

## A Study on the role of Elective Laparoscopic Appendectomy For Chronic Right Lower Quadrant Pain

\*Dr. Kannan<sup>1</sup>, Dr. Pradeep Kumar Gunasekaran<sup>2</sup>, Dr. Dhayanithi Dhayalan<sup>3</sup>

(Institute of General Surgery, Madras Medical College, India)<sup>1,2,3</sup>

Corresponding author: \*Dr.Kannan G

### Abstract

**Aims and Objectives** :To study the role of elective laparoscopic appendectomy for chronic or recurrent right lower quadrant pain. To study the relationship between clinical improvement and histopathological findings of removed appendix

**Methods** : 50 cases who underwent laparoscopic Appendectomy in a period of 9 months were included in the prospective observational study and followed up at 6 weeks, 3 months, were assessed with pain score and also histopathological reports of the removed appendix.

**Results**:Right lower quadrant abdominal pain was the chief complaint in all of the 50 patients and 5 patients(10%) had fever and 6 patients (12%) had vomiting. In this study, it shows that 40 patients (80%) had complete relief of right lower quadrant pain after 6 weeks after laparoscopy appendectomy and at the end of the 3 months after, 45 patients(90%) had complete relief but still 5 patients (10%) complained of right lower quadrant abdominal pain.. On Histopathological examination of removed appendix 12 patients (24%) had acute features of inflamed appendix,14 patients (28%) had chronic features and 24 patients (48%) had normal features.

**Conclusion** :In patients with chronic right lower quadrant abdominal pain, elective laparoscopic appendectomy could be an effective therapeutic procedure in properly selected patients. Histopathological findings of the removed appendix does not contribute in establishing the diagnosis in these patients. A definitive therapeutic procedure can be undertaken laparoscopically in most patients instead of resorting to open laparotomy.

**Keywords** :, Appendix, Laparoscopic Appendectomy, Lower Quadrant pain

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### I. Introduction

Chronic right lower quadrant abdominal pain can be a diagnostic challenge. These patients are seen by a lot of different physicians and the surgeons are consulted at last after other modalities have failed to provide resolution of their symptomatology. The recent advances in laparoscopic surgery provides precise visual assessment and has a significant diagnostic and therapeutic role in patients with chronic right lower quadrant abdominal pain. It should be considered in these patients as it is minimally invasive, safe, efficacious and invariably effective mode of diagnostic modality with minimal sequelae and post - procedural pain.

### II. Histology

#### 2.1 Acute Appendicitis

In early acute appendicitis, there is congestion of the subserosal vessels and perivascular neutrophilic infiltration in all layers of the wall. The normal glistening serosa is transformed into a dull, granular, erythematous surface by the inflammatory reaction. The definitive diagnosis is based on the pathological findings of the removed appendix only. The histological finding pathognomonic of appendicitis is neutrophils infiltrating the muscularis propria<sup>[1,2]</sup>. Although mucosal neutrophils and focal superficial ulceration are often seen during the pathological study, these are not used as specific markers of acute appendicitis<sup>[3]</sup>.

#### 2.52 Chronic Appendicitis

In chronic inflammation of the appendix, there is lymphocytic and eosinophilic infiltration along with fibrosis, granulomatous reaction and foreign body giant – cell reaction (Rao et al.1998). Chronic appendicitis and recurrent appendicitis are often misdiagnosed<sup>[4,5]</sup>.

**III. Materials and Methods**

**3.1 Sample size :** 50 cases ; Study design : Prospective and observational study ; Study population : 50 cases;

**3.2 Inclusion Criteria:** 1). Patients with chronic or recurrent right lower quadrant pain for more than three months in whom routine investigations didn't reveal any pathology. 2). Age > 18 yrs. 3). Patient should have experienced continuous pain or atleast one pain attack in the month prior to inclusion.

