

Original Research Article

Spectrum of Histopathological Lesions Involving Ileocecal Region among Colectomy Specimens in Era of Radiodiagnosis: An Interesting Case Series

Dr. V. Lokeshwari¹, Dr. Hemalatha Ganapathy², Dr. B.O. Parijatham³

¹Postgraduate, ²Professor of pathology, ³HOD and Professor of pathology, Sree Balaji Medical College and Hospital, Chromepet – 600044, India

*Corresponding author

Dr. V. Lokeshwari

Email: dr.lokeshwari07@gmail.com

Abstract: Ileocecal junction is the major transition zone and it is considered as valve rather than a sphincter and this study includes various lesions that affect the ileocecal region, its presenting symptoms, signs and the choice of treatment. The study was observation of right sided colonic specimens which has been misdiagnosed clinically, surgically, which on histopathological examination turned out to be a different lesion in few cases and it includes patients of various age groups with both symptomatic and asymptomatic features. The role of imaging plays essential role in arriving the diagnosis and also crucial because of the diagnostic errors.

Keywords: Ileocecal, appendix, colon, mucinous, carcinoma.

INTRODUCTION:

Ileocecal junction is the major transition zone and it is considered as valve rather than a sphincter and this study includes various lesions that affect the ileocecal region, its presenting symptoms, signs and the choice of treatment[1]. Radiodiagnosis is an emerging tool which is very useful in identifying various lesions that is missed during clinical diagnosis[8]. However due to their non-specific imaging features, it is not reliable enough to differentiate between benign and malignant tumours[7].

The aim of this study is to bring clinical attention that there is variation in presentation that do not correlate with histopathology.

MATERIALS AND METHOD:

- This is a retrospective study done in Department of Pathology, SBMCH
- Study period - June 2014 to June 2016
- The material was received as surgically resected specimen from Department of General Surgery, SBMCH.
- Out of 24 colectomy specimens, 4 cases had varied presentation
- Clinical details like age, sex, signs and symptoms and other findings are included.
- The specimens were allowed to fix in 10% formalin for 24 – 48 hours.

- The gross features are noted and multiple bits were taken from representative areas, processed for Histopathological Examination.

OBSERVATION:

Table-1: Distribution of cases in this study

Intestinal tuberculosis	1
Subacute appendicitis with organised fibrosis of periappendiceal abscess	1
Intestinal perforation	1
Mucin secreting adenocarcinoma	1
NHL	1
Infiltrating mucinous carcinoma	1
Neuroendocrine adenocarcinoma	1
Infiltrating moderately differentiated adenocarcinoma	3
Villous adenoma with moderate dysplasia	1
Pseudomembranous colitis	1
Crohn's disease	1
Mucin secreting adenocarcinoma involving colon and appendix	2
Infiltrating mucin secreting adenocarcinoma of colon	2
Infiltrating poorly differentiated adenocarcinoma	1
Poorly differentiated carcinoma with multicentric serosal involvement	1
Infiltrating moderately differentiated adenocarcinoma	1
Nodular lymphoid hyperplasia	1
Gangrene	2
Ulcerative colitis	1

Table-2: Distribution of symptoms that patient presented in this study

Abdominal pain	60
Vomiting	30
Constipation	30
Gastrointestinal bleed	10
Loss of weight	10
Diarrhoea	20
k/c/o TB	1
Mass abdomen (RIF)	40

