

# Acute Appendicitis: Its symptoms, complications and management, A Retrospective Study

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## ABSTRACT

**Introduction:** Appendicitis is the most common abdominal emergency managed by the general surgeons. In spite of it being common, complications due to delayed presentations or due to severity of this condition make management difficult many a times.

**The aim of this study:** was to evaluate the symptoms, complications of acute appendicitis and its management in a tertiary care premiere medical institute.

**Materials and method:** A retrospective study was carry out in department of surgery Pt. B D Sharma PGIMS Rohtak from January 2015 to June 2015.

**Results:** Acute appendicitis was the commonest presentation and open appendicectomy, even today, is the commonest surgery done in our department. Around 26.18 % of patient with appendicitis have some form of complications and 87.96% of the total patients required surgical intervention. Though there was no mortality.

**Conclusion:** Acute appendicitis is the commonest surgical emergency and if operated in early phase has less complication rate Appendicular mass is the most common complication of appendicitis.

**Keywords:** Appendicitis, Perforation, Appendicular Mass, Operation, Conservative Treatment appendicectomy.

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## INTRODUCTION

Acute appendicitis is the most common cause of acute abdomen worldwide and should be included in differential diagnosis for every patient presenting with acute abdominal pain.<sup>1-2</sup> About 250,000 appendicectomies are performed in the United States annually, with 2000 deaths resulting from complications of the disease. One in 15 persons develops appendicitis during his or her life time.<sup>3</sup> The disease occurs at all ages but is most frequent in the 2nd and 3rd decades of life. Appendicitis was recognized as a clinical and pathological entity in 1886 AD, when Reginald Fitz, Professor of Pathologic Anatomy at Harward presented a paper at the meeting of association of American physicians' entitled "perforating inflammation of the vermiform appendix with special reference to its early diagnosis and treatment."<sup>4</sup>The purpose of this study is to know the frequency of complications of appendicitis and their management. Though a lot of international literature is available on this topic but local research is inadequate. Hence there is need to study the complications of appendicitis locally in our area. An attempt has been made to present different complications of appendicitis which were managed at Pt B.D. Sharma PGIMS Rohtak. Study shows frequency of complications, investigations, and different treatment options.

## MATERIALS AND METHOD

A total number of 183 patients were studies with various symptoms of acute appendicitis and their complications, all patients were admitted through emergency department in Surgical Units. After having detailed history and thorough clinical examination every patient was subjected to routine investigations including HB, BT CT BT TLC DLC, blood Sugar, Urea

and Urine , all the patients were also advised to ultrasound examination of abdomen. All patients were kept nil by mouth and intravenous fluids started. The patients with different complications of acute appendicitis were diagnosed. Over all 155 patients (84.89%) were operated rest of patients treated conservatively. Those who were treated conservatively were kept nil by mouth and received triple regimen antibiotics. They were rehydrated and electrolyte imbalance corrected. They were made pain free with injectable analgesics. These patients were watched closely. Frequent pulse and temperature monitoring performed and the size of mass and right iliac fossa tenderness were also reassessed frequently. These patients responded to conservative treatment and were discharged with instruction to report after 6 weeks for interval appendicectomy or as soon as they develop an attack of abdominal pain.

### RESULTS

A total number of 183 cases were studied during January 2015 to June 2015. 77 patients (42.07%) belonged to age group < 20 years; 55 patients (28.96%) to 21-30 years, 25 patients (13.66%) to 31-40 years, 18 patients (9.83%) were between 41-50 years and 6 patient (3.27%) 51-60 years and there four patients >60 years of age .

**Table 1: Age distribution**

Age group	No. of patient	Percentage
<20	77	42.07
21-30	55	28.96
31-40	25	13.66
41-50	18	9.83
51-60	6	3.27
>60	4	2.1

There were 134 (73.33%) male and 49 (26.66%) females.

**Table 2: Sex distribution**

Sex	No. of patient	percentage
Male	134	73.33
Female	49	26.66

Clinical examination of the patients revealed that 92 patients (50.27%) had localized tenderness at right iliac fossa, 18 patients (9.83%) had tender mass right iliac fossa, 30 patients (16.39%) had abdomen pain in addition to tenderness at right iliac fossa 6 patients (3.27%) had abdominal distension and guarding was present in 18 patients (9.83).

