

Various Presentations of Appendicular Pathology in a Tertiary Hospital

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Abstract: Background: The objective of this study is to observe the outcomes and complications of acute appendicitis such as appendicular perforation, gangrene, acutely inflamed appendix, abscess and lump.

Methods: This study was conducted in the department of General Surgery, Midnapore Medical College & Hospital, Medinipur, West Bengal, India, from January 2017 to June 2018. Patients 12-60 years of age of both sexes were included in this study. Patients were assessed by the on call surgical team, examined clinically, subjected to laboratory investigations, ultrasonography of abdomen and depending on the findings decisions were made regarding further management. After diagnosis of acute appendicitis, the patients were subjected to emergency open appendectomy and intraoperative findings were observed.

Results: Present study duration is one and a half years. A total of 100 patients were included in the study. Total number of cases operated suspecting acute appendicitis were 94, of which 89 were found to have appendicular pathology, of which 61 were males and 28 females. The number of patients having appendicitis were more common in age group (12-30) years (68.5%), than in (31-60) years age group (31.5%). Results of the intraoperative observations are – total operated cases 94 (males-61, females-28), number of patients with acute inflamed appendix-49, appendicular abscess-13, appendicular lump-11, appendicular perforation-9, and appendicular gangrene-7.

Conclusion: Acute appendicitis is quite common in a rural or tertiary hospital. Appendicitis affects younger patients (<30 years old) more commonly than older ones (>30 years old). Among the various presentations of appendicular pathology the most common presentation in our hospital is acutely inflamed appendix, followed by appendicular abscess, appendicular lump, appendicular perforation and appendicular gangrene.

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I. Introduction

Appendicitis today is one of the most common causes of surgical emergency, having varied number of presentations¹. Its incidence gradually rises over the teenage years and declines in the older ages². It is a disease more frequently seen in younger population, with a slight male predominance. Its incidence increases slowly from birth and peaks in the teenage years, and gradually declines in the elderly age groups. Acute appendicitis is quite often a clinical diagnosis³. About 6% of population may have appendicitis in their lifetime. Routine history and physical examination has still remained the most practical diagnostic modalities. Absolute diagnosis is however only possible at operating table and after histopathological examination of specimen⁴. Simple appendicitis can often progress to perforation, which is associated with a higher morbidity as well as mortality, and surgeons are therefore inclined to operate when the diagnosis is probable, rather than wait until it becomes certain⁵.

Appendicitis can present clinically in many forms such as migrating right iliac fossa pain, generalized peritonitis, abdominal lump, or even intestinal obstruction. Intraoperative findings of appendicular pathology is yet more varied. It can be simple inflamed appendix, or a perforated appendix, gangrene, lump, abscess, mucocele, intestinal worms, growth etc.

With delay in presentation, rate of complication rises, and the management protocol too changes accordingly. Thus, appendicitis can present to us both clinically and intraoperatively in a varied number of ways.

II. Methods

The total of 100 patients were enrolled in the study duration between January 2017 and June 2018 and 94 patients were operated for acute appendicitis in the Surgical Department, Midnapore Medical College & Hospital, Medinipur, West Bengal, India. It was an observational study.

Inclusion criteria

All patients above 12 years and below 60 years of age. All right lower abdominal pain clinically presumed to be of appendicular origin.

Exclusion criteria

Patients less than 12 years and above 60 years of age. Patients who were not willing for appendectomy.

Following investigations were performed:

- Hb, TLC, DLC, ESR.
- Plain X ray chest.
- Bleeding and clotting time.
- Blood urea, serum creatinine.
- HIV, anti HCV antibody, HbsAg.
- Abdomino pelvic ultrasound.
- X ray abdomen as and when required.
- ECG.

Preoperative antibiotics were administered to patients. All patients were operated under spinal anaesthesia, open method, and intraoperative findings were noted and recorded on a standard proforma.

III. Results

Present study duration is one and a half years. A total of 100 patients were included in the study. Total number of cases operated suspecting acute appendicitis were 94, of which 89 were found to have appendicular pathology, of which 61(68.5%), were males and 28(31.5) females.

Table 1: Intra-operative observations of Appendicular Pathology

APPENDICULAR PATHOLOGY	10-20 YRS	20-30 YRS	30-40 YRS	40-50 YRS	50-60 YRS	TOTAL
INFLAMED APPENDIX	15	20	5	4	5	49
PERFORATION	4	1	1	0	3	9
GANGRENE	2	2	1	1	1	7
ABSCESS	5	5	1	1	1	13
LUMP	3	5	2	0	1	11
TOTAL	29	33	10	06	11	89

The number of patients having appendicitis were more common in age group (12-30) years(69.7%) , than in (31-60) years age group (30.3%). Results of the intraoperative observations are – total operated cases 94 (males-61 , females-28), number of patients with acute inflamed appendix-49, appendicular abscess-13, appendicular lump-11, appendicular perforation-9, and appendicular gangrene-7.

Table 1: Intra-operative observations of Appendicular Pathology(sex distribution).

APPENDICULAR PATHOLOGY	MALE	FEMALE	TOTAL
INFLAMED APPENDIX	34	15	49
PERFORATION	6	3	9
GANGRENE	5	2	7
ABSCESS	10	3	13
LUMP	6	5	11

IV. Discussion

Acute appendicitis remains a common abdominal emergency⁷ throughout the world with an incidence of 1.17 per 1000 and a lifetime risk of 8.6% in males and 6.7% in females^{7,8}. The incidence is highest in adolescents and young adults. Early and accurate diagnosis of acute appendicitis is required to reduce the morbidity and mortality associated with delayed diagnosis and its complications.

In our study 61 patients out of 89(68.5%) males and 28 patients out of 89(31.5%) females were diagnosed to have acute appendicitis on the basis of histopathological report. This is consistent with study conducted by Bralas Sulu et al, in which appendicitis was more common in males(53.5%) compared to

females(46.5%)⁹. Also, in our series the age group in which acute appendicitis occurred commonly was between 12 and 30 years. This is consistent with the study conducted by A J Scott et al¹⁰, in which the mean age of appendicitis was found to be 27 years.

Malik Arshad et al, in his study found out the incidence of perforated appendix as an intraoperative finding to be 9.1% and in this study the value is 9% which is comparable¹¹. Appendicular abscess was found out to be 12.5% in the study conducted by Malik Arshad et al, as compared to 13% in this study.

V. Conclusion

Acute appendicitis is quite common in a rural or tertiary hospital. Appendicitis affects younger patients (<30 years old) more commonly than older ones (>30 years old). Among the various presentations of appendicular pathology the most common presentation in our hospital is acutely inflamed appendix, followed by appendicular abscess, appendicular lump, appendicular perforation and appendicular gangrene.

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