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An Experience of 135 Cases Laparoscopic Surgery at Newly Opened Tertiary Care Hospital

Medical

KEYWORDS :

*Dr Aakash Rathod	Senior Resident, Dept of Surgery, GCS MC, Ahmedabad.
**Dr Jaimish Gajjar	Associate professor of Surgery, GCS Medical College & Hosp. Ahmedabad.
*** Dr Shashank Desai	Associate professor of Surgery, GCS Medical College & Hosp. Ahmedabad.

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 & advanced laparoscopy techniques have established themselves as gold standard in management of diseases of appendix, gallbladder, inguinal & hiatus hernia. 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 various basic as well as advanced laparoscopic procedures performed at GCS medical college and hospitals over the past two years.

MATERIAL&METHODS:

Data of all laparoscopic surgeries performed between 2012 and 2014 was retrospectively reviewed. A total of 135 cases of laparoscopy were performed during a period of two years from 29/2/12 upto 15/2/14. Of which 74 cases of lap cholecystectomy, 43 cases of lap appendectomy, 18 cases of lap inguinal hernioplasty (TEP &TAPP), 1 case of lap Nissen's fundoplication& 1 case of lap Hydatid cyst exploration were performed. A follow up period of 2 months was selected to observe general complications of laparoscopic surgery.

Only elective cases were selected for laparoscopy. Patients of calculus & acalculous cholecystitis were selected. Patients of uncomplicated appendicitis with emergency presentation were selected. Patients of uncomplicated unilateral and bilateral inguinal hernia were selected. A patient of hiatus hernia& a patient of Hydatid cyst of liver was selected.

Laparoscopy surgery was performed afterdiagnosis, pre-operative preparation and anesthetic workup. All Pt were operated in a sterilized modular operative theatre and all universal precautions were followed. Pnuemo-peritoneum was created using closed Veress needle method, and IAP between 8-15 mm hg were kept depending upon type of surgery and operative findings. Optical xenon light source and 30* camera with tri-color chip set were used.All patients were evaluated on Pt age, sex, and ASA grade, pre-operative co-morbidities, intra-operative findings, intra-op complications rate & indications for conversion to open procedure, mean operative time, post-operative stay &general complications of laparoscopic surgery.





OBSERVATIONS:

All patients of appendicitis were operated on index admission within 24 hrs of admission. The mean age of patients undergoing Laparoscopic Appendectomy was21.1 yrs, the youngest 10 yrs and oldest 42 yrs.28(65.1%)were females and 15(34.9%)males. 37(86.4%) pts presented with acute appendicitis, 6(14%) pts with recurrent appendicitis. All patients were operated by 3 port laparoscopic appendectomy technique. Intra-op findings were inflamed appendix in 88.8% (38), pus collection4.6% (2)& bowel adhesions in 6.9% (3). Position of the appendix was retro cecal in 60.4% (26), pelvic in 32.5% (14) & pre ileal in 6.9% (3). Mean operative time was 37.2 min and none of the pt required conversion to open surgery. Postoperative complications were seen in 4(9.3%) pts, with 1 URTI, 2 Fever, 1 wound infection which were treated successfully. Mean postop stay was 72.8 hrs (3 days). There was no mortality.

All cases selected for lap cholecystectomy were elective. All patients of cholecystitis were operated on index admission between 24-72 hrs of admission. The mean age of patients undergoing Laparoscopic cholecystectomywas 47.1 yrs youngest 18 yrs & oldest 79 yrs. 60 were females and 14males. Pre op morbidities were diabetes mellitus 18 (24.3%), hypertension 23 (31%), LVD 3 (4.5%), acute bronchitis 1 (1.3%).All patients were operated by standardized 4 port laparoscopic cholecystectomy technique. Cystic duct and artery were ligated by metal clips in 68 (91.8%) & intra-corporeal suturing 6 (8.2%).Intra-op findings were calculous cholecystitis in 66 (89.1%), bowel adhesions 17 (22.9%), mucocele in 7(9.4%), perforated gall bladder 2(2.7%) & GB polyp 2(2.7%). Mean operative time was 76.4 min and no ptsrequired conversion to open surgery. Post op complications were seen in 11(14.8%) pts vomiting 6, fever 3, URTI 1, sub-acute intestinal obstruction 1. All complications were managed conservatively. The mean postoperative stay was 3.7 days. There was no mortality.