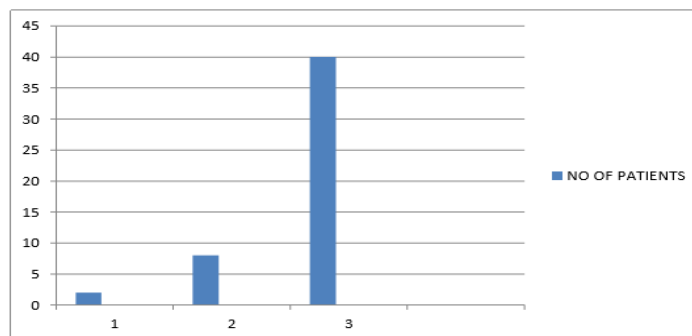
**3.3 Exclusion criteria:** 1). Age < 18 yrs & > 60 yrs; 2). Previous abdominal surgery; 3). Known case of specific gastrointestinal, gynecological or urological diseases ; 4). Diagnostic laparoscopy reveals abnormalities other than those related to appendix

**IV. Statistical Analysis**

In the study, of a total population of 50 patients, 26 patients (52 %) are female and 24 patients (48%) are male and the age group with maximum number of cases with chronic right lower quadrant pain was the 21 – 30 years , in both males and females , the total sum being 22 cases among the 50 cases , accounting to 44% of the total cases .

**Pain improvement after 6 weeks :**

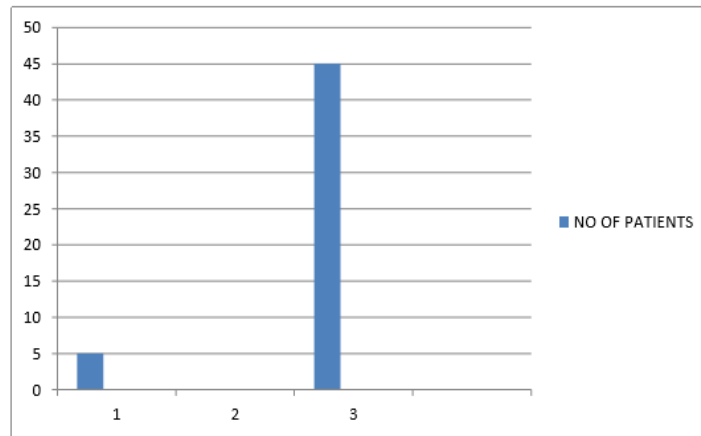
	Frequency	Percent	Valid Percent	Cumulative Percent
1	2	4.0	4.0	4.0
Valid 2	8	16.0	16.0	20.0
3	40	80.0	80.0	100.0
Total	50	100.0	100.0	



This fig shows 40 patients (80%) showed relief of pain and 8 patients (16%) showed remarkable pain relief, while 2 patients (4%) still complained of right lower quadrant pain after 6 weeks.

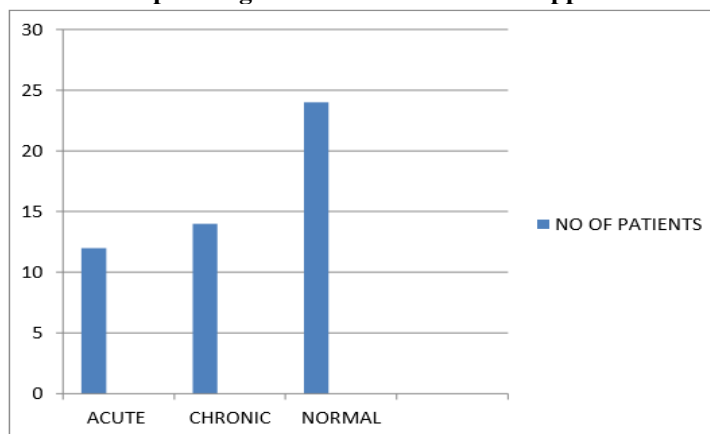
**Pain improvement after 3 months :**

	Frequency	Percent	Valid Percent	Cumulative Percent
1	5	10.0	10.0	10.0
Valid 3	45	90.0	90.0	100.0
Total	50	100.0	100.0	



This figure shows that 45 patients (90%) showed relief of pain and 5 patients (10%) complained of right lower quadrant pain persistence after 3 months.

