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Guest Editorial

Safety of Laparoscopy in Gyneco-Oncological Surgeries

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Introduction

Minimal invasive surgery has been widely used in benign gynecological surgeries presently. Value in gynecologic oncological diseases is also increasing gradually since last few decades. Aim of this editorial is to sum up safety aspect of laparoscopy in gyneco-oncological surgery.

Complex adnexal masses

In the course of laparoscopic excision of complex adnexal masses; there are risks of intraoperative rupture and spillage of cyst content to abdomen furthermore spillage of tumor cells in the case of undiagnosed malignancy. In a recent prospective study it was found that rupture of cyst risk is about 30% in laparoscopy; whereas intraabdominal spillage is even less at about 7% as long as safe compartment technique is used. It is also important to emphasize that all ruptured cysts were above 8 cm in diameter [1]. In masses that are known to be benign preoperatively, should be operated by minimal invasive techniques as long as it is possible. But safe compartment techniques should be incorporated into our daily practice to minimize risk of spillage of any cyst content to abdominal cavity even if it is free of tumor.

Ovarian cancer

In ovarian cancer patients laparoscopy can be used to evaluate resectability of tumor; to visualize the abdominal cavity as a second-look and to perform primary cytoreductive surgery. Since the residual tumor extent is one of the most important factor that effects survival outcomes; one must first put to account the efficiency of laparoscopy in term of cytoreduction. There are limited studies with retrospective design, limited case numbers and generally relevant to early stage disease. Commonly progression free survival, overall survival rates and number of resected lymph nodes were similar in both laparoscopic and laparotomic cytoreduction in these studies. Time to chemotherapy was shorter after laparoscopy as an advantage of rapid convalescence period [2]. In the cochrane review, it is stated that since there is not randomized study in literature; it is not possible to make a meta-analysis and to compare the survival outcomes of laparoscopic and laparotomic cytoreduction in ovarian cancer. Intraoperative rupture and spillage of tumor and as a result; upstaging of disease is the other safety issue Five of six studies that are comparing rupture of malign cyst and upstaging of disease concluded there is similar risk rate of upstaging in laparoscopy and laparotomy [3].

There is necessity of well-designed randomized studies to demonstrate the safety and efficacy of laparoscopy in ovarian cancer. Since the gold standard surgical approach is laparotomy; any study that is evaluating value of laparoscopy should improve noninferiority of this approach over laparotomy, especially in term of tumor removal.

Endometrial cancer

Randomized studies, meta-analyses and retrospective studies concluded that laparoscopic approach in endometrium cancer has advantages over laparotomy in terms of per-operative morbidity. Beside survival rates are not influenced negatively. LAP2 study conducted by gynecologic oncology group (GOG), has shown laparoscopy is safe in short term outcomes [4]. Further follow up same patient group revealed 11.4% recurrence rate in laparoscopy and 10.2% recurrence rate in laparotomy arm. Their comment is laparoscopy is safe in short term, recurrence rate is a bit higher and hazard ratio is 1.14. A recent publication implied surgical outcomes of patients older than 60 years in LAP2 study group. In addition to shorter hospital stay, postoperative morbidities like deep vein thrombosis, cardiac arrythmias, pneumonia are much more less in laparoscopy arm [5].

Port site metastases is not a common clinical condition. Incision site metastases in laparoscopic, robotic and laparotomic approach in endometrium cancer surgery has been investigated over more than 2600 patients. Only 3 cases of incisional site recurrences have been detected; all in open surgery. Port site metastases especially when they are non-isolated can be a poor prognosis factor and sign of an aggressive disease [6].

Uterine sarcoma

Rate of unknown sarcoma diagnosis on hysterectomy materials is about 3 - 100/10.000 in literature. Use of power morcellation is decreased after warning of F.D.A. in 2014. When morcellation is done within safe compartment; absence of any uterine tissue in peritoneal washings is shown. In a large case series, survival rates of uterine sarcoma patients operated by laparotomy was higher than laparoscopic approach arm. Within laparoscopy arm; power morcellated group had shorter survival than vaginal manual morcellated group [7].

Usage of safe compartment technique is extremely important and should be emphasized. Even in benign myomectomy patients there can be risk of spillage of fibroid parts and parasitic myomas may develop in future. Also lymph nodes resected in cancer patients should be collected in a safe sterile bags immediately to reduce spillage.

Cervical cancer

Meta-analyses have shown superiority of minimal invasive techniques over laparotomy especially in terms of per-operative morbidities whereas operation time was longer in this group. Most recent and randomized study is LACC study on this scope. Preliminary outcomes were striking. Disease free survival rates were 86% and 96% in laparoscopy and laparotomy arm respectively. This difference gave rise to early termination than planned. Early confinement may interfere the power of study. Disease free survival of laparotomy patients is even higher than patients with tumor size smaller than 5 mm and occult tumor in literature. This data may need further enlightment [8].

LACC study results caused interrogation the safety of laparoscopic approach in cervical cancer. Results should be interpreted cautiously because of aforementioned reasons. Also it is not possible to make a certain decision with one study. External validation of these results is essential.

Conclusion

Endoscopic surgery should not be used in surgery of adnexal masses with malignancy suspicion. In cases considered to be benign should be operated with care and safe compartment techniques should be used. In ovarian cancer; there is no evidence to suggest that laparoscopy is safe. Although laparoscopic surgery in endometrial cancer appears to be safe in the early stages and endometrioid types in short term; there is lack of information about long-term results. Laparoscopy should never be used for suspected uterine sarcoma patients. All uterine fibroids should be morcellated in a safe compartment. The situation in cervical cancer has become completely blurred and laparoscopy should be used very carefully or laparotomy should be preferred until external validations are made.

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