**Table 3: Clinical examination**

Findings	No. of patients	Percentage
Tenderness RIF	92	50.27
Mass in RIF	18	9.83
Abdominal distension	6	3.27
Abdominal pain	30	16.39
Guarding	18	9.83

Laboratory investigations of these patients were done and emphasis was given to record the total leucocytes count. TLC was within normal limits in 129 cases (69.50%) and was raised in 54 cases (29.50%). In this study different complications of appendicitis were seen. Appendicular mass was found in 18 (9.83%) cases and most of them were treated conservatively. 6 patients (3.27%) presented with picture of peritonitis due to perforated appendicitis and were subjected to laparotomy, 12 cases (6.54%) had gangrenous appendix and 6 (3.27%) were of appendicular abscess.

**Table 4: Complications observed**

Complications	No of patients	percentage
Appendicular mass	18	9.83
Appendicular peritonitis	6	3.27
Gangrenous appendix	12	6.54
Appendicular abscess	6	3.27
Laparotomy	6	3.27

There was history of colicky abdominal pain, repeated vomiting, abdominal distension and absolute constipation in all cases of acute appendicitis with generalized peritonitis. On examination these patients were severely dehydrated and had tachycardia with a pulse of more than 90/minute. Abdominal examination revealed distension with tenderness, tympanic percussion note, no fluid thrill and shifting dullness. Bowel sounds were exaggerated and digital rectal examination was inconclusive. X-ray chest was normal, while x ray abdomen erect posture showed multiple air fluid levels of small bowel pattern. The patients were prepared for laparotomy and operated after rehydrating and correcting electrolyte imbalance. Abdomen opened with mid line incision. Operative findings were; gross dilatation of small bowel, the omentum was attached with appendix causing obstruction of the terminal ileum. Appendix was thick and inflamed. Omentum was separated from the appendix relieving the obstruction and appendicectomy performed. 22 patients (12.02%) were managed non operative, 155 patients were operated (84.69) and 6 laparotomy (3.27) were done. (Table 5) All these patients recovered smoothly and discharged.

**Table 5: Surgical management of appendicitis and its complications**

Surgical management	No of patient	Percentage
Conservative ( non- operative )	22	12.02
Open appendicectomy	155	84.69
Exploratory laparotomy	6	3.27

### DISCUSSION

Acute appendicitis is a clinical entity which needs surgical treatment in shortest possible time after the attack, if ignored it may get complicated and increase the morbidity and may prove fatal. 5 we studied 183 cases of appendicitis and treated. Most of the patients were poor; their general health and immunity power was also not good, which is also supported by the literature available on the subject; suggesting that very young and old people are more vulnerable to complications because of their less immunity 6. In this study 132 patients (71.03%) were young and up to thirty years of age; most of the international literature is also supportive. 7 Male to female ratio in this study was 3:1. Several western studies suggested male to female ratio 2:1; this ratio further narrows as the age progresses. Traditionally, the diagnosis of acute appendicitis should be made clinically and appendicectomy was the preferred treatment of choice. Recently, these concepts are changing. Alvarado score and ultrasound examination which is operator dependent are often used in diagnosing appendicitis 8. (Complications of appendicitis include perforation, gangrene, appendicular mass, etc. The rate of the perforation ranges from 12-35% (9,8). In our study, appendicular mass was the commonest complication. Recently, laparoscopic appendicectomy has become the procedure of choice, though open appendicectomy is still performed commonly for various reasons like availability of expertise and laparoscopic instruments. At our hospital, which is a high volume referral centre, open appendicectomy is performed more commonly due to various reasons like expertise of the different operating surgeon, availability of assistant nurse trained in laparoscopy at emergency, patients from low income group, etc.

### CONCLUSION

Complications of appendicitis cause more morbidity than simple acute appendicitis. Therefore it is better to treat the acute appendicitis surgically not giving it a chance to become complicated. If conservative treatment is instituted, it may not work especially when the cause is obstruction of the lumen due to faecolith and process may progress to one of the complications like perforation of the appendix, gangrene of the appendix and appendicular abscess and even prove fatal. Cases of appendicular mass should be treated conservatively, except for those cases who do not respond to medical treatment.

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