



APPENDICECTOMY: HISTOPATHOLOGICAL EXAMINATION IS MUST IN ROUTINE PRACTICE

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ABSTRACT **Objective:** To Study the Various Histopathological Spectrum in detecting Non-neoplastic and Neoplastic lesions in Appendicectomy specimens. **Methods:** This is prospective study of 200 cases with age group 05 to 60 years was carried out from July 2023 to June 2024 in Histopathology section of pathology department, SMIMER Medical college, Surat, India. After carefully examined H&E stain Histology sections. **Results:** In this study, Acute Suppurative Appendicitis was the most common with 40 cases (20%) with unusual findings of Mucocele 2 cases (01%), Parasite 2 cases (01%), Carcinoid 2 cases (01%) and Malignancy 2 cases (01%) in different age groups. **Conclusion:** This study will increase awareness for the importance of Histopathological Examination for diagnosing infectious and Neoplastic pathologies in Appendicectomy specimens.

KEYWORDS : Appendicectomy, Acute Appendicitis, Neoplastic lesions, Mucocele.

INTRODUCTION:

Appendicitis is a global disease and one of the common cause of acute abdomen and emergency surgery with significant morbidity and mortality. The first line of treatment for acute appendicitis is Appendicectomy. There is significant upsurge in the incidence of Acute Appendicitis in urban cities due to the increased intake of western diet. Appendicitis presents with right iliac fossa pain, tenderness, guarding and rigidity with other symptoms like fever and vomiting.

Histopathological examination is the gold standard to diagnose various histopathological spectrum of Appendicular lesion.

AIM AND OBJECTIVE:

To assess histopathological patterns in patients undergoing appendicectomy and to study the detailed morphological features of different Non-neoplastic and Neoplastic lesions.

MATERIAL & METHODS:

Study Setting: The Study was conducted at SMIMER, Surat, Gujarat.

Study Design: Prospective Observational Study

The present study is prospective Observational study and carried out in Histopathology section from July 2023 to June 2024. Total 200 cases of Appendicectomy specimens was studied for the routine histopathology examination at SMIMER, Surat, Gujarat, India. A detailed clinical history was taken in each case with Radiological conformation of Appendicitis.

Inclusion Criteria:

Patients who were diagnosed with acute appendicitis and underwent appendicectomy in surgery department of SMIMER.

Exclusion Criteria:

Patients whose appendix were removed during other surgeries and with missing data.

RESULTS AND DISCUSSION:

The total of 200 cases were included in this study. Patients age range from 5 - 60 years were included. Among this The chief complaints of the patients were Right Iliac fossa pain, tenderness, guarding, rigidity, fever and vomiting.

Table 1: Age- Wise Distribution Of Total Number Patients

Age (in years)	No. of cases	Percentage (%)
5-15	30	15
16 -25	66	33
26-35	76	38
36-45	22	11
46-60	06	3
Total	200	100

Table 2: Histopathological Findings In Appendicectomy specimens.

Sr. NO	Microscopic Findings	No. of cases	%
1	Acute Appendicitis without periappendicitis	33	16.5
2	Acute Appendicitis with periappendicitis	34	17
3	Acute Suppurative Appendicitis	40	20
4	Acute Gangrenous Appendicitis	15	7.5
5	Chronic Appendicitis	35	17.5
6	Lymphoid Hyperplasia	22	11
7	Eosinophilic Appendicitis	06	03
8	Parasite	04	02
9	Mucocele	02	01
10	Fibrous Obliterations of Appendix	05	2.5
11	Carcinoid	02	01
12	Malignancy	02	01
Total		200	100