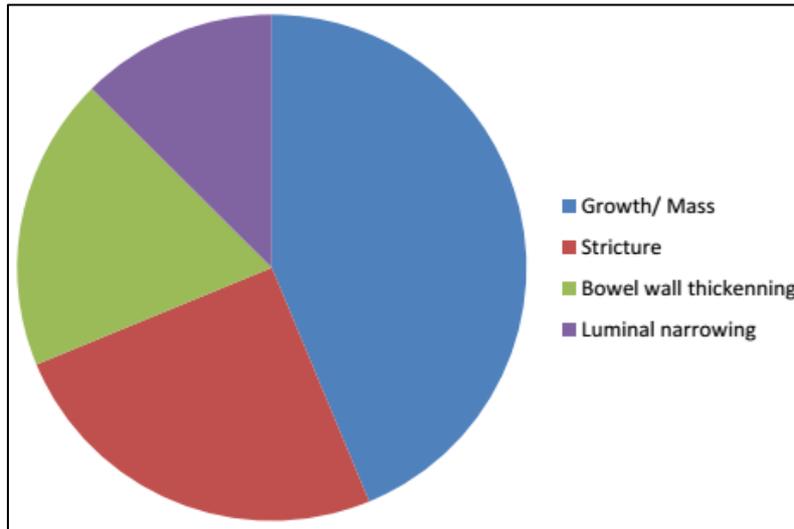


Fig-1: Most common findings present radiologically in this study

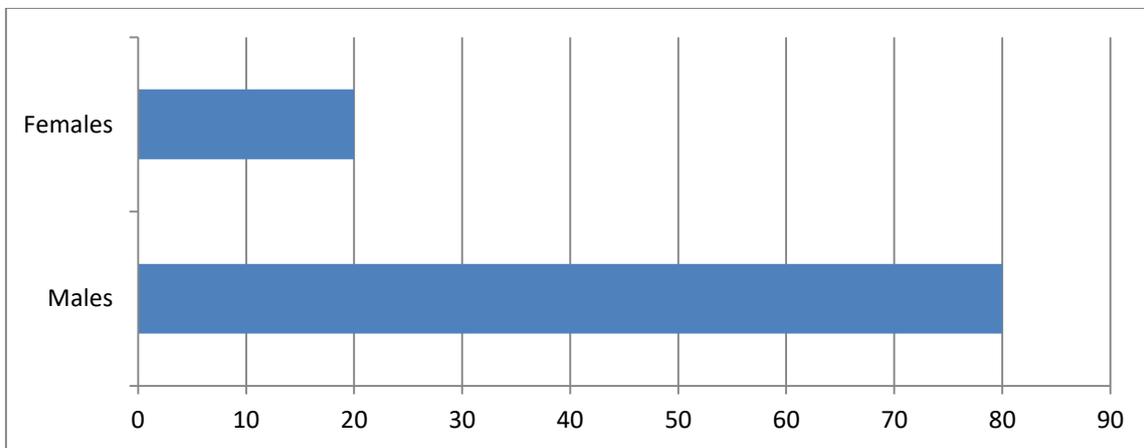


Fig-2: Distribution of cases among male and female

CASE 1:

- 79/M - C/o pain and mass abdomen.
- USG and colonoscopy revealed ileocecal growth.
- Right hemicolectomy is done.
- GROSS:
 - Multiple raised serosal nodules

- Globular enlargement of cecum
- Appendix rounded and thickened, C/S shows dilated lumen filled with gelatinous material
- Enlarged ulcerated lesion in cecum beyond ileocecal valve measuring 8x6cm occupying the entire circumference of the cecum.



