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Research Article

**IMPORTANCE OF C-REACTIVE PROTEIN LEVELS AS A
DIAGNOSTIC TOOL OPPOSITE TO LEUKOCYTE FOR
EMERGENCY APPENDISECTOMY****Kainat Sana, Abdullah Khan, Anum Shehzadi**
Mayo Hospital Lahore**Abstract:*****Objective:** To determine the role of CRP as a part of leukocyte count in the diagnosis of acute appendicitis.****Study design:** A Descriptive Study.****Place and duration of study:** In the Surgical Department, Services Hospital, Lahore for one year duration from November 2016 to November 2017.****Methods:** Patients with a history of clinical and acute appendicitis were included in the study. During the admission to the hospital, laboratory tests were performed on blood samples taken from all patients with acute appendicitis. The normal upper limit of CRP and leukocyte count was 6 mg / L and 11000 / cmm, respectively.****Results:** Eighteen additional histopathological findings were evaluated after appendectomy. Eighteen appendix were reactive lymphoid hyperplasia unchanged from the mucosa and submucosa. Twelve appendix were an acute non-suppurative supplement (Catarrhal group) and 30 appendix were acute appendix. Four of the 18 patients with reactive lymphoid hyperplasia (group II) had an increase in TLC, and 14 had a normal range of TLC. Twelve cases of acute non-suppurative appendix (group II) had only elevated CRC levels of two. Of the 30 acute suppurative inserts, 12 had normal TLC, 18 had a high TLC, and CRP levels were all increased.****Conclusion:** Acute appendicitis appears to be low in a patient with normal CRP and white blood cell count, even if clinical signs and symptoms show acute appendicitis.****Key words:** C-reactive protein, acute appendicitis, leukocyte count.***Corresponding author:****Kainat Sana,**
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INTRODUCTION:

Abdominal pain is one of the most common causes of acute appendicitis to receive emergency services and medical help is one of the most common surgical problems faced by public and private practice of surgeons. It is seen that it is difficult to detect in almost all age groups especially in the early stages. The acute appendicitis diagnosis is difficult and in clinical surgery may be the most common diagnostic issue. Rather a full laboratory investigation, the initial diagnosis of physical and misdiagnosis ranged from 28% to 57% of children 2 years or less, 100% or even less than 12 years or less, with a multiple diagnostic method. Acute appendicitis, including clinical problem abscess formation, acute appendicitis, scarring and long-term hospitalization, is a large amount of atypical and non-inflammatory atypical cause leading to delay in leading morbidity. Postoperative morbidity associated with negative screening is 5 to 15%. Classical clinical manifestations of acute appendicitis are peripheral pain, pain in the lower right quadrant, followed by nausea, fever and vomiting. In 50% of adults this type of sequences occurs, but in children is not very common. In acute appendicitis, white blood cell count increased. Unfortunately, up to 70% of the white blood cell count and other causes pain in right lower quadrant will also increase. Recently, the accuracy of the diagnosis of acute appendicitis was increased by measuring the CRP value and white blood cell count. A quarter of negative appendectomy (JM Gronroos) can be prevented. High white blood cell count is widely used in the diagnosis of acute appendicitis despite its low specificity. In order to increase the diagnostic accuracy, inflammatory variables such as C-reactive protein concentration and white blood cell count were studied. The aim of our prospective study was to determine the role of CRP as part of the leukocyte count in the diagnosis of acute appendicitis.

MATERIALS AND METHODS:

This Descriptive Study was held in the Surgical Department, Services Hospital, Lahore for one year duration from November 2016 to November 2017. Total included 30 patients with the clinical diagnosis of acute appendicitis were selected. The diagnosis was made mainly for clinical reasons and histopathological reports revealed the definitive diagnosis of acute appendicitis. According to the histopathological examination, the patients were divided into two groups: the mucosa and the lower mucosa and the acute appendicitis nonsuppurative (catarrhal), group I, without surgery, patients undergoing surgery, for example, acute suppurative attachment and group II desired group non-surgery, ie, lymphoid hyperplasia. . Because cranial appendicitis cannot lead to a normal histology, catheps can be treated with antibiotics. Clinical diagnosis was performed by laboratory tests including preoperative clinical examination, physical examination, leukocyte count and CRP level. Thirty patients had white blood cell counts and CRP levels regardless of age, gender, and duration of symptoms. Laboratory tests were performed on blood samples taken from hospitalized patients. The normal upper limit of CRP and leukocyte count was 6 mg / L and 11000 / cmm, respectively.