**Histopathological features of removed Appendix**



This figure shows that 12 patients (24%) had acute features of inflamed appendix, 14 patients (28%) had chronic histopathological features and 24 patients (48%) had normal features.

NULL HYPOTHESIS	TEST	SIGNIFICANCE	DECISION
Histopathology of the removed appendix is not related to the pain relief at 6th week follow-up	Independent samples Mann – Whitney U test	0.64552	Retains the null hypothesis

p value < 0.05 is significant.

NULL HYPOTHESIS	TEST	SIGNIFICANCE	DECISION
Histopathology of the removed appendix is not related to the pain relief at 3rd month follow-up	Independent samples Mann – Whitney U test	0.50286	Retains the null hypothesis

p value < 0.05 is significant .

### V. Results And Discussion

From this study, it has been shown that doing an appendectomy in patients presenting with chronic right quadrant pain is more likely to relieve the pain thanin leaving the appendix in situ.Right lower quadrant abdominal pain was the chief complaintin all of the 50 patients (100%) and 5 patients (10%) had feverand 6 patients (12%) had vomiting. It has been identified thatexcept chronic and recurrent right lower quadrant pain, no other clinical characteristics helps in establishing the diagnosis of chronicappendicitis, unlike in acute appendicitis. There were neither typicalsigns and symptoms nor routine diagnostic modalities to diagnose chronic appendicitis. In the study, no post – op complications or post – op deathswere encountered. The study, shows that 40 patients (80%) had complete relief of right lower quadrant pain after 6 weeks after laparoscopy appendectomy and at the end of 3 months, 45 patients (90%) had complete relief but still 5 patients (10%) complained of right lower quadrant abdominal pain .

In our study 45 patients ( 90% ) were rendered free frompain after laparoscopic appendectomy but 5 patients (10%) still complained of right lower quadrant abdominal pain. Though the clinical data is convincing on pain relief after the appendectomy, the histopathological findings are tough to comprehend relating to this context and also no correlation between them. There is inconsistency between the symptomatology and histopathological findings.

### VI. Conclusion

In patients with chronic right lower quadrant abdominal pain,elective laparoscopic appendectomy could be an effective therapeutic procedure in properly selected patients<sup>[5]</sup>. Histopathological findingsof the removed appendix does not contribute in establishing the diagnosis in these patients.However strenuous efforts must be taken in pre – assessment of these patients, in order to identify patients who might benefit from the surgery. A definitive therapeutic procedure can be undertaken laparoscopically in most patients instead of resorting to open laparotomy<sup>[6]</sup>.

### Bibliography

- [1]. Carr NJ. The pathology of acute appendicitis. Ann DiagPathol 2000;4:46-58
- [2]. Williams RA, Myers P. Pathology of the Appendix. New York:Chapman and Hall Medical; 1994:1-7.
- [3]. Andreou P, Blain S, DuBoulay CE. Ahistopathological studyof appendix at autopsy and after surgical resection. Histopathology 1990;17: 427–43
- [4]. Mattei P, Sola JE, Yeo CJ. Chronic and recurrent appendicitis are uncommon entities often misdiagnosed. JAmCollSurg 1994; 178: 385–389
- [5]. Leardi S, Delmonaco S, Ventura T, Chiominto A, DeRubeis G, Simi M. [Recurrent abdominal pain and chronic appendicitis]
- [6]. de Kok HJ. Laparoscopic appendectomy: a new opportunity for curing appendicopathy. SurgLaparoscEndosc 1992; 2: 297–302.

\*Dr.KannanG. "A Studyon Theroleofelectivelaparoscopicappendectomy For Chronicright Lower Quadrant Pain." IOSR Journal of Dental and Medical Sciences (IOSR-JDMS) 16.12 (2017): 61-64