Non Burial of the Appendix Stump During Appendectomy a Safe Procedure

Dr. Bahaa Aldeen A. K. Al.mujamaee *

Abstract

A prospective study comparing the surgical technique of simple ligation, with ligation and stump burial during a appendectomy for non complicated appendicitis, was done for 160 patients from april 2000 to april 2003 in baquba general hospital.

The patients were randomized into tow groups. In group I simple ligation and group II ligation and stump invagination was carried out, the patient was followed up for tow years to check for post operative complication.

We found the incidence of wound infection and ileus was higher in group II, which take me conclusion that simple liigation of the appendex stump is safe better during appendectomy.

Key words: Appendicitis, appendix, stump, invagination, complications.

Introduction

Appendicitis is the most common acute surgical condition of the abdomen, and obstruction of the lumen is the dominant factor in the production of acute appendicitis.

The first appendectomy was performed by amyand, surgeon to wasminster and st. George hospital and sergeant surgeon to george in 1736 [2].

The technique of appendectomy may vary from surgeon to surgeon. Starting from the skin incision to the ligation and invagination of the stump. the optimum management of the appendectomy stump has frequently been discussed and detailed historical review was made by ochsner and lilly [3].

Some surgeons prefer invaginating the stump by means of purse-string stitch or z-stitch doubly invagnenate the stump.
Simple ligation without invagination and burying the appendix stump was introduced by keronein in 1884 [3]. Some surgeons criticize the procedure as learning to increased incidence of wound infection and peritoneal adhesions.

In this study the surgical procedure for the stump management comparing ligation only, with ligation and invagination and the results was compared with the international literatures.

The traditional method of ligation and inversion has the advantages that peritonealization and haemostasis are secured still the risk of intramural abscess of the caecum can not be neglected. In our study , We discovered that stump burial can not only be omitted from the procedure but also with better post operative results.

**Patients and Methods**

A total number of 160 patients were conducted in my study between the ages of 10-60 years. the diagnosis of acute appendicitis was largely made on clinical examination with simple lab investigations and confirmed during surgery .

Patient with perforated appendicitis, appendicular abscess or mass was excluded from the study. patients were randomaly divided into tow groups. in group I the appendix stump was simply ligated following removal of the appendix. In group II, stump invagination with chromic 210 suture by purse-string or z-stitch was done , all the operation were done by 3 sergeons and followed up during the tow weeks , 2 month and 2 years post operative period , and their symptoms regarding the occurrence of wound infection , bowel obstruction were evaluated.

**Results**

160 patients were included in the study from april 2000-april 2003 , simple silk ligation were done for group I n:8 and ligation with burial of the appendix stump was done for group II n:80 pt. Post operative wound infection was noticed in II pt. (13.75%) in group I and 14 pt. (18.75%)in group 0.05 which is significantly not different in the tow groups .>II P value

There is early return of the bowel sound in group I with demonstrable difference 52 pt. (65%) have positive bowel sound , compared with only 12 pt. (15%) in group II.

At the first post. Operative day.
The frequently of post operative ileus was more in group II during the first month which may very well be due to simple fibrinous adhesions, 9 pt. (11.25%) in group I and 24 pt. (30%) in group II: P<0.05 which is significantly higher in group II.

Non case of post-operative major complications including peritonitis, residual abscess and intestinal obstruction was noticed in both groups during the post-operative period and follow up (table 1).

**Table (1): incidence of post-operative complications in both group**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Post-operative wound infection</td>
<td>11pt. 13.75%</td>
<td>14pt. 18.75%</td>
<td>0.05&gt;</td>
</tr>
<tr>
<td>Early return of bowel sound</td>
<td>52pt. 65%</td>
<td>12pt. 15%</td>
<td>-</td>
</tr>
<tr>
<td>Post-operative ilues (1month later)</td>
<td>9pt. 11.25%</td>
<td>24pt. 30%</td>
<td>0.05&lt;</td>
</tr>
<tr>
<td>Major complications</td>
<td>Nil =</td>
<td>Nil =</td>
<td>-</td>
</tr>
<tr>
<td>* peritonitis</td>
<td>=</td>
<td>=</td>
<td>-</td>
</tr>
<tr>
<td>* residual</td>
<td>=</td>
<td>=</td>
<td>-</td>
</tr>
<tr>
<td>* intestinal</td>
<td>=</td>
<td>=</td>
<td>-</td>
</tr>
<tr>
<td>* other complications</td>
<td>=</td>
<td>=</td>
<td>-</td>
</tr>
</tbody>
</table>

**Discussion**

A cute appendicitis is the most common surgical emergency that is common in the second decade of life [4].
During appendectomy some surgeons do simple ligation, while others still prefer to invaginate it by a purse-string suture or z-stitch. The reason given for this burial of the stump are safety against ligature slipping or blow out of the appendix stump, less incidence of wound infection (5). On the other hand, those who do simple ligation found it simpler, less time consuming and leaving the anatomy of the caecal wall intact (6). With no difference in the incidence in the incidence of the postoperative wound infection or paralytic ileus, however some report show increasing incidence of residual abscess over the caecal wall due to invagination [3].

In our study no significant difference in the incidence of wound infection in both groups, which was also observed by Engstrom [3], Waters [7], and Dass [8].

No serious postoperative complications were noticed in both groups, which is similar to report by different authors in the international literature [7,8].

**Conclusion**

It is concluded that, we can omit the step of stump invagination and perform simple silk ligation of the appendix stump during appendicectomy which will shorten the operative time, with less incidence of wound infection, postoperative ileus and short hospital stay.

**Reference**


Bahaa Aldeen A. K. Al.Mujamaee, “Non Burial of the Appendix Stump During Appendectomy a Safe Procedure”