



## General Surgery

## A COMPARATIVE STUDY OF LAPAROSCOPIC APPENDECTOMY VERSUS OPEN APPENDECTOMY

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**ABSTRACT** **Background :** Laparoscopic appendectomy has rapidly become established as the popular alternative to open appendectomy, it has a safety profile better than open procedure.

**Objectives:** Laparoscopic procedure for appendectomy is compared with open surgical Technique with respect to:

- Duration of procedure.
- Post operative pain.
- Cosmetic benefit
- Complication encountered

**Methods:** Prospective study from JULY 2018 to AUGUST 2019, involved 60 patients with Diagnosis of acute appendicitis. Choice of operation to either the open or the laparoscopic technique. Statistical Comparisons were performed using the chi-square test and students 't' test.

**Results:**

1. In the study, the mean post op pain for laparoscopic appendectomy is  $1.37 \pm 0.49$  and for open appendectomy is  $3.27 \pm 0.828$ . The parameter difference is significant  $p < 0.0001$ .
2. In the study, 8 (26.7%) patients in open group and 1(3.3%) patients in laparoscopic group had post op wound infection. The difference was significant ( $p < 0.01$ )
3. In the laparoscopic group, 26 (86.7%) patients were satisfied with cosmetic benefit, 4 (13.3%) patients were equivocally satisfied, 0 patients were unsatisfied. In the open group, 15(50%) patients were satisfied, 8 (26.7%) were equivocally satisfied, 7 (23.3%) patients were unsatisfied with cosmetic benefit. The study show that laparoscopic group had better cosmetic results
4. In the study, the mean score for duration of time of surgery was  $36.17 \pm 12.25$  minutes in laparoscopic group and  $17.5 \pm 5.211$  minutes in open group.

**CONCLUSION:** Laparoscopic appendectomy was better than open appendectomy in a properly prepared and selected patient in terms of Post operative pain, Post operative complications like wound infection, fever, Cosmetic benefit.

**KEYWORDS :****INTRODUCTION**

In surgical practice Acute appendicitis is one of the common causes of acute abdomen encountered, requiring emergency surgery.

With the introduction of the laparoscopic technique it provided an opportunity to explore new method of therapy in the management of suspected acute appendicitis.

Laparoscopic appendectomy combines the advantages of treatment and diagnosis in one procedure with the least morbidity. Advantages include decreased wound infection, better cosmetic, ability to explore the entire peritoneal cavity for diagnosis of other conditions and effective peritoneal toileting without the need for extending the incision. Laparoscopic appendectomy is increasingly being used particularly in young females of child bearing age where the differential diagnosis of right lower quadrant pain is extensive including gynecologic pathology.

**AIMS AND OBJECTIVES**

The aim of the study is the comparison between the outcomes of Laparoscopic appendectomy and Open appendectomy in terms of

1. Post operative pain
2. Post operative complications
3. Cosmetic benefit
4. Duration of surgery time

**Source Of The Data**

The study design consists of the patients admitted in the surgical wards GGH, Kurnool with acute appendicitis from July 2018 to August 2019.

**Method Of Collection Of Data**

This prospective study from July 2018 until August 2019 involved 60 Cases that were consecutively selected, where the investigator was a part of the Surgical team managing the patients, by using random sampling technique.

**Inclusion Criteria**

Patients presenting with acute appendicitis.

**Exclusion Criteria**

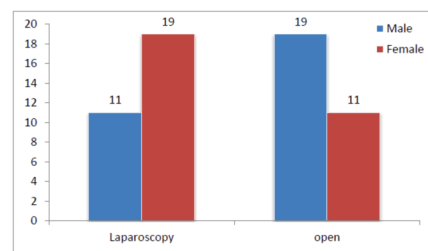
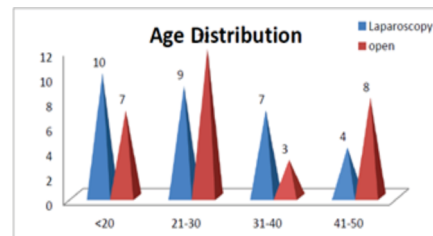
Patients with delayed presentation leading to appendicular mass, abscess.

Patients who do not consent for the study.

Patients less than 12 years of age.

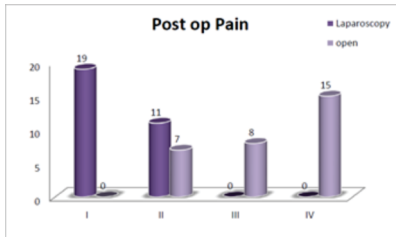
**Observations And Results**

30 Patients of laparoscopic appendectomy and 30 patients of open appendectomy are analyzed and results are as follows,

**Sex Distribution****Age Distribution**

In the study, 11 (36.7%) males and 19 (63.3%) females underwent laparoscopic appendectomy. 19 (63.3%) males and 11 (36.7%) females underwent open appendectomy. The mean age for undergoing laparoscopic appendectomy was 28.67 years and open appendectomy was 29.73 years.

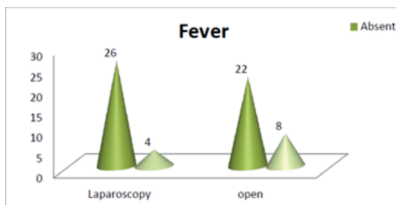
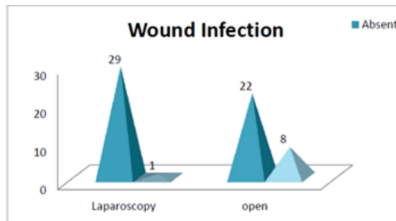
**Post Op Pain**



In the study, the mean pain score was  $1.31 \pm 0.49$  in the laparoscopic group.

The mean pain score in the open group is  $3.27 \pm 0.828$ . The difference is significant ( $p < 0.0001$ ).

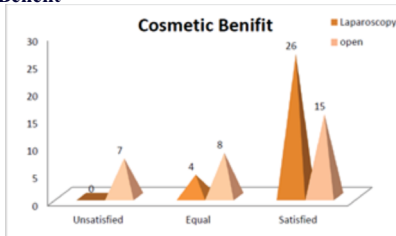
**Post Operative Complications**



8 patients in the open group (26.7%) and 1 patients in the laparoscopic group (3.3%) have post op wound infection. The difference was significant ( $p < 0.01$ ).

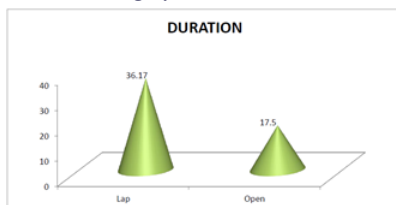
8 patients in the open group (26.7%) and 4 patients in the Laparoscopic group (13.3%) have post op fever.

**Cosmetic Benefit**



In the study, cosmetic benefit difference found to be significant (0.004).

**Duration Of Time Of Surgery**



The mean score for duration of time of surgery was 36.17 minutes in the laparoscopic group and 17.5 minutes in the open group. The difference was significant ( $p < 0.0001$ ).

**CONCLUSION**

After analyzing all the data's, we found the difference between open and laparoscopic appendectomy.

Laparoscopic appendectomy was better than open appendectomy in a properly prepared and selected patient in terms of

1. Post operative pain
2. Post operative complications like wound infection, fever.
3. Duration of the procedure
4. Cosmetic benefit.

Overall, laparoscopic appendectomy is better than open appendectomy in the properly selected patients of acute appendicitis at the cost of increase in the duration of the time of surgery.

In our study, there was no conversion rate from laparoscopic to open appendectomy.

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