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## Original Research

### Assessment of cases of appendectomy performed on 56 cases- A clinical study

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#### ABSTRACT:

**Background:** Acute appendicitis (AA) is the leading cause of surgical acute abdomen worldwide. The present study was conducted to assess the cases of appendectomy. **Materials & Methods:** The present study was conducted on 56 cases of appendectomy performed laproscopically. General information such as name, age, gender etc. was recorded. In all patients, variants, clinical features and outcome of treatment was recorded. **Results:** Out of 56 patients, males were 36 and females were 20. Age group 0-20 years had 10 males and 5 females, 20-40 years had 22 males and 14 females and 40-60 years had 4 males and 1 female. The difference was significant ( $P < 0.05$ ). Cases of appendix with hyperemia and edema was 18, appendix with fibrinous exudates was 22, appendix with necrosis and abscess was 14 and perforated appendix was 2. The difference was significant ( $P < 0.05$ ). Complications were death seen in 1 and wound infection in 5 cases. **Conclusion:** Most common variant was appendix with fibrinous exudates, appendix with necrosis and abscess, appendix with hyperemia and edema and perforated appendix. Most cases were seen in age group 20-40 years.

**Key words:** appendicitis, Complications, necrosis

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#### INTRODUCTION

Acute appendicitis (AA) is the leading cause of surgical acute abdomen worldwide, with a prevalence of approximately 7% of the population. It has a peak incidence between 10-14 years in females and 15-19 in males. Appendectomy is the treatment of choice. Acute appendicitis is the most common intra-abdominal condition which requires emergency surgery in children. Open Appendectomy (OA) and Laparoscopic Appendectomy (LA) can be used for the intervention.<sup>1</sup>

Appendicitis was relatively uncommon outside Western countries during the 20th century. However, at the turn of the 21st century newly industrialized countries are reporting a rising incidence of appendicitis. The most important causal factor of AA appears to be the development of luminal obstruction, whose etiology is associated with age – lymphoid hyperplasia is the most common factor found in patients younger than 20 years, while the obstruction by a fecalith is more common in the elderly.<sup>2</sup>

When it presents with typical symptoms, it is relatively easy to diagnose and treat. In young children, elderly persons, and those presenting with various atypical symptoms, however,

the diagnosis may be delayed and treatment may become difficult. The diagnosis and treatment of acute appendicitis, particularly the diagnostic role of imaging modalities such as ultrasonography and computed tomography (CT), and the therapeutic role of laparoscopic appendectomy is highly recommended.<sup>3</sup> The present study was conducted to assess the cases of appendectomy.

#### MATERIALS & METHODS

The present study was conducted in the department of general surgery. It comprised of 56 cases of appendectomy performed laproscopically. Ethical clearance was obtained from institutional ethical committee. All patients were informed regarding the purpose of the study and written consent was obtained.

General information such as name, age, gender etc. was recorded. In all patients, variants, clinical features and outcome of treatment was recorded. Results thus obtained were subjected to statistical analysis. P value less than 0.05 was considered significant.

#### RESULTS

**Table I Distribution of patients**

Total- 56		
Gender	Males	Females
Number	36	20

Table I shows that out of 56 patients, males were 36 and females were 20.

**Table II Age wise distribution of appendicitis cases**

Age group (Years)	Males	Females	P value
0-20	10	5	0.01
20-40	22	14	
40-60	4	1	

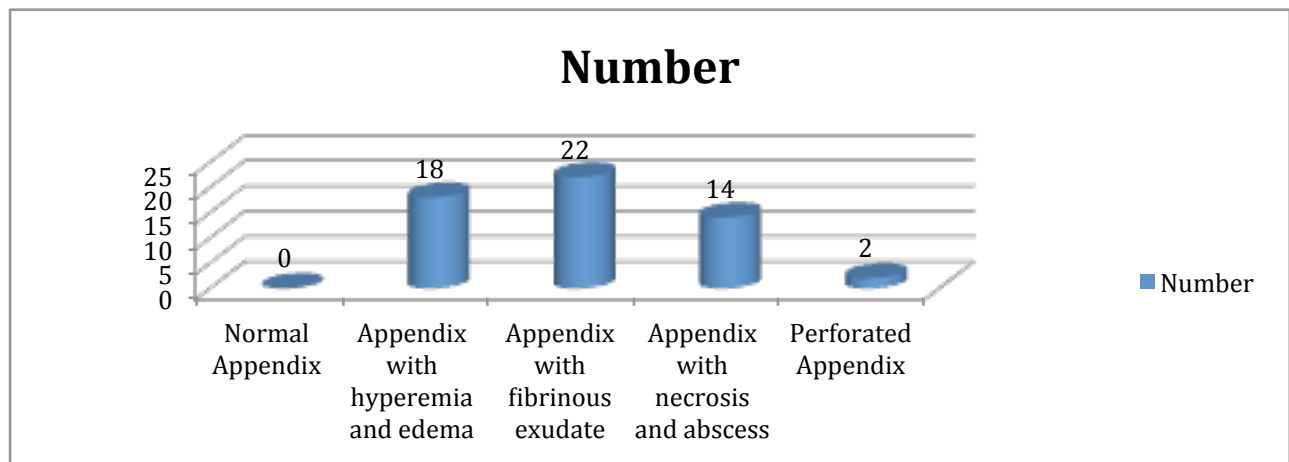
Table II shows that age group 0-20 years had 10 males and 5 females, 20-40 years had 22 males and 14 females and 40-60 years had 4 males and 1 female. The difference was significant ( $P < 0.05$ ).

