ORIGINAL RESEARCH PAPER
Volume - 12 | Issue - 04 | April - 2023 | PRINT ISSN No. 2277 - 8179 | DOI : 10.36106/ijsr
INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

A HISTOPATHOLOGICAL STUDY OF GASTROINTESTINAL TRACT LESION IN SPECIMENS RECEIVED FROM TERTIARY CARE HOSPITAL BHAVNAGAR

Histopathology

Dr. Prashant Pachauri* Resident Doctor, Department Of Pathology, Government Medical College, Bhavnagar *Corresponding Author

Dr. Alpesh Puri Goswami Associate Professor, Department of Pathology, Government medical college, Bhavnagar

Dr. Kirti Chaudhary Resident Doctor, Department Of Pathology, Government Medical College, Bhavnagar

ABSTRACT

Background: Gastrointestinal tumors make a large proportion of the neoplasms. The histological types of tumor at different gastrointestinal site also differ by incidence and prognosis. Cancer is a major cause of morbidity and mortality, with approximately 18 million new cases and 9.5 million cancer related deaths in 2018. Histopathology is the gold standard for the diagnosis and early diagnosis leads to good prognosis. **Material and Method:** The present study was conducted in Histopathology section, Pathology department, Government Medical College, Bhavnagar after getting approval from Scientific research committee and Ethical committee. Received specimen were studied grossly and after tissue processing microscopic examination was noted from the slides prepared. Data was recorded and analysis was done using Epi info software. **Result:** 111 specimens were studied. Out of which, maximum cases were in the age group of 21-40 years(29.73%). Majority were females (69.37%). The most common were non-neoplastic lesions (91.29%) and among them appendicitis was most common (55.86%). Malignancy was found in 4.50% and adenocarcinoma was the most common diagnosis. **Conclusion:** The most common lesion in our study was non-neoplastic lesion.Acute appendicitis was found to be the most common non-neoplastic lesion and among malignant lesion, most common was adenocarcinoma. Early detection of suspected lesions by biopsy for histopathological examination is helpful for timely diagnosis, better management and good prognosis.

KEYWORDS

Adenocarcinoma colon, Appendicitis, Colitis, Intestinal TB, SCC

INTRODUCTION

The gastrointestinal (GI) tract is a hollow tube extending from the oral cavity to the anus that consists of anatomically distinct segments, including the oesophagus, stomach, small intestine, colon, rectum, and anus. Gastrointestinal tract (GIT) is a common site for numerous pathological processes from non-neoplastic, pre-neoplastic to neoplastic.

GI tumors constitute one of the major causes of morbidity and mortality worldwide and include both benign and malignant tumors. Gastrointestinal malignancies account for 12.9% of all malignant diseases.[1] They continue to be the second leading cause of cancer related deaths in the developed world. The early detection and treatment of gastrointestinal neoplasms has been shown to improve patient's survival significantly.[2]

Endoscopy is a minimally invasive diagnostic medical procedure directly visualizing any part of the inside of the body, using an endoscope. [3] An endoscopy or colonoscopy has become incomplete without biopsy for histopathological examination. [4,5]

Histopathology is regarded as the most sensitive and specific diagnostic method (gold standard) for the early detection of GIT lesions (especially malignant cases) and plays an important role in the diagnosis and therefore aids in their early management.

MATERIAL AND METHODS

The study was conducted in Histopathology Department, Government Medical College Bhavnagar, Gujarat. Study was undertaken after approval from ethical committee of government medical college, Bhavnagar and my EC approval No. is 1060/2021& CTRI No. REF/2021/06/044592.

Inclusion Criteria

All Gastrointestinal tract specimen.

Exclusion Criteria

Autolysed Specimen

OBSERVATION AND RESULTS

111 specimens were studied out of which, maximum cases were in the age group of 21-40 years (29.73%). Majority were females with 69.37%. The most common were non-neoplastic lesions with 91.29% and among them appendicitis was most common with 55.86%. Malignancy was found in 4.50% and adenocarcinoma was the most common diagnosis.

Table I: Age Group Wise Distribution Of GI Lesions:

Age group	Number of cases	Percentage (%)
0-20	27	24.32%
21-40	33	29.73%
41-60	31	27.93%
61-80	20	18.02%
Total	111	100

Table II: Gender Wise Distribution Of Patients Presented With GI Lesions:

Gender	Number of cases	Percentage (%)
Female	77	69.37%
Male	34	30.63%

Table III: Distribution Of Lesions According To Histopathological Diagnosis:

Histopathological Diagnosis	No. of cases	Percentage (%)
Non-neoplastic	102	91.89%
Neoplastic		
Benign	3	2.70%
Malignant	6	5.41%

Table IV: Distribution Of GIT Lesions According To Site And Type:

Site	Non-neoplastic	Neoplastic		Total
		Benign	Malignant	
Oesophagus	-	-	2	02
Stomach	4	-	1	05
Duodenum	1	-	-	01
Jejunum	2	-	-	02
Ileum	20	2	1	23
Caecum	3	-	-	03
Mesenteric lymph node	2	-	-	02
Appendix	61	-	-	61
Colon	3	-	1	04
Sigmoid colon	2	-	-	02
Rectum	1	1	1	03
Anal Canal	3	-	-	03

Table V: Distribution Of Appendicular Lesions:

Appendix	No. of cases	Percentage(%)
Acute appendicitis	38	62.29%

Chronic appendicitis	23	37.70%

DISCUSSION

There were111 Gastrointestinal tract specimen were collected for Histopathological Diagnosis in our study.