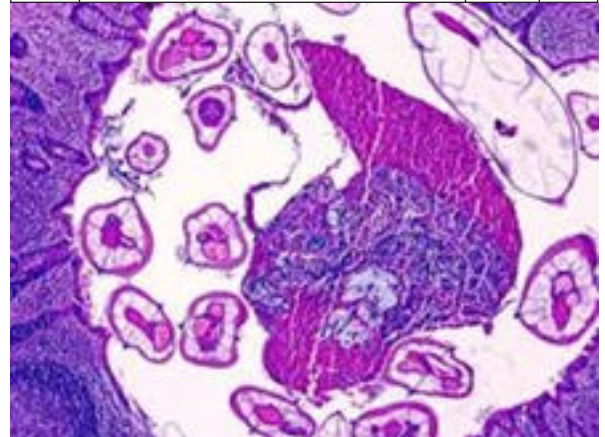


Fig 1: E. vermicularis In Appendix

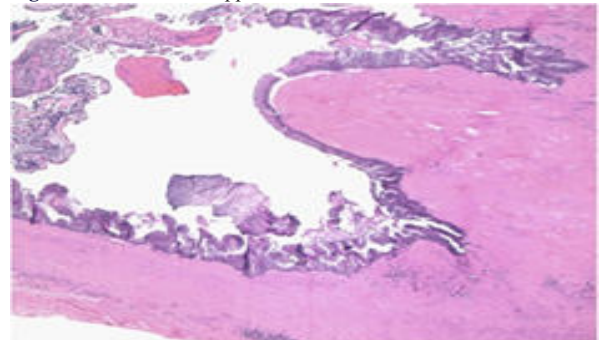


Fig 2: Low grade Mucinous Neoplasm

DISCUSSION

1) A total of 200 cases were analyzed for above mentioned period. The age of patients range from 16 - 35 years have maximum 142 cases (71%). (Table 1)

2) Out of 200 cases 140 cases(70%) were male patients and 60 cases (30%) were female patients. 30 cases(15%) were in the range of paediatric age group of 5 - 15 years.

3) Out of 200 cases of Appendicectomy, maximum of Acute Suppurative Appendicitis with 40 cases(20%), 35 cases(17.5%) of Chronic Appendicitis, 34 cases(17%) of Acute Appendicitis with Periappendicitis and Carcinoid in 2 cases(1%) Compare to a study conducted by Medha et al was (1.53%).¹ (Table 2).

Eosinophilic Appendicitis with transmural Infiltration were seen in 6 cases(3%) and presence of Parasite *E. Vermicularis* in 4 cases(2%) were found close to study conducted by Sujata et al.²

Finding of Mucocoele in 2 cases(1%) correspond with the incidence seen in study done by Shaveta et al.³

Fibrous Obliteration of Appendix is seen in 5 cases(2.5%) is a new observation and all these are observed in pediatric age group 5 - 15 years.

2 cases(1%) of Malignancy (Low grade Mucinous Neoplasm) are observed as incidental findings. This Histopathological assessments can provide valuable insights into the patients disease and improve clinical outcomes in unrecognised conditions.

CONCLUSIONS:

The present study concluded that Males were more likely to develop Appendicitis in age group of 16 - 35 years of life. Histopathological examination recommended for every Appendicectomy specimen for confirmation of Acute Appendicitis and unusual or coexisting pathologies. These will impact the clinical outcome of affected patients for adding chemotherapy for malignant change or antihelminthic treatment.

REFERENCES:

- 1) Kulkarni MP, Sulhyan KRS, Barodawala SM, Yadav DH. Histopathological study of the appendix. *Int J Health Sci Res.* 2017;7(4):90-95.
- 2) R Sujatha, Anushree CN, Neha Singh. Histopathological spectrum of appendicectomy specimens- A prospective study. *Indian J Pathol Oncol.* 2017;4(4):638-642. doi: 10.18231/2394-6792.2017.0136.
- 3) Sharma S, Mahajan D, Rasool M, Bashir S, Hafiz A, Wajahat M. histopathology of appendicectomy specimen: A 5-year study. *Scholar J App Med Sci.* 2014;2:176-180.
- 4) Roopmala M., Thamilselvi R., Saranya B., Poovizhi I: importance of routine histopathological examination in appendicectomy specimens. *Trop J Path Micro* 2019;5(10): 756-761. doi:10.17511/jopm.2019.i10.02.