Laparoscopic Appendicectomy: Study of 60 Cases done at GCS Medical College, Ahmedabad
Mahendra Goswami*, Shashank Desai**, Ajay P. Munshi***

Abstract

Introduction: Laparoscopic Appendicectomy is a gold standard of surgical management of Appendicitis. Our study is an Experience of first 60 cases of Laparoscopic Appendectomy at newly opened GCS Medical College and Hospital, Ahmedabad. Objectives: To study Laparoscopic Appendicectomy with respect to operative time, patient comfort, post-operative complications, hospital stay and cost effectiveness. Methodology: A non randomized study of first 60 patients underwent Laparoscopic Appendicectomy from December 2012 to August 2014 in surgery department of newly opened Teaching Hospital in Ahmedabad, Gujarat, India. Result: Mean operative time was 40 minutes; average post-operative hospital stay was 3 days, post-operative complication rate was 8.33% including URTI, Fever and Wound Infection. None of the patient required conversion to open surgery. Conclusion: Results of Laparoscopic Appendicectomy in our Institute were comparable with referenced studies and International data. It is also cost effective. Recommendation: A newly established surgical training Institute must focus on performing basic Laparoscopic surgeries such as Lap Appendicectomy on routine basis. the procedure were identified as the main predictors of surgical site infections.

Key Words : Laparoscopic Appendicectomy, Cost effectiveness, Hospital stay

Introduction

Laparoscopic surgery has become a necessity in a surgical department nowadays and is being performed with increasing frequency nationwide in tertiary care centers. Basic and advanced Laparoscopy techniques have established themselves as gold standard in management of disease of appendix, gall bladder, hernia etc. For any center well equipped with necessary technical setup it has become mandatory to provide facilities and skill demanded for Laparoscopic surgery. We put forward our experience of Laparoscopic appendectomy performed at GCS Medical College and Hospital over past two years.

First Laparoscopic Appendicectomy was performed by Dr. Kurt Semms in 1982. Before that in India some surgeons were performing laparoscope assisted appendicectomy with the help of gynecal Laparoscope under direct vision through a small incision in right iliac fossa and delivering the appendix outside the abdomen up to the base of the appendix and appendicectomy were performed.

This technique was not helpful where omentum was adherent with inflammed appendix or appendicular Lump was developed.

Objectives

To study Laparoscopic Appendicectomy with respect to operative time, patient comfort, post-operative complications, hospital stay and cost effectiveness. Return to activities of daily routine and patient compliance.

Methodology

Data of all Laparoscopic surgeries performed between 2012 and 2014 was retrospectively reviewed. Total of 60 cases of Laparoscopic Appendicectomy were performed during the period of two years from December 2012 up to August 2014. A follow up period of two months was selected to observe general complications of surgery. Patients of uncomplicated appendicitis with emergency and elective Appendicectomies were selected in study.

Laparoscopic surgery was performed after Diagnosis, Pre operative preparations and anesthetic work up. All patients were operated in a sterilized modular operation theater and all universal precautions were followed. Pneumo peritoneum was created using close veress needle method and Intra Abdominal Pressure between 10-15 mmHg was kept depending up on operative findings. Optical xenon light source and 30 degree camera with tri color chip set were used. All patients were evaluated on age, sex, ASA grade, pre operative co-morbidities, intra operative findings, intra operative complication rate, mean operative time, post operative stay and general complications of Laparoscopic surgery.

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11 patients were with recurrent appendicitis. All patients were operated by three port technique. Intra operative findings were of Inflammed Appendix in 51 cases (85%), Pus collection in 3 cases (5%) and Bowel adhesions in 6 cases (10%).

### Table 2: Intra Operative findings

<table>
<thead>
<tr>
<th>Findings</th>
<th>Number of Cases</th>
<th>% of cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inflammed Appendix</td>
<td>51</td>
<td>85</td>
</tr>
<tr>
<td>Pus collection</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Bowel adhesions</td>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>60</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

In 40 patients (66.66%) Appendix was Retrocaecal, in 16 patients (26.66%) it was Pelvic and in 4 patients (6.68%) it was pre ileal in position.

### Table 3: Position of the Appendix

<table>
<thead>
<tr>
<th>Position</th>
<th>Number of Cases</th>
<th>% of cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retrocaecal</td>
<td>40</td>
<td>66.66</td>
</tr>
<tr>
<td>Pelvic</td>
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<td>26.66</td>
</tr>
<tr>
<td>Pre Ileal</td>
<td>4</td>
<td>6.68</td>
</tr>
<tr>
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<td><strong>60</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Mean operative time was 40 minutes and none of the patient required conversion to open surgery. Post operative complications were seen in 5 (8.33%) patients. Upper Respiratory tract infection (URTI) in 1 patient, Fever in 2 patients and wound infection in 2 patients. Mean postoperative stay was 3 days. There was no mortality. All patients were able to return to activities of daily life within 7 days after surgery. After two months patients were relatively pain free and no post-operative complications were noted.

Laparoscopic Appendicectomy was cost effective as short hospital stay, less post-operative complication and early return to routine work.

### Discussion

In all cases of Laparoscopic Appendicectomy patients epidemiology, mean operative time, post operative stay and complications rates were comparable with referenced studies and international data. Cases of...
emergency and elective presentations were managed laparoscopically. No cases required conversion to an open procedure. Difficult intra operative presentation such as localized abscess and gangrenous appendicitis could be managed laparoscopically without a significant change in mean operative time or complications.

The Laparoscopic appendicectomy was cost effective as short hospital stay was there and due to small incisions early discharge of the patients was possible. Post operative IV fluid, antibiotics and injections were also required for short duration. Chances of wound infection was also very less. Patient can go to their duty immediately after the discharge so economically was beneficial for the patient.

**Conclusion**

Laparoscopic surgery is rapidly growing super speciality. Laparoscopic appendicectomy is a gold standard of surgical management of all cases of appendicitis. A newly established surgical training institute must focus on performing of basic Laparoscopic surgeries such as Lap Appendicectomy on routine basis before performing more advanced surgeries Laparoscopically. It is recommended for any surgeon learning Laparoscopic surgery to perform adequate number of basic Laparoscopic surgeries and acquire ample experience before performing more difficult surgeries and advanced Laparoscopic maneuvers.

**References**

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