INTRODUCTION

Ovarian cancer is the sixth most common cancer in women in the world and is the second most common cause of death from gynecological cancer, accounting for 4% of all cancers in female patients. This poor prognosis and a 5 year survival rate that only approach 25%.

In approximately 25% of patients the detection of ovarian cancer is fortunately made during an earlier stage, confined to one or both ovaries, without evidence of local or distant metastases, usually as an incidental finding on routine imaging evaluation, which is associated with a very good prognosis including a five year survival rate that approaches 90%.

The mainly histologic tumor type is epithelial

Ovarian cancer is usually an asymptomatic disease, mostly diagnosed in advanced stages chance and that generally results in death. More rarely, the diagnosis is accomplished in initial stage (early ovarian cancer) by pelvic ultra-sonography. The classical curative treatment either initial or advanced cases has been cytoreductive surgery by laparotomy. However, the role of laparoscopic approach in treating malignant masses is increasing due to its many benefits. The authors present a case of an early ovarian cancer which was both stated and treated by means of an optimal laparoscopic cytoreduction, with a good post-operative course and no signs of recurrence at fourteen months follow up. Laparoscopic approach to perform an optimal cytoreduction for early ovarian cancer presents an excellent choice of treatment. Good expertise of surgical teams may allow laparoscopic approach to be a feasible, safe and effective option to the management of early ovarian cancer without comprises the oncologic radicality.

Key words. Early ovarian cancer; laparoscopic cytoreduction; ovary.
carcinoma and the most common histological subtype is serous (40 to 70% of all types), followed by endometrioid tumors (20 to 25% of all cases) and by mucinous tumors (5 to 20% of all cases). Despite a lower incidence, the mucinous tumors are more associated with appendiceal primaries, often requiring an appendectomy as an additional surgical procedure.

Cytoreductive surgery is the standard care in managing early stage ovarian cancer, classified by International Federation of Gynecology and Obstetrics (FIGO) as stage IA to IC, and which traditionally involves total abdominal hysterectomy, bilateral salpingo-oophorectomy, omentectomy, peritoneal biopsies, pelvic and para-aortic lymph node dissection and peritoneal washings. This aggressive surgery is performed to minimize the risk of microscopic metastatic disease that occurs in almost 20% of early ovarian cancer. Sites of predilection occult metastatic disease included the contralateral ovary, omentum, diaphragm and retroperitoneal lymph nodes. The reported incidence of lymph node involvement in patients with apparent stage I disease is up to 36%.

Depending on the type of surgical approach, the classical practice consists in a laparotomy procedure, with the usual generous vertical midline abdominal incision, allowing inspection and palpation of the cavity from the pelvis to the diaphragm, assuring the search for tumoral implants. First description of the use of minimally invasive surgery in patients with ovarian cancer dated 1973. However, in the last two decades, minimally invasive laparoscopic surgery have an increasing role in oncological surgeries, providing advantages for cervical, endometrial and ovarian cancer when compared to laparotomy.

The authors report one case of early ovarian endometrioid carcinoma which was treated by means of totally laparoscopic cytoreduction by single surgical team.

**CASE REPORT**

A premenopausal asymptomatic 52 years old woman was referred to the surgical oncology team for evaluation of right ovarian mass. Routine transvaginal ultrasonography revealed a solid-cystic lesion of approximately 10 x 8 cm in size. The Doppler ultrasonography showed an enhanced blood flow with low resistance. Both computed tomography and nuclear magnetic resonance images confirmed these findings (Figure 1). There was no disseminated disease. The patient has no associated diseases. Familiar history was negative for ovarian cancer. She underwent total abdominal hysterectomy for uterine myomatosis ten years ago. Serum tumor markers were negatives (CA 125, carcinoembryonic antigen, alpha-fetoprotein and lactate dehydrogenase). Both diagnostic and therapeutic laparoscopy was subsequently performed due to the suspect of ovarian cancer.

Surgical procedure was followed: a) peritoneal cavity was accessed via umbilical puncture by Hassom’s technique (open approach) with the insertion of 10 mm port-site; b) pneumoperitoneum was performed (with 12 mmHg pressure); c) three additional trocars were placed under direct visualization – 5 mm trocar at the right iliac fosse, 10 mm trocar in the hypogastrium close to the previous Pfannenstiel incision and a 12 mm trocar at the left iliac fosse.

During the pelvic cavity inspection, one complex solid-cystic mass was found into the right ovarian. The lesion was hardly adhered to the neighboring organs (right ureter, sigmoid colon and bladder). The mass was dissected from these structures by means of Ultracision® device (Johnson & Johnson). The lesion was completely removed into an endobag through small infra-umbilical transversal incision (Pfannenstiel). Therefore, right adnexectomy was performed without any intercurrence.