Fig-3: Gross Anatomy of CASE 1

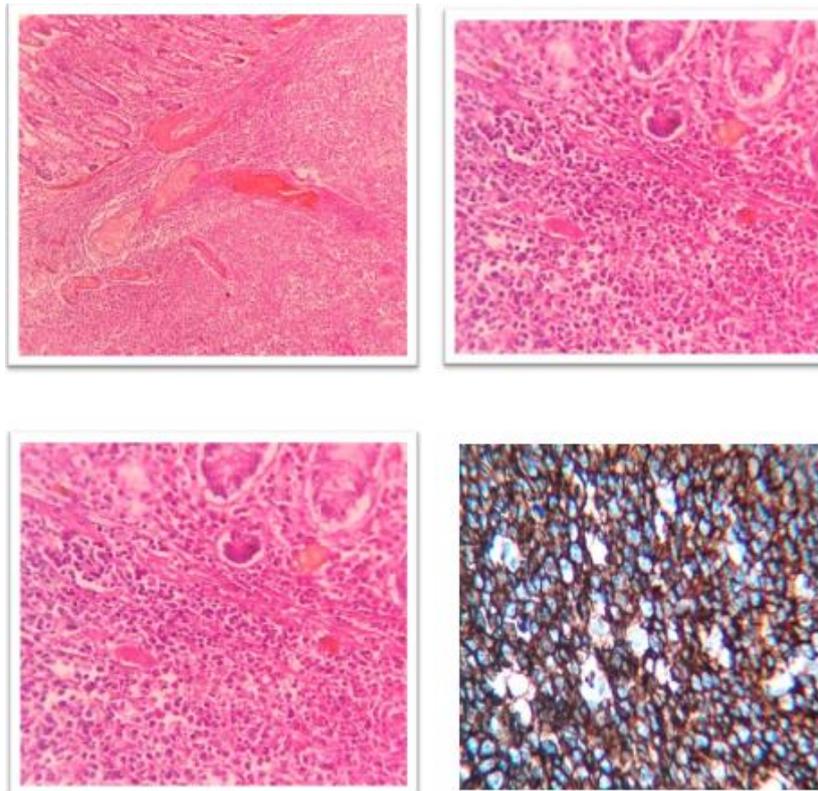


Fig-4: Microscopic study of CASE 1

MICROSCOPY: Sections from the Right hemicolectomy specimen shows cellular neoplasam in the caecum composed of diffuse sheets of lymphocytes with coarse

IMPRESSION: Right Hemicolectomy - Diffuse large B – cell lymphoma (CD 20+ve)

CASE 2:

- 73/M – C/O not passing stools and vomiting for past 1 week.
- Right hemicolectomy is done.
- GROSS: Specimen in toto measuring 52cms

(Large intestine 42cms+ Small intestine 10cms)
C/S of ileum– Unremarkable
Colon - Multiple ulcers Present
-foci of flattened mucosa

-Cobble stone appearance in transverse colon
-Stricture present at 7cm from distal resected margin
-Appendix measuring 5cm, unremarkable.



Fig-5: Gross Anatomy of CASE 2

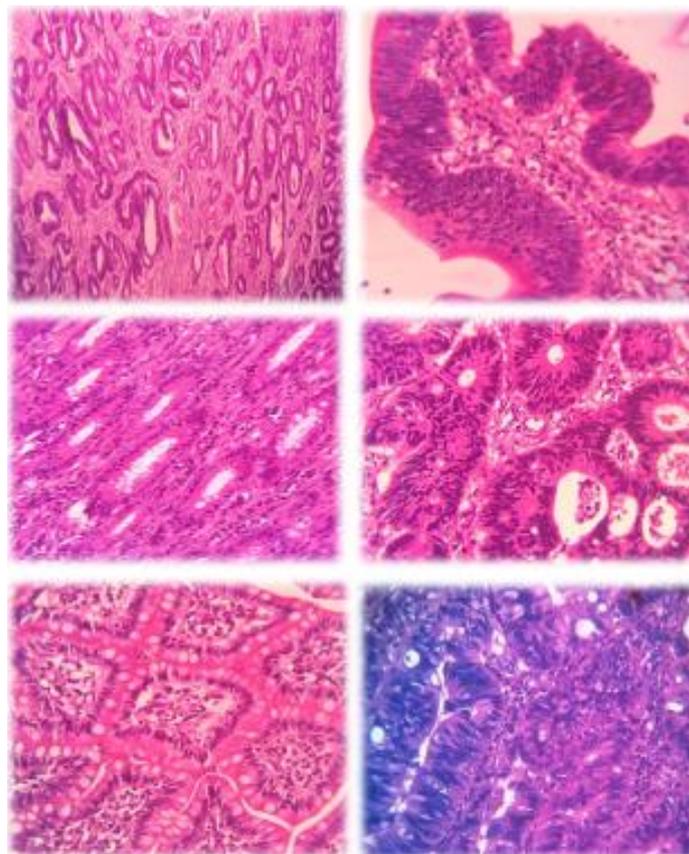


Fig-6: Microscopic study of CASE 2

IMPRESSION: Infiltrating moderately differentiated adenocarcinoma of the colon

CASE 3:

- 56/M - C/o pain abdomen x 10days aggravated since 3 days and constipation for 3 days.
- USG suggested ?Subacute intestinal obstruction/ TB.
- CT ABDOMEN – Ileo-cecal wall thickening
 - Terminal ileum narrowing
 - appendix could not be identified
- Right hemicolectomy with ileocolicanastomosis is done.

