

Parcelar gastric resection in association with bowel resections as part of debulking surgery for advanced stage ovarian cancer – a case report

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ABSTRACT

Ovarian cancer represents one of the most aggressive gynecological malignancies affecting women worldwide, associated with significant rates of cancer related death within the first years after the initial diagnostic. The poor survival rates are usually explained by the presence of disseminated lesions even from the beginning. In such situations, the digestive tube is one of the most commonly involved territory, therefore necessitating extended resections in order to achieve complete cytoreduction. The aim of this paper is to report the case of a 53 year old patient who was diagnosed with peritoneal carcinomatosis from ovarian cancer, presenting multiple levels of digestive tract involvement due to the presence of disseminated tumoral masses. Therefore the patients was submitted to multiple digestive resections represented by parcelar gastrectomy, segmental ileal resection and subtotal colectomy. In order to minimize the risks of developing severe postoperative complications – due to the relatively high number of anastomoses – the continuity of the digestive tract was established by a terminal ileostomy, considering that creation of a ileorectal anastomosis would be too dangerous in the context of multiple digestive resections. The postoperative evolution was simple, the patient being further submitted to adjuvant treatment.

Keywords: ovarian cancer, peritoneal carcinomatosis, gastric resection, bowel resection

INTRODUCTION

Ovarian cancer still represents the leading cause of mortality among all gynecological cancers affecting women worldwide with high capacity of spread via multiple pathways. Therefore, most often patients are diagnosed when systemic dissemination is already present, extended resections being needed in order to achieve complete cytoreduction (1-3). The most commonly encountered pathways of dissemination are represented by the hematogenous route, leading to the development of parenchymatous lesions, lymphatic one, leading to the development of tumoral adenopathic

lesions and the peritoneal one leading to the apparition of peritoneal carcinomatosis. Although initially it has been considered that peritoneal carcinomatosis is the sign of disseminated disease, more recent studies came to demonstrate that such cases should be rather considered to have an abdominal confined disease and should be treated by the means of cytoreductive surgery. One of the most commonly involved area is represented by the gastrointestinal tract, tumoral nodules of peritoneal carcinomatosis being able to develop at the level of any serosa (4). The aim of the current paper is to report the case of a 53 year old patient submitted to debulking surgery for advanced stage

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ovarian cancer that necessitated extended gastrointestinal resections in order to achieve no residual disease.

CASE PRESENTATION

The 53 year old patient with no significant previous medical history was investigated for diffuse pelvic pain, abdominal distension and weight loss. The imagistic studies demonstrated the presence of a large amount of free peritoneal fluid in association with extended tumoral lesions involving the transverse colon as well as the ileal loops in association with a right adnexal mass measuring 10/15/10 cm with no demarcation line with the sigmoidian loop. The laboratory tests demonstrated the presence of a increased level of CA 125 (of 4,520 U/ml). After discussing with the patient the possible risks and benefits of an extended surgical procedure versus neoadjuvant chemotherapy followed by surgery, the patient was further submitted to per primam attempt of cytoreduction. Intraoperatively the peritoneal carcinomatosis index was calculated, a value of 18 being reached. Radical surgery was performed and consisted of total hysterectomy with bilateral adnexectomy, pelvic and para-aortic lymph node dissection, total omentectomy en bloc with subtotal colectomy and parcellar gastrectomy, and segmental ileal resection with entero-enteral stomy; meanwhile pelvic and bilateral parietal peritonectomy was associated, complete cytoreduction being achieved (Fig. 1-5).

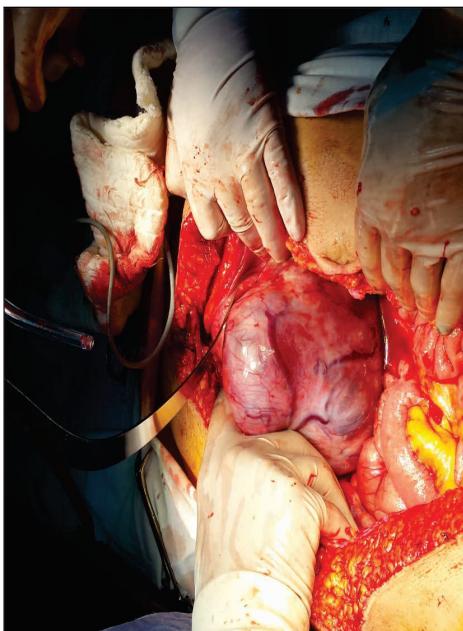


FIGURE 1. Initial intraoperative aspect – large tumor originating from the right adnexa