Only uncomplicated reducible cases of direct & indirect inguinal hernia were selected. All cases were elective. The mean age

of pts was 49.3 yrs, youngest 15yrs & oldest 75 yrs. 1 was female & 13 were males. 13 were unilateral and one bilateral inguinal hernia. 3 were indirect & 11 direct inguinal hernia. Preop morbidities were diabetes mellitus3 (21.4%), hypertension 4(28.5%), LVD 1 (7.1%). 11 cases were operated by TEP and 3 cases by TAPP repair after due anesthetic work up. The mean operative time was 84.2 min. post op complications were URTI 1 (7.1%), inguinodynia 1 (7.1%). 1 pt required conversion to open surgery. The mean post op stay was 2.7 days. Pt were followed up over a mean period of 5.8 months with max f'up 1.5 yrs without any recurrence. There was no mortality.

A 63 yrs male pt of hiatus hernia was operated by Lap Nissen's fundoplication using 5 port technique.the operative time was 78 min. there were no intra op or post op complications and pt was followed up for 6 months without recurrence of symptoms.

A 50 yr male pt of hydatid cyst of liver was operated laparoscopically. The operative time was 91 min. there were no intra op or post op complications. Drain was removed on day 7. Pt was followed up over a period of 6 months with no symptoms or recurrence.

DISCUSSION:

In all cases of laparoscopic appendectomy, pt epidemiology, the mean operative time, post op stay & the complication rates were comparable with reference studies and international data. All cases of emergency and elective presentation were managed laparoscopically & no cases required conversion to an open procedure. Difficult intra op presentations such as localized abscess and gangrenous appendicitis could be managed laparoscopically without a significant change in mean operative time or complications.

In all cases of laparoscopic cholecystectomy, pt epidemiology, mean operative time, mean post op stay, and complication rates were comparable to international data. Pt were significant pre op morbidities such as diabetes and hypertension were successfully operated laparoscopically without significant complications. Difficult cholecystectomies could be managed laparoscopically without the need to conversion, & advanced techniques such as intra corporeal suturing were performed at the cost of prolonged operative time. Conversion rate to open procedure was lower compared to international data in our study. No post op bile leak or fistula were observed in our study. Generalized complication rate was also lower in our study compared to reference data.

In all cases of TEP& TAPP hernioplasty, mean operative time, duration of post op stay, post op pain(VAS), were higher compared to reference data. Small size of pt sample maybe a factor. Over a comparable follow up period no recurrances or mesh related complications were observed. Initial increased operative time was comparable with reference data with increasing pt experience.

Single cases of advanced laparoscopic procedures such as lap Nissen's fundoplication and lap Hydatid cyst aspiration were also performed with encouraging results.

Type of Surgery	Avg Age(yrs)	No. of Surgeries	Avg op. time(min)	Avg Post op. stay(days)	Complications (%)
Lap Appendectomy	21.1	43	37.2 min	3 days	4%
Lap Cholecystectomy	47.1	74	76.4 min	3 days	14.8%
Lap Hernia repair	49.3	18	84.2 min	2.7 days	14.2%
Lap Nissen's fundoplication	63	1	78 min	5 days	-
Lap Hydatid cyst aspiration	50	1	90 min	7 days	-

CONCLUSION:

Laparoscopic surgery is a rapidly growing sub specialty. Laparoscopic approach has become gold standard in management of acute appendicitis, acute cholecystitis etc. and quickly gaining popularity in management of several other abdominal as well as thoracic surgical diseases. A newly established surgical training institute must focus on performing of basic laparoscopic surgeries such as lap appendectomy or cholecystectomy 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. With progressing learning curve and ongoing practice of laparoscopic surgeries, hernia repair, Hydatid cyst aspiration, hiatus hernia repair are some of the surgeries that can be done laparoscopically.

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