- GROSS: Specimen in toto measuring 43 cms (Large intestine 13cms + Small intestine 30cms)
- E/S -Multiple tubercles studded over serosa
- C/S – Stricture made out at the ileocecal junction
 - greyish white are ? growth of 2x2cm
 - Appendix flushed with surface Omental bits separately sent



Fig-7: Gross Anatomy of CASE 3

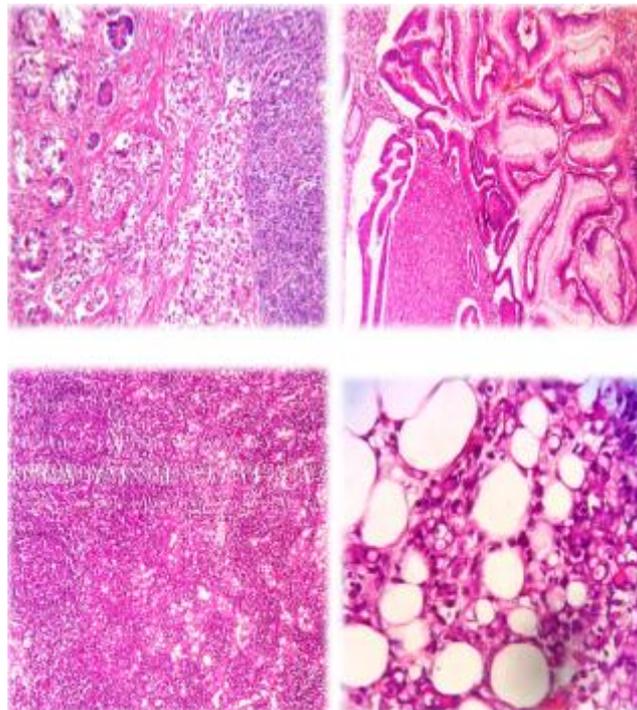


Fig-8: Microscopic study of CASE 3

IMPRESSION: Infiltrating Mucin secreting adenocarcinoma involving ileocecal region and appendix with lymph node and peritoneal deposits.

CASE 4:

- 25/F – k/c/o Tuberculosis of Abdomen 1 years back and took treatment
- Now came with C/o Vomiting and Abdominal pain

- CLINICAL DIAGNOSIS: ?Sub acute intestinal obstruction in TB Abdomen
- PROCEDURE: End to end ileocolic anastomosis
- GROSS: Specimen in toto measuring 60cm, Dilated small intestine
Stricture present 5cm from ileocecal junction
Appendix measuring 5cm
- c/s shows multiple ulceration with small tubercles studded all over the mucosal surface



Fig-9: Gross Anatomy of CASE 3

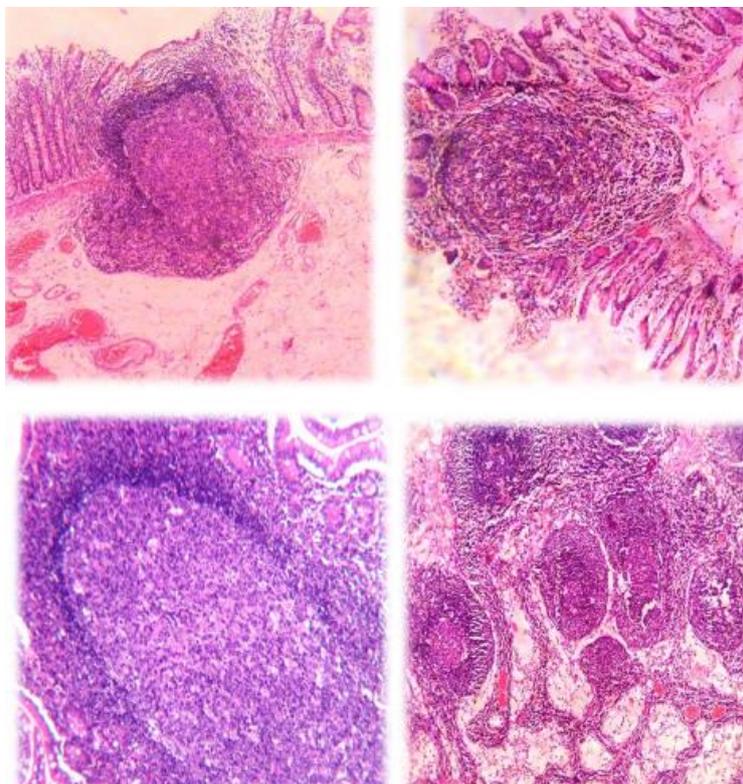


Fig-10: Microscopic study of CASE 3

IMPRESSION: Nodular lymphoid hyperplasia of the intestine with focal ulceration

DISCUSSION:

The pathology of ileocecal junction is polymorphic, it may be inflammatory, infectious, non-neoplastic and neoplastic[4]. Ileocecal segment is relatively short in Gastrointestinal tract which can be affected by either commonest or uncommon lesions. The structures of ileocecal region are located close together in which most commonly involving coexisting lesion[3], which leads to diagnostic dilemma when the primary or the secondary site is thought off. The degree of involvement, associated findings will help to narrow down the differential diagnosis.