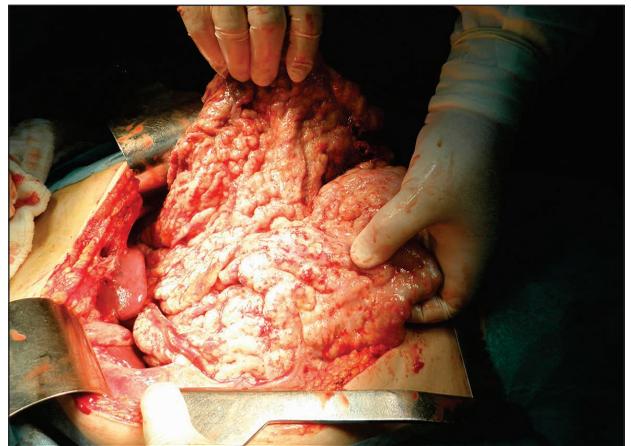


FIGURE 2. The greater omentum is totally transformed into a tumoral mass

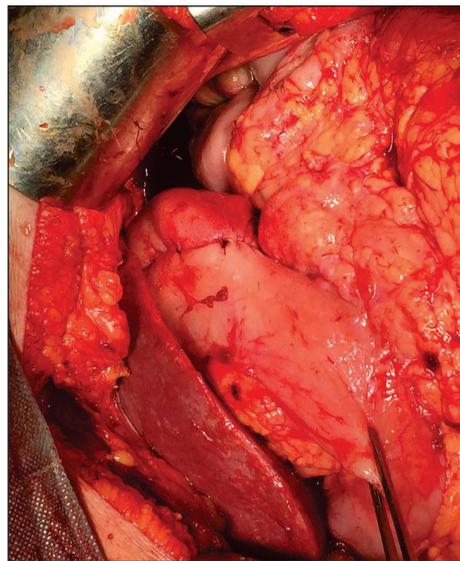


FIGURE 3. The aspect after parcellar gastrectomy

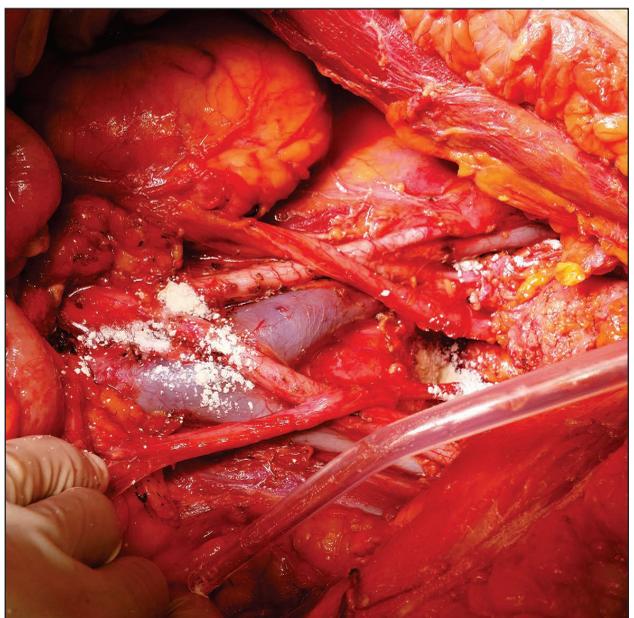


FIGURE 4. The final aspect after total hysterectomy en bloc with bilateral adnexectomy, pelvic and parietal peritonectomy, pelvic and para-aortic lymph node dissection and subtotal colectomy

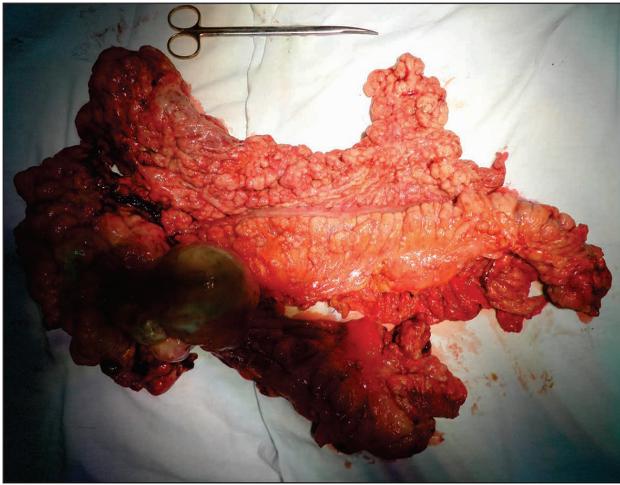


FIGURE 5. The specimen of subtotal colectomy – the resected colon was entirely invaded by the tumoral masses at the level of the omentum

In order to diminish the risks of postoperative complications a terminal ileostomy was performed. The postoperative course was uneventful, the patient being discharged in the seventh postoperative day. The histopathological studies confirmed the presence of a moderately differentiated serous ovarian cancer, serosal to submucosal invasion being identified on all the resected specimens originating from the gastrointestinal tract. Meanwhile, six out of the 19 pelvic lymph nodes and two out of the eight para-aortic lymph nodes were found to have tumoral burden. The patient was deferred to the oncology service and was submitted to adjuvant chemotherapy consisting of platinum salts and taxanes.

