Ann Surg Oncol
DOI 10.1245/s10434-010-1039-7

Annals of
SURGICAL ONCOLOGY
OFFICIAL JOURNAL OF THE SOCIETY OF SURGICAL ONCOLOGY

ORIGINAL ARTICLE – GASTROINTESTINAL ONCOLOGY

Peritoneal Carcinomatosis from Gastric Cancer: A Multi-Institutional Study of 159 Patients Treated by Cytoreductive Surgery Combined with Perioperative Intraperitoneal Chemotherapy

Olivier Glehen, MD, PhD[1], François Noel Gilly, MD, PhD[1], Catherine Arvieux, MD, PhD[2], Eddy Cotte, MD[1], Florent Boutitie[3], Baudouin Mansvelt, MD, PhD[4], Jean Marc Bereder, MD[5], Gérard Lorimier, MD[6], François Quenet, MD[7], Dominique Elias, MD, PhD[8] and Association Française de Chirurgie

[1]Departement de Chirurgie Generale, Thoracique et Endocrinienne, Centre Hospitalier Lyon-Sud, Pierre Bénite Cedex, France; [2]CHU Grenoble, Grenoble Cedex 9, France; [3]Hospices Civils de Lyon, Service de Biostatistiques, Lyon, France; [4]Hopital Jolimont, Haine Saint-Paul, Belgium; [5]CHU Nice, Nice Cedex 3, France; [6]Centre Paul Papin, Angers, France; [7]Centre Val D'Aurelle, Montpellier, France; [8]Department of Surgical Oncology, Institut Gustave Roussy, Villejuif, France

ABSTRACT

Background. Peritoneal carcinomatosis (PC) from gastric cancer has long been regarded a terminal disease with a short median survival. New locoregional therapeutic approaches combining cytoreductive surgery with perioperative intraperitoneal chemotherapy (PIC) have evolved and suggest improved survival.

Materials and Methods. A retrospective multicentric study was performed in French-speaking centers to evaluate the toxicity and the principal prognostic factors in order to identify the best indications. All patients had cytoreductive surgery and PIC: hyperthermic intraperitoneal chemotherapy (HIPEC) and/or early postoperative intraperitoneal chemotherapy (EPIC).

Results. The study included 159 patients from 15 institutions between February 1989 and August 2007. The median follow-up was 20.4 months. HIPEC was the PIC used for 150 procedures. Postoperative mortality and grade 3–4 morbidity rates were 6.5 and 27.8%, respectively. By multivariate analysis, the institution had a significant influence on toxicity. The overall median survival was 9.2 months and 1-, 3-, and 5-year survival rates were 43, 18, and 13%, respectively. The only independent prognostic indicator by multivariate analysis was the completeness of cytoreductive surgery. For patients treated by complete cytoreductive surgery, the median survival was 15 months with a 1-, 3-, and 5-year survival rate of 61, 30, and 23%, respectively.

Conclusions. The therapeutic approach combining cytoreductive surgery with PIC for patients with gastric carcinomatosis may achieve long-term survival in a selected group of patients (limited and resectable PC). The high mortality rate underlines this necessarily strict selection that should be reserved to experienced institutions involved in the management of PC and gastric surgery.

Peritoneal dissemination from gastric cancers is common and occurs in 5–20% of patients being explored for potentially curative resection.[1,2] In the past, carcinomatosis has been regarded as a terminal disease, especially when the primary tumor was gastric, and most oncologists would regard it as a condition only to be palliated. However, recent reports suggest curative treatment options for selected patients with carcinomatosis from digestive cancer.[3–7]

Over the past 2 decades, novel therapeutic approaches to peritoneal carcinomatosis (PC) have emerged, combining cytoreductive surgery and peritonectomy procedures with perioperative intraperitoneal chemotherapy (PIC), including hyperthermic intraperitoneal chemotherapy (HIPEC) and/or early postoperative intraperitoneal chemotherapy (EPIC).[8–11] Theoretically, cytoreductive surgery is performed to treat macroscopic disease and PIC to treat

© Society of Surgical Oncology 2010

First Received: 27 November 2009

O. Glehen, MD, PhD
e-mail: olivier.glehen@chu-lyon.fr

Published online: 25 March 2010