The most common age group in our study was 21-40 years with 29.73% cases which is comparable with study conducted by Neha K et al with 35.5% cases in the age group of 21-40 years.

In our study the incidence of Gastrointestinal tract lesions is more in females than males. While, in study by Neha K. et al, the incidence of Gastrointestinal tract lesion was more in males than females[7].In another study by Neha Goel the incidence of Gastrointestinal tract lesion was almost equal in male and female[6]

In the present study, we observed Non-Neoplastic Lesions were more over Neoplastic lesions. The similar result was found in the study conducted by Neha K. et al[7] and study by Rajesh Y.et al[8]. However, the study conducted by Chhanda et al[9] contradicted the results with more observation of neoplastic lesions.

Upper GI Tract involves Esophagus, Stomach and Duodenum.
Lower GI Tract involves Jejunum, Ileum, Appendix, Colon, Rectum and Anal Canal.

In Upper GIT, in present study, maximum number of lesions were in Stomach i.e., 05 cases followed by esophagus i.e., 02 cases and Duodenum i.e., 01 case. Similar findings were there in the studies conducted by Neha K. et al,[7] Islam et al[10], Aprajita et al[11], with 71.9%, 75.26%, 79.17 % respectively in Stomach followed by Esophagus and duodenum

Similarly in Lower GIT lesions, in present study maximum no. of lesions were in Appendix followed by small intestine, Colorectum and anal Canal. Similar findings were in the study of Twinkle et al (Rajkot)[12]. While, a study conducted by Neha K. et al[7], maximum no. of lesions was in Colo- rectum having 42.65% followed by small intestine, Appendix, Anal Canal with 27.59%, 21.50% and 7.88% respectively.

There was a wide variation in age with high incidence in 2nd and 6th decade. Similarly in study of Twinkle C. et al[12] highest incidence was 6th decade of life while in study of Neha K. et al[7], it was 5th decade of life. This variation in age group in other studies is may be due to variation in demographic data in various geographical areas.Also, we should consider the fact that majority population of studied area is vegetarian thus decreasing the incidence of neoplastic lesions.

In our study there were only 2 cases among which both were neoplastic, comparative to study of Chhanda et al,[9] and Twinkle C. et al,[12] in which also all cases were Neoplastic. While in study of Neha K. et al[7], there were 18 cases among which 38.88% cases were Non neoplastic and 61.11% were non-neoplastic.

In present study, two neoplastic lesions of esophagus were Squamous Cell Carcinoma (100%). Also, in Study of Twinkle C et al[12], 66.67% were Squamous Cell Carcinoma and 33.33% of benign etiology, while in study of Rashmi et al[13], there were 100% case of Squamous Cell Carcinoma.

In present study Stomach showed 04 cases of non-neoplastic tumors and 01 case of Neoplastic lesion.Similar findings were seen in the study by Neha K. et al,[7] while findings were contradicted in Bilal et al,2015 with 68.50% Neoplastic tumors.

In our study there is only 1 case of malignancy out of 5 cases that is Adenocarcinoma of Stomach.

There is predominance of non-neoplastic lesions over neoplastic lesions with 23 and 03 in cases out 26 cases. Similar results were concluded in the study by Neha K. et al[7] and Twinkle et al.[12]

Out of 3 Neoplastic cases, 1 was malignant adenocarcinoma of ileum and 2 were Benign.

In present study all appendicular lesions were non-neoplastic which was compared to Neha K. et al, and Twinkle et al.[7,12]In present Study Chronic appendicitis was the most common appendicular lesion as well as most common Gastrointestinal tract lesion which is comparable with studies by Neha K. et al.[7]

In present study, it was observed 09 (81.8) cases of large intestine were non-neoplastic and 02(18.1%) were neoplastic lesions. It is in concordance with study conducted by Neha K. et al. While, study by Ritesh et al contradicted our study with 66.96% of neoplastic lesions.[7,14]

Out of 3 neoplastic lesions one was benign and 2 were malignant. One was adenocarcinoma of colon and other was adenocarcinoma of rectum.

