Tumori, 96: 918-925, 2010

Positive experience of intraperitoneal chemotherapy followed by intravenous chemotherapy in heavily pretreated patients with suboptimal residual ovarian cancer and primary peritoneal cancer

Maria Ornella Nicoletto[1], Maurizia Dalla Palma[1], Martin E Donach[2], Milena Gusella[3], Alessandro Cappetta[1], Malihe Shams[1], Aberto Marchet[4], Margherita Nardin[5], Giovanna Pintacuda[5], Antonio Di Maggio[5], Maddalena Marchesi[1], Paolo Carli[1], Pasquale Fiduccia[1], Grazia Artioli[1], and Donato Nitti[4]

[1]Oncologia Medica 1, Istituto Oncologico Veneto/IRCCS, Padua, Italy; [2]New York University Langone Medical Center, New York, USA; [3]Laboratory of Pharmacology and Molecular Biology, Oncology Department, Hospital of Rovigo ASL-18, Rovigo; [4]Department Oncological and Surgical Sciences, University of Padua, Padua; [5]UOC Radiodiagnostica Oncologica, Istituto Oncologico Veneto/IRCCS, Padua, Italy

ABSTRACT

Aims and background. To assess feasibility and toxicity of intraperitoneal administration of cisplatin and paclitaxel, followed by intravenous chemotherapy in pretreated patients with suboptimal ovarian cancer (residuum >1 cm) or primary peritoneal tumor, and suffering from ascites and/or intestinal obstruction.

Methods. Fourteen relapsed ovarian cancer patients, 5 of whom were platinum sensitive (platinum-free interval >6 mo), 7 platinum-resistant (platinum-free interval <6 mo), and 2 platinum-refractory, received one cycle of intraperitoneal cisplatin, 100 mg/m^2 on day 1, and two cycles of intraperitoneal paclitaxel, 120 mg/m^2 on days 8 and 14. Intravenous chemotherapy was administrated 4 weeks following the last intraperitoneal paclitaxel instillation. Blood and peritoneal fluid samples were harvested at 0, 1, 4 and 24 h after ending paclitaxel delivery to guarantee proper tumor exposure and patient safety.

Results. Intraperitoneal cisplatin determined 6 cases of vomiting grade 1-2 (40% of the morbidity). Intraperitoneal paclitaxel was associated with 6 events of grade 1-2 abdominal pain; the only grade 4 toxicity was one case of neutropenia and one of mucositis. Ascites decreased in 11 patients: the median time to first need for paracentesis was 5 months, compared to a median baseline paracentesis of 4 weeks. Three intestinal normalizations were obtained. The median overall survival was 10 months for our cohort of patients. Intraperitoneal paclitaxel clearance was significantly higher in patients with suboptimal tumor and symptomatic disease than in patients with smaller residual masses and without ascites ($P = 0.004$).

Conclusions. Intraperitoneal treatment was feasible, and enhanced response to the following intravenous chemotherapy was seen in these patients. Free full text available at www.tumorionline.it

Key words: placlitaxel, platinum-resistant patients, platinum-sensitive patients, taxol.

Acknowledgments: The authors thank Dr Eros Ferrazzi (Medical Oncology Department, Rovigo General Hospital, Italy) for his assistance with the pharmacologic analysis.

Correspondence to: Maria Ornella Nicoletto, Medical Oncology Department 1, Istituto Oncologico Veneto/IRCCS, Gattamelata 64, 35128 Padova, Italy.
E-mail ornella.nicoletto@ioveneto.it

Received January 18, 2010;
accepted June 25, 2010