RESULTS:

After appendectomy, 60 additional histopathological examinations were performed. Eighteen appendix were reactive lymphoid hyperplasia without altering the mucosa and submucosa. Twelve additional noncontiguous groups (catarrhal) and 30 additional acute appendix. Of 18 patients with reactive lymphoid hyperplasia, four (group II) had an increase in TLC, and 14 had normal TLC. Twelve cases of acute non-suppurative appendix (group II) had only two CRC levels. 18 high TLC levels, but 30 of the 12 patients in addition to 30, have normal, acute suppurative TLC are all transmitted to high CRP levels (Table I).

Table 1: Leucocyte count, c-reactive protein values and histopathology test of patients with a clinical suspicion of acute appendicitis who underwent appendicectomy

No. of Patients	HistoPath	CRP		TLC	
		Raised / Normal	Raised / Normal	Raised / Normal	Raised / Normal
18	Reactive Lymphoid Hyperplasia with normal mucosa and submucosa	0/18		4/14	
12	Non suppurative appendicitis	0/12		2/10	
30	Suppurative appendicitis	30/0		18/12	

There were 24 women (40%) and 36 men (60%) (Table II).

Table 2: Sex versus histopathological distribution

Sex	Histopathology		
	Reactive e Lymphoid Hyperplasia	Acute Non suppurative appendix catarrhal	Acute suppurative appendix
Female 24 (40%)	8 (13.33%)	6(10%)	10(13.15%)
Male 36 (60%)	10(16.66%)	6(10%)	20(33.33%)

Age ranges from 9 to 60 years (Table III).

Table 3: Age & sex distribution

Sex	Age					
	1-10 yrs	11-20 yrs	21-30 yrs	31-40 yrs	41-50 yrs	51-60 yrs
Female(24)	2	10	12	0	0	0
Male (36)	4	8	14	4	2	2

In 60 cases, a total of 30 patients (50%) (or RLH and acute suppurative insertion in the mucosa and without involvement of the lower mucosa) II group I contained in 30 patients (50%) group (Table (suppurative acute addition) IV).

Table 4: Division of patients on the basis of histopathology group I –surgical treatment necessary group group II — possible non operative treatment group

Total No. of Patients	Histopathology		
	Reactive lymphoid hyperplasia Group II	Acute Non suppurative appendix GroupII	Acute suppurative appendix Group I
60	18 (30%)	12(20%)	30 (50%)

DISCUSSION:

The classical clinical picture of acute appendicitis has been known for over 110 years. The problem with the diagnosis of appendicitis, however, is the delay in the treatment of appendicitis with normal appendix or abscesses, abscesses or large complications such as peritonitis. CRP above 10 mg / dl was strongly associated with necrosis and CRP above 17 mg / dl was reported to be a strong marker of infection. These findings are supported by our study. The most commonly used test for the diagnosis of acute appendicitis is the number of leukocytes. Several reports are often the oldest laboratory test of increased white blood cell counts to demonstrate white blood cell appendicitis. In this study, 15 possible groups, associated with surgery, reduction of morbidity and mortality, with the preventable burden of normal PCR, in this way non-therapeutic 13 normal TLC and 15 had a number of occupational surgery in non-invasive treatment Many patients have investigated the increased CRP value to improve acute appendicitis. Hallan and Asberg found a wide range of sensitivity ranges (40,99%) and a specificity (27%). Another study showed that the sensitivity of PCR was 76.5% and specificity was 26.1%. In our study, CRP, acute suppurative appendicitis was significantly higher in patients with low dL compared to 120 mg / 01 mg / dl compared to those with any acute appendicitis.

CONCLUSION:

The data presented in this study and the current literature suggest that the normal preoperative CRP level is probably not related to acute appendicitis. In this group of patients, postponement of the urgent appendectomy will probably reduce the rate of appendicitis excision. Additional prospective studies are recommended to indicate their importance for this recommendation.

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