Research Article

Effectiveness of Laparoscopic specimen retrieval bag for specimen removal during laparoscopic surgeries

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Abstract

Objective: The purpose of the study is to investigate the effectiveness of laparoscopic specimen retrieval bag for specimen removal during laparoscopic surgery in reducing duration of surgery. **Material and methods:** Total 30 patients with ectopic pregnancy undergoing laparoscopic salpingectomy were included in study and investigated. Cases were studied as follows. Out of these 30 patients, 15 patients were in group I that is patients in which laparoscopic specimen retrieval bag was used for specimen removal during laparoscopic surgery and 15 patients were in control group that is patients in which specimen removal during laparoscopic surgery was done without laparoscopic specimen retrieval bag. Starting time of specimen retrieval and ending time of specimen retrieval was noted in each patient. **Salient findings:** On an average time required for specimen retrieval with using laparoscopic specimen retrieval bag was 3 minute 25 second and average time required for specimen retrieval without using laparoscopic specimen retrieval bag was 10 minute 52 second. **Conclusions:** Using laparoscopic specimen retrieval bag for specimen removal during laparoscopic surgery was effective in reducing duration of surgery.

Key Word: Laparoscopic specimen retrieval bag, Endosac, Endobag.

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INTRODUCTION

Laparoscopic procedure of salpingectomy for ectopic pregnancy is a commonly performed procedure. Many times there is ruptured ectopic pregnancy with haemoperitonium. In any surgical procedure especially in ruptured ectopic pregnancy, reducing surgical time to minimum possible is always better. After salpingectomy, the specimen of fallopian tube with ectopic pregnancy tissue and blood clots is obtained. This specimen is fragile and often breaks down in pieces during its removal from abdominal cavity. In that case there is spillage of the tissue in abdominal cavity and the surgeon has to find out all these spillage pieces and remove them one by one which is a time consuming job. Spillage of tissue and specimen retrieval time can be minimized if laparoscopic specimen retrieval bag is used for specimen removal during laparoscopic surgery.

AIMS AND OBJECTIVES

1. To study the effectiveness of laparoscopic specimen retrieval bag for specimen removal during laparoscopic salpingectomy for ectopic pregnancy in reducing duration of surgery.

MATERIALS AND METHODS

The present study was carried out in the Department of Obstetrics and Gynecology, Bhartiya Maternity and Nursing Home, Raja Bazar, Aurangabad, Department of Obstetrics and Gynecology, Bhartiya Maternity and

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Nursing Home Private Limited, Manjeet Nagar, Aurangabad from January 2010 to August 2014. Total 30 patients with ectopic pregnancy undergoing laparoscopic salpingectomy were included in study and investigated. Cases were studied as follows. All 30 patients were given General anesthesia. Time was noted. One 10 mm Laparoscopy port was inserted infra umbilical and two 5 mm trocars are inserted on right side and left side in lower abdominal quadrants lateral to inferior epigastric artery. One 5 mm trocar inserted in lower abdomen in midline. Salpingectomy done in all patients. Blood clots sucked. Time was noted again. Now out of these 30 patients, 15 patients were in group I that is patients in which laparoscopic specimen retrieval bag was used for specimen removal during laparoscopic surgery and 15 patients were in control group that is patients in which specimen removal during laparoscopic surgery was done without laparoscopic specimen retrieval bag. For patients in group I, specimen was removed from 5 mm left lower abdomen port incision by extending it to 10 mm and then newly designed laparoscopic specimen retrieval bag by authors was used. This laparoscopic specimen retrieval bag is made of plastic 100 microns thickness and 13.5 cm X 7.5 cm size. This bag is Ethylene Oxide sterilized or sterilized in formalin chamber. This bag is wrapped on Mixter Forceps and inserted from the port. Mixter forceps opened in the abdomen which causes opening of plastic bag mouth. Specimen was put inside the bag and Mixter forceps closed which causes closure of plastic bag mouth. Then Mixter forceps pulled out along with plastic bag and specimen in it. In cases where specimen is larger to come out directly with the pull, then opening of plastic bag was pulled out of abdomen and Ovum Forceps was put in the plastic bag and specimen was removed in pieces. For the patients in control group, specimen was removed from 5 mm left lower abdomen port incision by extending it to 10 mm and then 10 mm port inserted in it. 10 mm claw forceps was inserted in that port and specimen grasped and removed. Starting time of specimen retrieval and ending time of specimen retrieval was noted in each patient. Time was also noted at the end of surgery that is closure of all laparoscopy port incisions.

OBSERVATIONS

Table 1: Effectiveness of laparoscopic specimen retrieval bag for specimen removal during laparoscopic surgery

Total number of patients in which specimen retrieval was done in group I and in control group	Average time required for specimen retrieval in group I -15 patients	Average time required for specimen retrieval in control group – 15 patients
30	3 minutes 25 seconds	10 minutes 52 seconds

In our study, effectiveness of laparoscopic specimen retrieval bag for specimen removal during laparoscopic salpingectomy for ectopic pregnancy in reducing duration of surgery was noted. Out of 30 patients, 15 patients in group I in which laparoscopic specimen retrieval bag for specimen removal during laparoscopic salpingectomy for ectopic pregnancy was used, average specimen retrieval time was 3 minutes 25 seconds and in control group average specimen retrieval time was 10 minutes 52 seconds.

RESULTS

Laparoscopic specimen retrieval bag for specimen removal during laparoscopic salpingectomy for ectopic pregnancy was effective in reducing duration of surgery by average 7 minutes 27 seconds.

DISCUSSION

In our study, effectiveness of laparoscopic specimen retrieval bag for specimen removal during laparoscopic salpingectomy for ectopic pregnancy in reducing duration of surgery was noted. Out of 30 patients, 15 patients in group I in which laparoscopic specimen retrieval bag for specimen removal during laparoscopic salpingectomy for ectopic pregnancy was used, average specimen retrieval time was 3 minutes 25 seconds and in control group average specimen retrieval time was 10 minutes 52 seconds. Laparoscopic specimen retrieval bag for specimen removal during laparoscopic salpingectomy for ectopic pregnancy was effective in reducing duration of surgery by average 7 minutes 27 seconds.(Table-I). Unpaired t-test applied to data table. Specimen retrieval time in group I was compared to specimen retrieval time in control group. Probability value less than 0.01, so reduction in surgery time by using laparoscopic specimen retrieval bag for specimen removal during laparoscopic salpingectomy for ectopic pregnancy was significant. Ali *et al* (2013)[1] found that specimen retrieval in ruptured ectopic pregnancy patients undergoing laparoscopic salpingectomy using specimen retrieval bag was associated with significantly shorter operating time than specimen retrieval without bag. Our results were comparable with this study.

CONCLUSION

Laparoscopic specimen retrieval bag for specimen removal during laparoscopic salpingectomy for ectopic pregnancy was effective in reducing duration of surgery.

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