LAPAROSCOPY IN EARLY OVARIAN CANCER
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Traditionally, it has been recommended that a comprehensive surgical staging procedure for epithelial ovarian and fallopian tube cancers include a total abdominal hysterectomy, bilateral salpingo-oophorectomy, peritoneal cytologic washings, biopsies of adhesions and peritoneal surfaces, omentectomy, and retroperitoneal lymph node sampling from the pelvic and para-aortic regions through a generous vertical midline laparotomy incision [1]. With the advent of minimally invasive surgical techniques, surgeons are now able to perform all of the necessary procedures for comprehensive surgical staging.

Querleu and Leblanc in 1994, reported complete laparoscopic surgical staging procedures for ovarian or fallopian tube cancer. Eight referred patients with ovarian and fallopian tube cancers underwent complete laparoscopic staging after inadequate initial surgical staging. Since this initial series, others have confirmed the feasibility of comprehensive laparoscopic surgical staging of ovarian or fallopian tube cancers [2].

Recently, the results of a GOG study [3] to determine the feasibility of laparoscopic completion staging in patients with incompletely staged gynecologic cancers were reported. Of 95 eligible patients, 73 had incompletely staged ovarian, fallopian tube or primary peritoneal cancer. Eleven patients were later excluded based on pathology review, progression of the disease or incomplete documentation. Fifty-eight (69%) of these 84 patients were successfully completely staged with photographic documentation. Nine (10%) and seventeen (20%) of 84 patients were incompletely staged or required conversion to laparotomy, respectively. In patients undergoing laparoscopy, 6% had bowel complications and 11% were found to have more advanced disease. Hospital stay was significantly shorter with laparoscopy alone (3 vs 6 days, P=0.04). They concluded that interval laparoscopic staging of gynecologic malignancies can be successfully undertaken in selected patients, but laparotomy for adhesions or metastatic disease and risk of visceral injury should be anticipated.

Laparoscopy at various points during ovarian cancer treatment. The use of the laparoscopic approach to perform the conservative treatment of borderline ovarian tumors appears attractive because such management theoretically reduces post-operative adhesions and therefore could increase fertility results.

Laparoscopy can aid in the assessment of the feasibility of laparoscopic optimal cytoreductive surgery in ovarian cancer. Some patients, originally selected for debulking treatments, will be able to undergo only limited explorative laparotomy due to extremely advanced disease. An accurate and reliable method should be pursued to avoid unnecessary explorative laparotomies and to better select patients for surgical and/or medical specific treatments. Those cases judged unresectable by clinical–radiological evaluation could really benefit from a laparoscopic approach that can improve the predicted surgical outcome and provide a histological diagnosis by a less traumatic access.

The role of second-look surgery in the management of advanced epithelial ovarian cancer is controversial. High recurrence rates after negative histological findings, lack of consistently effective salvage therapy, and absence of data showing improved survival benefits have diminished acceptance of the routine use of second-look surgery. Nevertheless, patients with suboptimal initial cytoreductive surgery for stage III ovarian cancer who have a complete clinical response to platinum-based combination chemotherapy appear to achieve a distinct survival benefit from second-look surgical procedures [4]. The management of advanced epithelial ovarian cancer includes surgical staging and aggressive debulking by laparotomy followed by intravenous chemotherapy. Nevertheless, even in cases of a good response after optimal debulking surgery and intravenous chemotherapy, 50% of the patients with no clinical evidence of residual disease will suffer a recurrence because of the presence of microscopic peritoneal implants. In those patients the failure of second-line intravenous chemotherapy to control residual disease has led to the use of intraperitoneal chemotherapies for small microscopic residual disease. Until recently, second-look procedures and insertion of intraperitoneal catheters were almost always carried out by laparotomy or "blind" surgical technique. With the improvement of instrumentation and surgical techniques, we are now able to perform these procedures by laparoscopy.

Hand-assisted laparoscopic surgery (HALS) is a unique surgical approach that combines traditional laparoscopy with the ability to place a hand intraperitoneally, thus retaining tactile
sensation for the surgeon. General surgeons and urologists already use hand-assisted laparoscopy for a wide range of surgical procedures on a variety of organ systems including the kidney, spleen, liver, prostate, and gastrointestinal tract. Although the role of HALS in the primary surgical management of gynecologic malignancies requires further investigation, it appears that select patients with early- and advanced-stage ovarian cancer may be treated appropriately and successfully with HALS. Patients treated via this approach appear to benefit from the advantages associated with traditional minimally invasive surgery.

The occurrence of port-site metastases has raised significant concern about the use of laparoscopic surgery for procedures associated with malignant disease. The actual incidence of port-site metastases is unknown; however, estimates range from 0% to 2.3%. The overall incidence of port-site metastases in gynecologic cancers in a study by Nagarsheth et al. [5] was 2.3%. The risk of port-site metastases was highest (5%) in patients with recurrence of ovarian or primary peritoneal malignancies undergoing procedures in the presence of ascites. A recent paper by Abu-Rustum et al. [6] has demonstrated that CO2 pneumoperitoneum does not affect overall survival of women with persistent metastatic ovarian cancer. Some techniques such as deflation of the abdomen with trocars in place, irrigation of the trocar site with 5% povidine-iodine, and closure of the peritoneal trocar sites (10–12 mm trocars), have been suggested to decrease the risk of port-site metastases; however, their effectiveness have not been shown in clinical studies.

To date, the retrospective available data on intraoperative cyst rupture in early-stage ovarian cancer is conflicting, and there are no prospective clinical trials showing it will worsen prognosis. However, if spillage of cyst contents occurs, massive irrigation and immediate surgical treatment and staging are prudent because there is also no evidence to support the safety of delayed definitive management after capsular rupture [7].

Although laparoscopy provides excellent outcomes, its integration in gynecologic cancer surgery is hampered by lack of training at the subspecialty level and probably a significant learning curve. Because large prospective trials are lacking, the route used to perform staging or restaging will mainly depend on the surgeon's training. As shown in a series on other gynecologic malignancies [8], all patients undergoing laparoscopy have a better surgical outcome in terms of morbidity when compared with patients undergoing laparotomy.

References:

Questions:
1. Laparoscopy has a feasible role in all except: A. Debulking advanced disseminated disease; B. Borderline ovarian tumors; C. Second look laparoscopy
2. Recent data has shown a clear correlation of pneumoperitoneum and dissemination of disease:: A. True; B. False