

**Original research article****Clinical profile of patients admitted to tertiary care hospital with acute appendicitis**

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**Abstract**

Acute appendicitis is a common cause of non-traumatic surgical acute abdomen. The incidence of acute appendicitis in the United States population to be 11 cases per 10,000 populations annually. Incidence of appendicitis seems to have greatly increased in the first half of this century, particularly in Europe, America and Australia with incidence up to 16% of the population undergoing appendectomy. After complete history, clinical examination and laboratory investigations RIPASA score was calculated and Patients with score 7.5 or >7.5 undergone Appendectomy and Histopathological results were analyzed. Patients had acute appendicitis, chronic appendicitis and subacute appendicitis accounting to 0.49%, 9.9% and 86.6% of the total patients respectively.

**Keywords:** Acute appendicitis, chronic appendicitis and subacute appendicitis

**Introduction**

Appendicitis refers to the inflammation of vermiform appendix. Vermiform is a Latin word which means a worm shaped object. Literally speaking appendix denotes to an appendage to a larger or major part as a tail or limb. The vermiform appendix is a worm shaped tubular structure arising from caecum<sup>[1]</sup>.

Acute appendicitis is a common cause of non-traumatic surgical acute abdomen. The incidence of acute appendicitis in the United States population to be 11 cases per 10,000 populations annually. Incidence of appendicitis seems to have greatly increased in the first half of this century, particularly in Europe, America and Australia with incidence up to 16% of the population undergoing appendectomy<sup>[2]</sup>.

In the past 30 years the incidence has fallen dramatically in these countries, such that individual life time risk of appendectomy is 8.6% and 6.7% respectively.

The disease is slightly more common in males, with a male: female ratio of 1.4:1. In a lifetime, 8.6% of males and 6.7% of females can be expected to develop acute appendicitis. Young age is a risk factor, as nearly 70% of patients with acute appendicitis are less than 30 years of age. The highest incidence of appendicitis in males is in the 10-to 14-year-old age group (27.6 cases per 10,000 populations), while the highest female incidence is in the 15 to 19-year-old age group (20.5 cases per 10,000 populations)<sup>[3, 4]</sup>.

Patients at extremes of age are more likely to develop perforated appendicitis. Overall, perforation was present in 19.2% of cases of acute appendicitis. This number was significantly higher, however, in patients under 5 and over 65 years of age. Although less common in people over 65 years old, acute appendicitis in the elderly progresses to perforation more than 50% of the time<sup>[5, 6]</sup>.

There has been an increase in the incidence rate of non-perforated appendicitis. The reason for this is not clear, but it has been proposed that the increased use of diagnostic imaging has led to a higher detection rate of mild appendicitis that would otherwise resolve undetected.

**Methodology****Source of data**

Participants are those patients with suspected clinically as AA, presenting to Department of General Surgery.

**Study design:** Prospective non-randomised study.

**Consent:** Written informed consent was taken from the patients who fell into the inclusion criteria of the study.

**Sample size:** 202.

**Inclusion criteria**

- Patients with the clinical diagnosis of AA and undergoing surgery and willing to participate in the study.

**Exclusion criteria**

- Patients with generalized peritonitis.
- Appendicular abscess.
- Appendicular lump/mass.
- Blunt trauma abdomen.
- Recurrent appendicitis.
- Pregnancy.

**Method of collection of data**

After complete history, clinical examination and laboratory investigations RIPASA score was calculated and Patients with score 7.5 or >7.5 undergone Appendectomy and Histopathological results were analysed.

**Results**

**Table 1:** Sex-wise distribution of patients

Sex	Frequency	Percentage	Valid Percent	Cumulative Percent
Female	78	38.61	38.61	
Male	124	61.38	61.38	
Total	202	100	100	100

Patients had acute appendicitis, chronic appendicitis and subacute appendicitis accounting to 0.49%, 9.9% and 86.6% of the total patients respectively.

**Table 2:** Histological Wise Distribution of Frequency

Histological diagnosis	Frequency	Percentage	p-value
Normal	7	2.9	.000
Sub-Acute appendicitis	1	0.49	
Chronic appendicitis	20	9.9	
AA	174	86.6	
Total	202	100	

**Discussion**

Even though acute appendicitis is a most common surgical condition encountered in clinical practice sometimes, it is a challenging task for the surgeon in diagnosing. There always exists fear of negative appendectomy and also fear of appendicular perforation if diagnosis is delayed and so the morbidity and mortality. A higher negative appendectomy rate of 15% to 25% has been accepted in the past in the cost of preventing appendicular perforation<sup>[7]</sup>.

Negative appendectomy is not devoid of complications, though the mortality is low, it can be associated with the mortality of 10 to 15%. Negative appendectomy is associated with significant hospital stay. Hence, negative appendectomy should be lowered as low as possible<sup>[8]</sup>.

Diagnosis of acute appendicitis is mainly based on surgeon’s clinical examination, the accuracy rate of clinical examination ranges from 70% to 87%<sup>[9]</sup>.

Along with clinical examination, various laboratory parameters of inflammation (TLC, CRP) USG CT & Laparoscopy are used to establish an accurate diagnosis of AA. This armamentarium has definitely increased the diagnostic accuracy and help to reduce negative appendectomy rate<sup>[10]</sup>. However, these techniques are not available universally.

**Conclusion**

Acute appendicitis is a common surgical emergency. Accurate and timely diagnosis and intervention is critical in the management and so reducing the morbidity and mortality. The diagnosis of acute appendicitis is mainly clinical judgement based on signs and symptoms added by investigations.

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