

# Difficulties in achieving optimal cytoreduction in primary peritoneal carcinoma management

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## Summary

Primary peritoneal carcinoma (PPC) occurs mostly in older women and rarely in women under 50 years of age. The mean age of patients with PPC in our study was 65.5 years. We present the clinical and demographic data, management of cases and the results of six women who underwent exploratory laparotomy between January 2003 and August 2006.

*Key words:* Primary peritoneal carcinoma; Optimal cytoreduction.

## Introduction

Primary peritoneal carcinoma (PPC) is a tumor that diffusely involves the peritoneal surface while sparing or only minimally involving the ovaries [1]. The widespread nature of PPC especially in the upper abdomen and along the diaphragm may account for the reduced ability to perform optimal cytoreduction which is one of the main prognostic factors. To improve survival efforts should be made to achieve optimal tumor cytoreduction at primary surgery [2]. Six cases of PPC are presented.

## Case Reports

Between January 2003 and August 2006, six patients underwent explorative laparotomy and were diagnosed with primary peritoneal serous carcinoma. Clinical and demographic data, management of cases and the results are given in Table 1.

PPC occurs mostly in elderly women and very occasionally in women younger than 50 years [1]. In this study the mean age was 65.5 years (range 51-75 years).

Preoperative CA125 values were elevated in all patients and the mean CA125 value was 753.66 U/ml (range, 196-1772 U/ml). In follow-up therapy the levels of this antigen have remained below 35 U/ml. Thus, our findings support the value of CA125 in monitoring the course of this disease.

The surgical staging classification outlined for ovarian carcinoma is typically applied to women found to have PPC and, by definition, there can be no Stage I disease [1]. In our study, surgical stage was Stage IIIc in all patients.

It has been shown that patient age, surgical stage, performance status and degree of cytoreductive surgery are significant prognostic factors in PPC [3].

Many studies have investigated the use of neoadjuvant chemotherapy (NAC) for advanced ovarian cancer when the surgeon knows that optimal cytoreduction can not be achieved [4]. An alternative to primary surgical cytoreduction in patients with unresectable bulky tumors or poor performance status is the use of chemotherapy in neoadjuvant settings. Recent retro-

spective analyses have revealed that progression-free and overall survival were comparable between patients treated with neoadjuvant chemotherapy (NAC) followed by interval cytoreductive surgery (ICS) and those treated by primary cytoreductive surgery, though the former group was older and had a poorer performance status. The neoadjuvant setting has the advantage of starting treatment earlier and lower invasiveness. Given its success in ovarian cancer, the use of NAC in PPC may be reasonable for surgically unresectable disease [5].

In our cases, all patients underwent TAH, BSO, total omentectomy, and excision of accessible implants on peritoneal surfaces. Although we performed maximal surgical effort such as right hemicolectomy, four patients had suboptimal residual disease due to upper abdominal involvement. To achieve optimal cytoreduction one patient (case 3) underwent splenectomy. The most recently operated patient (case 6) underwent laparotomy to determine the histopathologic diagnosis of the disease. A decision to use NAC was made. Three cycles of the same combination of the drugs were used after primary laparotomy. Then a second laparotomy was performed and optimal cytoreduction was achieved. Postoperatively an additional three cycles of the same chemotherapy regimen combination was given.

## Conclusion

A prospective study on women with findings compatible with peritoneal cancer which is not likely to be optimally cytoreduced, randomized to either undergo cytoreductive surgery followed by chemotherapy or to receive NAC, is needed. NAC is an acceptable alternative to primary surgical cytoreduction in PPC.

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Table 1. — Patient characteristics, clinicopathologic findings and management approach.

| Case | Age | Presenting symptoms               | Preoperative CA125 | Preoperative cervical smear | Endometrial involvement        | Clinical Stage (FIGO) | Surgical procedure | Ascites | Residual disease | Tumor histology            | Adjuvant therapy                           | Survival           |
|------|-----|-----------------------------------|--------------------|-----------------------------|--------------------------------|-----------------------|--------------------|---------|------------------|----------------------------|--|--------------------|
| 1    | 75  | Abdominal distention, GI symptoms | 1187               | Nonspecific                 | Nonspecific                    | IIIc                  | TAH+BSO+O+E+RHC*   | present | suboptimal       | PPSC                       | 6xC+P                                      | Dead after 21 mos. |
| 2    | 75  | Abdominal distention              | 542                | Nonspecific                 | Nonspecific                    | IIIc                  | TAH+BSO+O+E        | present | suboptimal       | PPSC                       | 6xC+P                                      | 25 mos. A          |
| 3    | 65  | Abdominal distention and pain     | 274                | Nonspecific                 | Papillary serous carcinoma     | IIIc                  | TAH+BSO+O+E+S      | present | optimal          | PPSC                       | 6xC+P                                      | 24 mos. A          |
| 4    | 63  | Abdominal distention              | 1772               | Atypical glandular cells    | Implantation of isolated tumor | IIIc                  | TAH+BSO+           | present | suboptimal       | PPSC+ Clear cell component | 6xC+P                                      | 18 mos. A          |
| 5    | 64  | Abdominal distention and pain     | 551                | Nonspecific                 | Nonspecific                    | IIIc                  | TAH+BSO+O+E        | present | suboptimal       | PPSC                       | 6xC+P                                      | 17 mos. A          |
| 6    | 51  | Abdominal distention, GI symptoms | 196                | Nonspecific                 | Nonspecific                    | IIIC                  | TAH+BSO+O+E+SR     | present | optimal          | PPSC                       | preoperative 3xC+P and postoperative 3xC+P | 15 mos. A          |

\* RHC: right hemicolectomy; TAH: total abdominal hysterectomy; BSO: bilateral salpingo-oophorectomy; O: total omentectomy; S: splenectomy; SR: sigmoid resection; E: excision of accessible tumoral implants on peritoneal surfaces; A: alive.

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