The varied presentations of the lesions discussed in this study mostly presented with symptoms with respect to ileocecal region[6], most commonly growth, obstruction, stricture, acute appendicitis and its associated constitutional symptoms. The most confusing issue among diagnosing such lesions is

because of the most possible and least possible differential diagnosis that sometimes gives guidance or approach to definitive diagnosis[5].

The diagnosis is usually made by correlating clinical, radiological, per-operative, gross and histopathological findings with respect to its usual presentations according to age, sex, duration of symptoms, dietary and environmental habits.

Sometimes due to the diagnostic errors the malignant lesions are missed by mistaking it as benign[10], thus altering the treatment modality and its prognosis. Such patients need adequate follow up with medications and screening at regular intervals.

Among the 24 colectomy specimens studied, 4 cases had varied clinical, radiological and suspicious gross features that do not correlate with usual presentation which turned out to be a different lesion during microscopic examination.

	CLINICAL / GROSS / RADIOLOGICAL DIAGNOSIS	HISTOPATHOLOGICAL DIAGNOSIS
CASE 1	Mucin secreting adenocarcinoma	Diffuse large B-cell lymphoma
CASE 2	Crohn's disease	Infiltrating moderately differentiated adenocarcinoma of the colon
CASE 3	Subacute intestinal obstruction TB	Infiltrating Mucin secreting adenocarcinoma involving ileocecal region and appendix with lymph node and peritoneal deposits
CASE 4	Sub acute intestinal obstruction? TB Abdomen	Nodular lymphoid hyperplasia and focal intestinal ulceration

CONCLUSION:

- It is essential to know the accurate anatomy so as to locate the pathognomic findings
- This study is mainly done to bring out the careful evaluation among presentations of the neoplastic lesions that sometimes misleads the clinical diagnosis and the treatment modality.
- Even though the CT is best diagnostic test and optimal to evaluate intra and extramural disease, recognize mural thickening, characterize disease extension and associated findings, only the microscopic findings confirms the final diagnosis.
- Hence, Histopathology plays important role in diagnosis such lesions.

REFERENCES

1. Rosai J. Rosai and Ackerman's surgical pathology. Elsevier Health Sciences; 2011 Jun 20., volume II, edition
2. Shepherd NA, Warren BF, Williams GT, Greenson JK, Lauwers GY, Novelli MR, editors. Morson and Dawson's gastrointestinal pathology. John Wiley & Sons; 2012 Nov 8.
3. El-Amin LC, Levine MS, Rubesin SE, Shah JN, Kochman ML, Laufer I. Ileocecal Valve: Spectrum of Normal Findings at Double-Contrast Barium Enema Examination 1. Radiology. 2003;227(1):52-8.
4. Fletcher CD. Diagnostic Histopathology of Tumors: 2-Volume Set with CD-ROMs. Elsevier Health Sciences; 2007 Mar 29.
5. Dabbs DJ. Diagnostic immunohistochemistry. Elsevier Health Sciences; 2013 Oct 11.
6. Zacharia T. Key points on MRI in Multiple Sclerosis. European Congress of Radiology 2015
7. Sternberg SS, Mills SE, Carter D, editors. Sternberg's diagnostic surgical pathology. Lippincott Williams & Wilkins; 2004.
8. Kleihues P, Sobin LH. World Health Organization classification of tumors. Cancer. 2000;88(12):2887-.
9. Horton KM, Jones B, Bayless TM, Lazenby AJ, Fishman EK. Mucinous adenocarcinoma at the ileocecal valve mimicking Crohn's disease. Digestive diseases and sciences. 1994;39(10):2276-81.

10. Iafrate F, Rengo M, Ferrari R, Paolantonio P, Celestre M, Laghi A. Spectrum of normal findings, anatomic variants and pathology of ileocecal valve: CT colonography appearances and endoscopic correlation. *Abdominal imaging*. 2007;32(5):589-95.