**Table III Type of appendicitis**

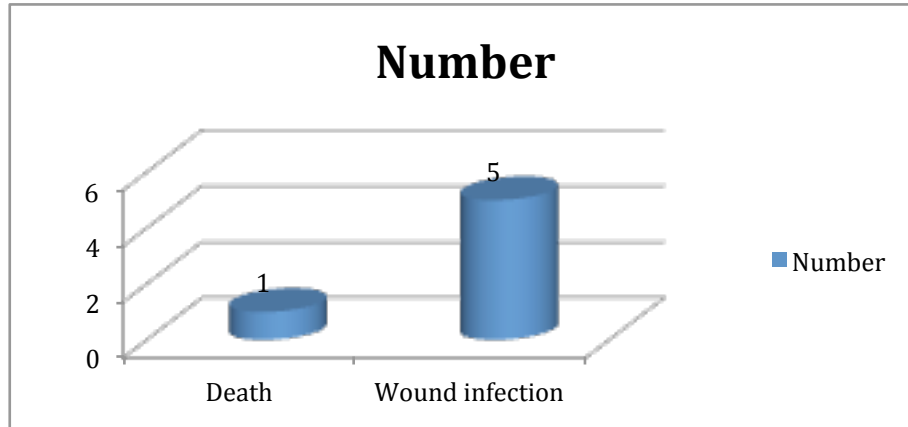
Type	Number	P value
Normal Appendix	0	0.01
Appendix with hyperemia and edema	18	
Appendix with fibrinous exudate	22	
Appendix with necrosis and abscess	14	
Perforated Appendix	2	

Table III shows that cases of appendix with hyperemia and edema was 18, appendix with fibrinous exudates was 22, appendix with necrosis and abscess was 14 and perforated appendix was 2. The difference was significant ( $P < 0.05$ ).

**Graph I Type of appendicitis**



**Graph II Complications of appendectomy**



Graph II shows that complications were death seen in 1 and wound infection in 5 cases.

## DISCUSSION

The cause of appendicitis is considered to be obstruction of the appendiceal lumen and the subsequent onset of bacterial infection. Luminal obstruction can be produced by various mechanisms and it results in the retention of mucus. If bacterial infection supervenes, the intraluminal pressure increases, leading to interruption of lymphatic flow and the development of appendiceal edema. This process leads to acute appendicitis characterized by distension of the appendix and vascular congestion, which is designated as catarrhal appendicitis. If this condition progresses further, appendiceal edema and vascular congestion become pronounced with the formation of multiple abscesses in the wall and purulent fluid on the serosal surface. Symptoms of appendicitis include abdominal pain, fever, and anorexia. Pain occurs in the upper abdomen at first. It then moves slowly and localizes to the right lower quadrant. In many cases, a fever of around 38°C is present.<sup>4</sup>

Physical examination is the most useful method for diagnosing appendicitis and for determining whether an operation is necessary. Tenderness can be elicited at various points in the right lower quadrant of the abdomen, including McBurney's, Lanz's, and Munro's points. Among the indications for surgical treatment, the presence of peritoneal irritation is critical. Operation is indicated when Blumberg's sign is positive.<sup>5</sup> The present study was conducted to assess the cases of appendectomy.

In present study, out of 56 patients, males were 36 and females were 20. Age group 0-20 years had 10 males and 5 females, 20-40 years had 22 males and 14 females and 40-60 years had 4 males and 1 female. Kano et al<sup>6</sup> in their study found that AA was more prevalent in young adults (19-44 years) and males (65.20%). The mean hospital stay was seven days and phase II was the most prevalent. We found the histopathological diagnosis of primary tumor of the appendix in six patients (0.94%), adenocarcinoma being the most common histologic type (66.7%). Regarding the use of antibiotics, 196 patients underwent antibiotic prophylaxis and 306 received antibiotic therapy. Eighty-one patients used

some kind of drain, for an average of 4.8 days. Seventeen patients died (2.67%), predominantly males (70.59%), with mean age of 38.47 years.

We observed that complications were death seen in 1 and wound infection in 5 cases. Histopathology is a best practice because it allows identifying malignancy in up to 1% of patients, most often in the form of neuroendocrine tumor, adenocarcinoma or mucinous cystadenoma. Katkhouda et al<sup>7</sup> found that there was no case of neuroendocrine tumor, despite this being considered the most common appendix primary neoplasm, accounting for approximately 32-57% of tumors of the organ. Adenocarcinoma was the most prevalent tumor; this cancer is rare, accounting for less than 0.5% of all gastrointestinal tumors and between 4-6% of tumors of the appendix. In these cases, hemicolectomy must be performed.

Tsai et al<sup>8</sup> evaluated the pathology results of 371 patients who underwent appendectomy and revealed parasitosis as incidental diagnosis in 8.5% of cases. Only one patient had AA by parasitic infestation.

## CONCLUSION

Most common variant was appendix with fibrinous exudates, appendix with necrosis and abscess, appendix with hyperemia and edema and perforated appendix. Most cases were seen in age group 20-40 years.

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