Primary peritoneal serous carcinoma – a case report and literature review

Nicolae Bacalbasa¹,², Irina Balescu³, Claudia Stoica⁴,⁵, Cristina Martaç⁶, Valentin Varlas¹,⁷, Andrei Voichitoiu¹,⁸, Lucian Pop¹,⁸, Sorin Petrea⁸, Mihaela Vilcu⁸,⁹, Iulian Brezean⁸,¹⁰, Corina Grigoriu¹,¹¹

¹Department of Obstetrics and Gynecology, “Carol Davila” University of Medicine and Pharmacy, Bucharest, Romania
²Department of Visceral Surgery, Center of Excellence in Translational Medicine, Fundeni Clinical Institute, Bucharest, Romania
³Department of Visceral Surgery, Ponderas Academic Hospital, Bucharest, Romania
⁴Department of Anatomy, “Carol Davila” University of Medicine and Pharmacy, Bucharest, Romania
⁵Department of Surgery, Ilfov County Emergency Hospital, Bucharest, Romania
⁶Department of Anesthesiology, Fundeni Clinical Institute, Bucharest, Romania
⁷Department of Obstetrics and Gynecology, Filantropia Clinical Hospital, Bucharest, Romania
⁸Department of Obstetrics and Gynecology, “Alessandrescu-Rusescu” National Institute of Mother and Child Care, Bucharest, Romania
⁹Department of Surgery, “Dr. I. Cantacuzino” Clinical Hospital, Bucharest, Romania
¹⁰Department of Surgery, “Carol Davila” University of Medicine and Pharmacy, Bucharest, Romania
¹¹Department of Obstetrics and Gynecology, Emergency University Hospital, Bucharest, Romania

ABSTRACT

Primary peritoneal serous carcinoma represents a rare epithelial tumor originating at the level of the peritoneum which might exhibit common features with ovarian carcinoma; therefore, establishing the correct diagnostic might represent a real cornerstone and, in certain cases, the final diagnostic is established only at the time of surgery. Fortunately, in most cases the therapeutic strategies of primary peritoneal serous carcinoma and ovarian carcinoma are similar in terms of surgical procedure and oncological treatment. The aim of the current paper is to report the case of a 71 year old patient with preoperative diagnostic of ovarian carcinoma and in whom the final diagnostic was of a primary peritoneal serous carcinoma.

Keywords: primary peritoneal serous carcinoma, ovarian carcinoma, surgery, chemotherapy

INTRODUCTION

Primary peritoneal serous carcinoma represents a rare epithelial malignancy originating at the level of the peritoneal lining, initially described in 1959 by Swerdlow [1]. One of the most important features of this tumor is the fact that it has common clinical and histopathological characteristics with ovarian carcinoma, especially with the serous epithelial subtype [2]. Due to these reasons, and due to the rarity of cases, therapeutic strategies for primary peritoneal serous carcinomas have been extrapolated from those for epithelial ovarian cancer [3]. However, we should not omit the fact that even radical surgery with curative intent followed by adjuvant chemotherapy is performed, primary serous peritoneal carcinoma exhibits a poorer prognosis when compared to epithelial ovarian cancer [4]. The aim of the current paper is to present the case of a 71 year old patient investigated for asthenia and distension of the abdomen who was initially suspected to have an ovarian malignant tumor but in whom a primary peritoneal serous carcinoma was found.

CASE REPORT

The 71 year old patient with no significant medical history was investigated for diffuse abdominal pain, abdominal distension and fatigability; the abdominal ultrasound demonstrated the presence of a
high volume of ascites while the paraclinical tests revealed increased levels of serum CA 125 (measuring 2100U/ml). The patient was further submitted to a computed tomography which demonstrated the presence of a tumoral mass at the level of the left adnexa measuring 4/5/4 cm and a high amount of ascites. Therefore, the presumptive diagnostic was of an advanced stage ovarian carcinoma so the patient was further submitted to surgery. Intraoperatively 4000 ml of ascites were evacuated; however, although the presence of peritoneal carcinomatosis was expected, no macroscopic nodule was found. At the level of the pelvis the tumoral mass at the level of the left adnexa was found, so the patient was further submitted to the standard surgical procedure consisting of total hysterectomy with bilateral adnexitomy, pelvic lymph node dissection and omentectomy (Figures 1, 2). When transecting the specimen, we observed that the tumor was in fact developed at the level of the peritoneum of the left broad ligament and came in close contact with the
left ovary without invading the parenchyma. The final histopathological result confirmed the presence of a primary peritoneal serous carcinoma with no metastases at the level of the omentum and at the level of the retrieved lymph nodes. The postoperative outcome was uneventful, the patient being discharged in the fourth postoperative day and referred to the oncology service in order to be submitted to the standard adjuvant treatment.

**DISCUSSIONS**

Primitive peritoneal serous carcinoma usually spreads via peritoneal route, leading to the development of omental metastases and rarely involves the ovaries [5]. However, these tumors usually exhibit common characteristics with ovarian carcinoma in terms of histopathological features and therefore, the therapeutic strategies are similar, the first intent option being represented by optimal cytoreduction followed by platinum based chemotherapy [6]. In order to maximize the effects of debulking surgery, the NCCN guidelines recommend association of intraperitoneal chemotherapy followed by adjuvant intravenous chemotherapy [7].

Another interesting aspect which should be discussed when it comes to primitive peritoneal serous carcinoma is related to the correlation with the serum levels of CA 125 and with the presence of ascites; although traditionally it has been thought that these two elements are associated with the presence of ovarian cancer, it seems that these two parameters are also found at elevated values in cases diagnosed with primitive peritoneal serous carcinoma. Meanwhile, CA 125 levels are also useful in order to provide an effective follow up after surgery and to allow a rapid identification of recurrent disease [8]. Besides CA 125 levels, other prognostic factors in these cases are represented by age at the initial diagnostic, performance status and completeness of cytoreduction [9].

Unfortunately, patients diagnosed with primary peritoneal serous carcinoma exhibit a poorer prognosis when compared to epithelial ovarian cancer, the median overall survival ranging between 11 and 17 months [9].

**CONCLUSIONS**

Primitive peritoneal serous carcinomas are rare epithelial malignancies with similar features in terms of clinical, histopathological and therapeutic options to epithelial ovarian cancer; therefore, although in certain cases the patient is submitted to surgery with the preoperative diagnostic of ovarian cancer, the final diagnostic will be established at the time of surgery. However, due to the fact that the type of the procedure is similar, this fact does not influence the overall outcome.

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**REFERENCES**