

ABSTRACT

INTRODUCTION : Laparoscopic surgery also called minimally invasive surgery, minimal access surgery, band aid surgery or key hole surgery is a modern surgical technique in which operations in the abdomen performed through small incision (usually 0.5 – 1.5cm) as opposed to larger incisions need in laparotomy. The field of minimally invasive surgery as experienced an explosive growth in last decades. Though the art of surgery has gone through a complete evolutionary process due to antiseptics, antibiotics and anaesthesia, the field of laparoscopic surgery has undergone major changes in the recent past. Upto half of complications occur at the time if abdominal access for camera port placement. Complication may be associated with the anaesthetics, insertion of primary and secondary trocars. Induction of pneumoperitoneum, thermal instruments, mechanical instruments and other associated condition. Conversion to an open procedure may be needed to manage complications that have been identified intraoperatively. Severe complications such as vascular injury, bowel perforation can be catastrophic and are the main cause of procedure specific morbidity and mortality related to laparoscopic surgery.

AIM OF THE STUDY : To evaluate the incidence of complications during intraoperative and post operative periods of laparoscopic surgeries done at Govt. Rajaji Hospital, Madurai. It includes Anaesthesia related complications, General complications of laparoscopic surgery, Laparoscopic surgery related complications, specially for Laparoscopic appendicectomy, Laparoscopic cholecystectomy, Laparoscopic Hernioplasty, Post operative complications, For analysis post operative complications and its association with pre operative risk factor

MATERIALS AND METHODS : This study was conducted at Government Rajaji Hospital, Madurai from March 2016 to August 2016. It includes data on complications of all patients who undergo laparoscopic surgeries in general surgery department. Before surgery, an informed consent was obtained from patients with awareness of the risks and complications of laparoscopic procedures and a possibility to switch to laparotomy. Age and sex, body mass index of the patient were recorded. Presence of risk factors such as obesity, previous surgeries, type of scar, hypertension, diabetes mellitus, coronary artery disease, COPD were also noted. **Inclusion criteria:** Patients more than 15 years of age and less than 65 years age group in both sexes were selected for laparoscopic surgery. Selection of patients depend on patient's risk factor and diseases process. Patients signed in consent form for laparoscopic surgery according to designed proforma. Total number of patients registered during the 6 months period was 100 patients.

Results : Age of the patients included in the study ranges from 15-65 years. Mean age of the patient was 34.92 years. Complications has been divided into two categories: Intraoperative and post-operative complications. Intraoperative complication has been divided into a) Anaesthetic complication b) Complication unique to laparoscopy, c) Specific procedure related complications In

intraoperative period, I have observed 2 cases of hypertension, 2 cases of tachycardia during anaesthetics. While doing laparoscopic procedures, 1 case of subcutaneous emphysema, 2 cases of vascular injury (inferior epigastric artery), one retractor injury and one indirect electrosurgical injury happened.

Out of 100 surgical procedures, 60 cases of laparoscopic appendicectomy accounted for major proportion. Next was 30 cases of laparoscopic cholecystectomy.

While doing laparoscopic appendicectomy one case of stump appendicitis, and caecal injury happened out of 60 cases .

Out of 30 cases, 3cases of gallstone spillage, one case of bile duct injury, bile duct leak and pancreatitis were observed while doing laparoscopic cholecystectomy.

I have registered 10cases of laparoscopy hernioplasty in my study period. Out of 10cases, 3cases of bleeding from tacker site, one case of seroma were observed.

After analysis of complications versus procedures, no procedures significantly associated with complications.

Conclusion :The advent of laparoscopic surgery has provided surgeons with new techniques to deal with familiar problems. Laparoscopy can reduce hospital stay, decrease post-operative pain and hasten recovery time.

The complication rates in individual category decreased significantly in this study compared to previous studies. It also confirms that laparoscopy is highly experience dependent. Some of the measures followed by us during laparoscopic procedures that helped in preventing complication are

(a) ACCESS:

While introducing trocar, we always introduce primary trocar by 'OPEN TECHNIQUE' using blunt trocar

By following this method, we have not landed up in even single trocar injury during insertion.

(b) PNEUMOPERITONEUM:

After introducing primary trocar by open technique, insufflation of carbondioxide is done by slow insufflation method using an intraabdominal pressure of 15mmHg at 2.5litres/minute.

In open technique, it is important to monitor the pneumoperitoneum creation. Rapid insufflation may cause air getting trapped in circulation thereby causing gas embolism.

So far, we have not encountered any pneumoperitoneum related complications

(c) PROCEDURE RELATED:

(1) LAPAROSCOPIC CHOLECYSTECTOMY:

We routinely use hemo-lock clips for clamping cystic duct and artery and till now, no complication has occurred due to the safety action of these clips and a tube drain is routinely kept for 24 hours to watch for any complication and

hemolock clips are very useful when cystic duct is short and dilated where it cannot be clipped by usual endoclips.

(2) LAPAROSCOPIC APPENDICECTOMY:

By routinely using bipolar diathermy for appendicectomy, we have not encountered any case of iatrogenic bowel injury.

While using cautery, a complete knowledge of biophysics and mechanism of cautery is necessary.

(3) LAPAROSCOPIC HERNIOPLASTY :

We always use absorbable or delayed absorbable sutures for fixing the mesh using transfacial sutures because use of non – absorbable suture material may cause sinus formation.