

Laparoscopic Assisted Appendicectomy Versus Laparoscopic Appendicectomy

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ABSTRACT

Aim: To compare the mean duration of time in laparoscopic assisted appendectomy with laparoscopic appendectomy in patients of acute appendicitis.

Methods: This randomized controlled trial was conducted from July 2013 to December 2013 at DHQ Hospital Faisalabad on 100 patients of acute appendicitis. Either gender, acute appendicitis with swelling (inflammation) of the appendix with tenderness and rebound tenderness in RIF with TLC >10,000 were included. Patients with gangrenous appendix, organ due to interference of blood supply, perforated appendix, extreme obesity, with BMI >39, very thick mesentery and division of adhesion were excluded. They were divided in two groups; group A (laparoscopic assisted appendectomy) and group B (laparoscopic appendectomy). The appendectomy was performed as an open procedure. The appendix was tied and divided in two endo-loops with laparoscopic scissor. An extraction bag was used to remove it.

Results: The mean ages were 18.80±3.08 and 27.30±8.22 in group A and B. There were 11(22%) males and 39(78%) females in group A and 13(26%) were males and 37(74%) were females in group B. Mean operating time in assisted laparoscopic appendicectomy group was significantly less when compared with laparoscopic appendicectomy (P<0.001).

Conclusion: The laparoscopic-assisted technique for appendicectomy incorporates the advantages of both the laparoscopic technique and the open technique.

Keywords: Appendicitis, Laparoscopic appendectomy, Assisted laparoscopic appendectomy

INTRODUCTION

Acute appendicitis is the frequent indication for abdominal surgery and appendectomy is most common surgical procedure. It has become the standard treatment for acute appendicitis, because of its positive efficacy and safety¹.

Laparoscopic surgery has achieved in status and found applicable in approximately every surgical specialty. Advantages of laparoscopic surgery are in terms of less hospital stay, fast postoperative recovery and better pain control².

A two port laparoscopic assisted appendectomy is now gaining popularity in adult patients with appendicitis. The appendectomy will be done via an assisted two ports method using 10mm umbilical optical port and another 10mm port in right iliac fossa. The two ports assisted laparoscopic open appendectomy has the advantage of diagnostic laparoscopy and open appendectomy. It is simple and can be converted to open or intracorporeal approach when required³. The laparoscopic assisted approach has advantage of shorter operating time and hospital stay⁴. Cosmetic results were also excellent in this technique^{5,6}.

In laparoscopic assisted appendectomy, mean operating time was 25±14.75 and in laparoscopic appendectomy mean operating time was 48.78±14.63.³

MATERIAL AND METHODS

This randomized controlled trial was conducted from July 2013 to December 2013 at DHQ Hospital Faisalabad on 100 patients of acute appendicitis. Either gender, acute appendicitis with swelling (inflammation) of the appendix with tenderness and rebound tenderness in RIF with TLC>10,000 were included. Patients with gangrenous appendix, organ due to interference of blood supply, perforated appendix, extreme obesity, with BMI >39, very thick mesentery and division of adhesion were excluded. Patients were randomly divided into two groups; group A (laparoscopic assisted appendectomy) and group B (laparoscopic appendectomy). The appendectomy was performed as an open procedure. The cut end was painted with betadine (aqueous solution of 10% of povidone-iodine). Another two 5mm ports was used, one in the left iliac fossa and other in the suprapubic region made. Tripolar cutting forceps were routinely used for dissection and division of mesoappendix. The appendix base was tied and divided between two endo-loops with laparoscopic scissor. An extraction bag was used to

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remove it. All the collected data was entered and analyzed on SPSS 16.

RESULTS

Mean age of the patients were 18.80 ± 3.08 in group A and 27.30 ± 8.22 in group B respectively (Table 1). Mean operating time was 18.80 ± 3.08 in group A and 27.30 ± 8.22 in group B. statistically the difference between the groups was significant [$P < 0.001$] (Table 2).

Table 1: Distribution of patients by age

Age (years)	Group A	Group B
<2	35(70%)	12(24%)
20-30	15(30%)	22(44%)
31-40	0	13(26%)
41-45	0	3(6%)
Mean \pm SD	18.80 ± 3.08	27.30 ± 8.22

Table 2: Comparison of mean operating time (minutes)

Mean operating time (minutes)	Group-A	Group-B
Mean \pm SD	11.50 ± 3.09	31.42 ± 8.64
P <0.001		

DISCUSSION

The number of patients who have laparoscopic assisted appendectomy steadily increased and the conversion rate decreased^{7,8,9}. Chiarugi et al¹⁰ stated that no cause for acute pain found during laparoscopy when normal appendix was removed. Others combined the advantages of operating telescope in umbilical with a 5mm suprapubic port but practice is inadequate³.

The disadvantages of the laparoscopic procedure are longer operating time¹¹ and greater cost¹². A technique to reduce operating room time and cost is a combination of the laparoscopic and open technique called the laparoscopic-assisted technique¹³.

Surgeons to use the laparoscopic method including visual diagnosis, less postoperative pain, and quicker return to work. The laparoscopic assisted appendectomy requires less operating room time and is less costly than the traditional intracorporeal laparoscopic treatment. In essence, it offers the advantages of both the laparoscopic and the open techniques¹⁴.

Our results indicate that laparoscopic assisted appendectomy (LAA) can be performed in less operative time than the laparoscopic appendectomy (11.50 ± 3.09 vs 31.42 ± 8.64). This is comparable with the study carried out by Golash (2008)³.

Konstadoulakis et al also demonstrated less operative time in laparoscopic assisted

appendectomy when compared with laparoscopic appendectomy⁷.

Misauno et al in their study also advocated that LAA in adults, a significantly cheap and shorter operating time when compared to laparoscopic appendectomy (LA)¹⁵.

CONCLUSION

The laparoscopic assisted technique for appendectomy incorporates the advantages of both the laparoscopic technique and open technique. The laparoscopic assisted appendectomy technique provides a laparoscopic method that can be performed in the same amount of operating time as an open technique.

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