DISCUSSIONS

Due to the improvement of the surgical techniques, the rates of complete cytoreduction have been permanently improved by adding more complex procedures; therefore the recommendations of the international scientific societies permanently changed and the desiderate in such cases modified from a minimal tumoral residual disease of 2 cm to 1 cm and, nowadays, to no visible residual disease (5-7). Whenever resection to no visible residual disease is achievable, a significant benefit in terms of survival is expected; therefore, while at the beginning of the twentieth century the lifespan in such cases was of less than one year, nowadays the five year survival rate might reach 40% (8). However, it should not be omitted the fact that these significant benefits in terms of survival are achievable especially in cases in which two desiderates are achievable: resection to no visible residual disease and no severe postoperative complica-

tions. In the meantime, the surgeon should be aware by the fact that increasing the number of associated visceral resections (especially digestive and urinary tract resections) might induce significant increase of the rates of postoperative severe complications such as intestinal or urinary leaks, pelvic abscesses, postoperative ileus, bowel obstruction or peritonitis which leads to a longer postoperative hospital in stay, higher rates of readmission of into the intensive care units, a higher need of reoperation and finally, a longer time to the moment of initiation of adjuvant chemotherapy (9-12). When it comes to the location of the most commonly affected digestive segments, they are represented by the transverse colon and the greater gastric curvature – due to the local invasion of the omentum which usually suffers a tumoral transformation, the small bowel loops – through contiguity whenever omental cake is present and the rectosigmoidian loop due to the development of tumoral lesions at the level of the rectosigmoidian pouch; therefore, is estimated that up to 40% of patients submitted to upfront cytoreductive surgery will need digestive tract resections, this percent being decreased at up to 25% in cases in which neoadjuvant chemotherapy is administrated (12-14). However, in the later situation it should not be omitted the fact that association between neoadjuvant chemotherapy and digestive tract resections might be associated with significantly increased rates of postoperative complications (15-17).

Therefore, in the case we presented we estimated that per primam cytoreduction to no residual disease is feasible and therefore upfront surgery was performed. As expected, the omentum suffered a complete tumoral transformation, an aspect of omental cake being found; therefore, total omentectomy en bloc with parcelar gastrectomy and transverse colectomy extended to the splenic angle was needed. Meanwhile, the local invasion of the small bowel loops located in the close proximity of the omentum imposed association of segmental enteral resection followed by anastomosis. In the meantime, when exploring the Douglas pouch, as expected, large nodules of peritoneal carcinomatosis were found. Initially, a Douglasectomy was tempted but the deep infiltration of the rectal wall imposed performing a rectosigmoidian resection. However, the presence of disseminated peritoneal nodules at the level of the remnant segments of the colon imposed completion to subtotal colectomy. Therefore, in order to diminish the risks of postoperative complications a terminal ileostomy was associated.

However, an interesting study conducted on the issue of the risks of postoperative complications after digestive surgery as part of debulking for ovarian cancer came to demonstrate that not only digestive resection itself is associated with significant risks of postoperative complications but also the need of surgical repair of an intestinal loop. The study was conducted on 4,965 patients submitted to cytoreductive surgery between 2006 and 2017; among these cases, 541 patients associated colonic resection and anastomosis, 104 cases necessitated colonic resection and colostomy and 413 cases needed a surgical procedure for intestinal repair. The authors demonstrated that surgical site infection including wound dehiscence were significantly higher among cases in which any kind of digestive tract procedure was performed when compared to cases in which the gastrointes-

tinal tract was not open. In the meantime, the authors underlined the fact that the rates of postoperative mortality were not significantly influenced by the association of gastrointestinal tract procedures (12).

CONCLUSIONS

Although multiple areas at the level of the gastrointestinal tract might be involved in cases presenting disseminated peritoneal nodules of carcinomatosis from ovarian cancer, such patients should not be routinely excluded from surgery as a first therapeutic option; therefore, in such cases, multiple digestive resections might be successfully associated in order to achieve maximal cytoreduction.

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