In our study, all the Anal lesions were non-neoplastic with 3 cases. A similar study conducted by Neha K. et al and Twinkle c et al concluded maximum non-neoplastic cases with 68.18 % and 77,78% respectively.[7,12]

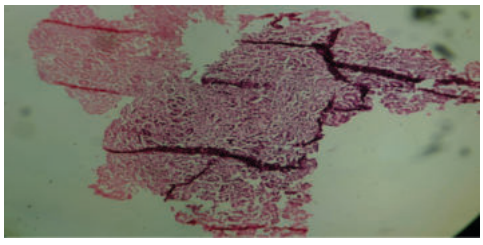

Figure 1- Gastric Adenocarcinoma 10X view, H&E Stain

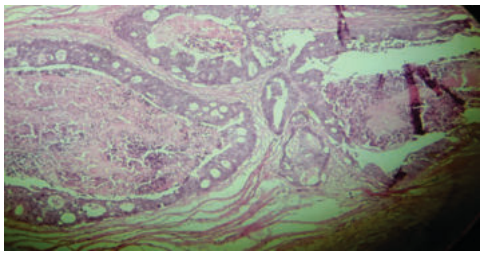

Figure 2- Rectal Adenocarcinoma 10X view, H&E Stain

CONCLUSION

The most common lesion in our study was non-neoplastic lesion.Acute appendicitis was found to be the most common non-neoplastic lesion and among malignant lesion, most common was adenocarcinoma. Early detection of suspected lesions by biopsy for histopathological examination is helpful for timely diagnosis, better management and good prognosis.

REFERENCES

(1) Kelley, J. R., & Duggan, J. M. (2003). Gastric cancer epidemiology and risk factors. Journal of clinical epidemiology, 56(1), 1-9.
(2) Trisal, M., Goswami, K. C., & Khajuria, A. (2018). A study of histopathological spectrum of gastrointestinal endoscopic biopsies in a tertiary care centre. Saudi J Pathol Microbiol, 3(8), 226-34.
(3) Fenoglio-Preiser, C. M., Lantz, P. E., Michael, D., Listrom, M. B., & Rilke, F. O. (1989). Gastrointestinal pathology an atlas and text. In Gastrointestinal pathology an atlas and text (pp. 892-892).
(4) Prasaad, P. R., & Rao, B. (2016). Histo-pathological spectrum of gastrointestinal lesions-an experience in a tertiary care centre in South India. Int J Res Med Sci, 4(8), 3407-3412.
(5) Thakur, R. Y., Nikumbh, D. B., & Swami, S. Y. (2016). Clinico histopathological overview of git lesions in a rural hospital. Indian Journal of Pathology and Oncology, 3(2), 305-314.
(6) Goel, N. M., Desai, A. Y., Mohan, W. R., & Dombale, V. D. (2019). A study of histopathological spectrum of gastrointestinal tract lesions in a rural Tertiary Care Centre. MedPulse International Journal of Pathology, 12(3), 153–160. https://doi.org/10.26611/1051238
(7) Kumawat, D. N., Shah, D. S., & Goswami, D. H. (2021). A study of histopathological spectrum of gastrointestinal tract lesions in a tertiary care centre. International Journal of Clinical and Diagnostic Pathology, 4(2), 09–12. https://doi.org/10.33545/pathol.2021.v4.i2a.349
(8) Thakur, R. Y., Nikumbh, D. B., & Swami, S. Y. (2016). Clinico histopathological overview of git lesions in a rural hospital. Indian Journal of Pathology and Oncology, 3(2), 305-314.
(9) Das, C., Maity, N., & Mukhopadhyay, M. (2016). A Histopathological Spectrum of Gastrointestinal Tract Lesions In A Tertiary Care Hospital: An Epidemiological Study For Four Years. IOSR Journal of Dental and Medical Sciences, 15(2), 74-77.
(10) Islam, S. M., Ahmed, A. S., Ahmad, M. S., & Hafiz, S. A. M. M. A. (2014). Endoscopic and histologic diagnosis of upper gastrointestinal lesions, experience in a port city of Bangladesh. Chattagram Maa-O-Shishu Hospital Medical College Journal, 13(3), 11–14. https://doi.org/10.3329/cmoshmcj.v13i3.20997
(11) Aparajita A.Mohanty RC,Sahu AA. Histomorphological Study OfUpper GI Endoscopic Biopsies, Int J Med Res Health Sci. 2016;6(12):59-64.
(12) ChaudhariT,Bhalara R,Dhruva G. A histopathological study of spectrum of gastrointestinal tract lesions: Two-year study. MedPulse International Journal of Pathology. August 2018;7(2): 50-56.

(13) Krishnappa, R., Horakerappa, M. S., Ali, K., & Gouri, M. (2013). A study on histopathological spectrum of upper gastrointestinal tract endoscopic biopsies. International Journal of Medical Research & Health Sciences, 2(3), 418. https://doi.org/10.5958/j.2319-5886.2.3.073
(14) Sulegaon, R. (2015). Histological spectrum of large intestinal lesions with clinicopathological correlation. JOURNAL OF CLINICAL AND DIAGNOSTIC RESEARCH. https://doi.org/10.7860/jcdr/2015/14247.6842