Malignancy was diagnosed by intraoperative frozen section analysis. At this point, the incision was closed and the pneumoperitoneum was remade. Additional trocar of 5 mm was placed at the epigastrium. The patient underwent a complete laparoscopic surgical staging. It was performed peritoneal biopsies (bilateral diaphragmatic surfaces, paracolic gutters and cul-de-sacs), appendectomy, infracolic omentectomy and contralateral adnexitomy. Sampling of both pelvic and para-aortic nodes was performed (Figure 2). A total of eight lymph nodes were dissected. All specimens were extracted through the 12 mm port-site. The histological features were compatible with a grade II endometrioid adenocarcinoma, which was classified, according to FIGO, as stage IA, associated with endometriosis.

The laparoscopic cytoreductive surgery was considered successfully with no evidence of macroscopic residual disease (optimal debulking). The postoperative course was carried out without complications. The patient was treated with low doses of common analgesics (dypirone). Patient was discharged on the third postoperative day. She received no adjuvant treatment. To date, fourteen months later, the patient is alive without tumor recurrence.
DISCUSSION

There is general agreement to choose laparoscopy approach to both diagnosis and treatment of benign adnexal masses.\(^5\),\(^11\),\(^14\),\(^15\) Nevertheless, to ovarian cancer, this practice has not already been a consensus, despite of the favor for its use. Surgical management of ovarian cancer has undergone substantial development over the years. Since first description of the use of minimally invasive surgery in patients with ovarian cancer dated 1973, the prospect of laparoscopic curative surgery has improved with advances in both technical equipment and good expertise of surgical teams. Nowadays this approach has been considered a valid alternative option to the classical laparotomy route.\(^16\),\(^17\)

Several advantages of laparoscopic staging for epithelial ovarian cancer have been described. Many previous studies, with altogether thousands of patients, have favored laparoscopic approach. However current opinion of laparoscopy is only based on case series reports or even cohort studies. No randomized clinical controlled trials have been undertaken due to the low incidence of this disease.\(^3\),\(^17\)

The authors report one case of a patient with an apparent early ovarian cancer that was submitted to complete laparoscopic staging, including a pelvic and para-aortic lymphadenectomy and omentectomy, with an excellent oncological, functional and aesthetics outcomes. This technique has been made respecting the oncologic radicality and besides it assured an adequate resection with free surgical margins (without microscopic disease). The duration of surgery was 180 minutes, similar to others studies (176 – 377 min).\(^3\) There were no intraoperative injuries. Moreover, there was minimal blood loss (50 mL), with no postoperative complications (neither local nor systemic), no port-site implantation, no infection and a satisfactory wound healing. The patient was discharged home on postoperative day 3 and had a fast recovery, returning to daily activities fifteen days after operation. There was no need to propose an adjuvant treatment. After eighteen months there was no sign of recurrence.

To the authors’ knowledge, in Brazil, only one case report describing the use of laparoscopic approach for the treatment of early ovarian cancer was found. However, in this study, the patient did not undergo para-aortic lymphadenectomy.\(^15\)

Multiple benefits can be attributed to a laparoscopic route, including smaller incisions with better aesthetics results, improved inspection of both abdominal and pelvic cavities, minimal blood loss, lower postoperative complications, fewer postoperative adhesions, decreased surgical site infection, shorter hospital stay, less pain with reduction in the need of the analgesics, more rapid return of bowel function, decreased morbidity, and quicker return to work. In addition, it offers a shorter interval to commencement of treatment with chemotherapy.\(^3\),\(^8\),\(^9\) Furthermore, current literature suggests equal efficacy of laparoscopy compared with laparotomy in both early and advanced stage ovarian cancer.\(^3\),\(^8\)

Despite in the past concerns related to laparoscopy such as the possibility of tumor rupture and port-site metastases were fearful, nowadays these are not frequently observed. The reported incidence of port site metastases after laparoscopic surgery is 1% to 20%.\(^8\) These concerns should be prevented by removing specimen in a retrieval bag and layered closure of the trocar sites.\(^3\),\(^8\)
In summary, laparoscopic approach seems a good option for the treatment of ovarian cancer in much selected cases, such as described in the present case. This approach represents a safe, feasible and effective alternative. Therefore, it does not disturb oncological principles when it is performed by skilled laparoscopic team.

DISCLOSURE

No potential conflict of interests was reported.

REFERENCES


MEDICAL QUOTATION

Medical cure of cancer is perhaps the easiest to achieve. But to enable former patients to recover the joy of living and a place in the sun is not so simple a task. It may require continuous prolonged effort with which the doctor cannot remain uninvolved (Odile Schweisguth, pioneer of cancer treatment for children in Europe).