green arrowheads).

