Results of Gastric Resection for Carcinoma of the Stomach: The European Experience

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A European state of the art in the treatment of gastric cancer is presented from the results of a questionnaire. Data were obtained from 62 centers, 60% of which were from abroad and 40% of which were from Germany, reporting a total of 16,594 patients. A feature was a low portion (8.8%) of early cancer. The operation preferred was total gastrectomy. Only in the case of antral carcinoma of the intestinal type, according to Laurén, would the majority perform subtotal gastrectomy. Staging of lymph nodes was performed by 84% of these centers; however, systematic radical dissection was carried out only by 27%. The preferred type of reconstruction after total gastrectomy was Roux-en-Y esophagojejunostomy; 16% of the European centers used some type of pouch in addition. Splenectomy was carried out depending on location of the tumor.

The median in-hospital mortality for early cancer was 0%; for carcinoma of the antrum, 6.7%; corpus, 9.6%; and gastroesophageal junction, 11.7%. The median 5-year survival rate in patients with early cancer was 82.5%; for advanced cancer of the antrum, 30.7%; corpus, 24%; and gastroesophageal junction, 15.5%. Ten-year survival was 6-10% less.

It is concluded that in Europe there is a high rate of advanced gastric cancer affecting the results. Improved results may be expected if gastric cancer can be detected earlier and if there is radical lymph node dissection. Generally, prospective randomized studies presented by standardized documentation and statistics are urgently needed.

The prognosis of patients with gastric cancer is poor except for those presenting with early gastric cancer [1]. Radical and nonradical operative procedures are used as primary treatment. There is still much debate on the extent of gastric resection and the degree of lymph node dissection [2-4]. The Japanese are advocating a radical systematic lymph node dissection as outlined in the guidelines of the Japanese Research Society for Gastric Cancer (JRSGC) [5]. It is the purpose of this article to give the current opinion about the operative treatment of gastric cancer of European centers analyzed by a questionnaire.

Material and Methods

In the questionnaire, specific questions were asked on the indications for operation, operative details including staging, radical lymph node dissection performed, type of reconstruction, and the use of stapler and splenectomy. Further questions were directed to tumor classification. The documentation of the results in gastric cancer surgery was subdivided into surgery of early cancer, antral carcinoma, fundus and corpus carcinoma and of adenocarcinoma of the gastroesophageal junction. Within these subgroups, the number of patients, type of operation, intraoperative staging, splenectomy, mortality and specification of 5- or 10-year results were requested.

In March, 1985, a total of 127 questionnaires had been sent out mainly to university departments in Western and Eastern Europe, 96 from abroad and 31 within the Federal Republic of Germany (FRG). Until August, 1985, a total of 62 centers reported their results: 37 (60%) from abroad and 25 (40%) from FRG (Table 1).

Calculations are based on absolute figures, when possible. Results are given as a percentage of each single center and are evaluated by calculation of the median.

Results

The 62 centers of Europe reported a total of 16,594 patients. Among those, 13,921 patients were staged according to advanced or early gastric cancer (Table 2). Early gastric cancer was found in 8.8% of patients. The most common location of advanced gastric cancer was the antrum, 40.3% (Table 3). The proportion of advanced adenocarcinoma of the gastroesophageal junction was 21.4%, ranging from 10% to 73% within the various European centers.

The indication for total gastrectomy "en principe" was stressed only by one center. Forty-four percent of the authors, however, mentioned that they would change to total gastrectomy whenever the histology of an antral carcinoma revealed a diffuse type according to the classification of Laurén [6]. Seven of the 62 centers gave no answer to this question.

As for palliative procedures, 97% of the authors would perform a partial resection when technically feasible and 53% a total gastrectomy, if required. No data were obtained from 3%. When asked for the criteria of nonoperability, 61% of the European centers named distant metastases. Distant metastases also included lymph nodes of group III, according to the Japanese classification [5].

Intraoperative lymph node staging is carried out by the
majority of the European centers (84%) according to the TNM classification [7] (Table 4). Only 5% are using the Japanese system.

Concerning radical lymph node dissection, 50% of the European centers perform it (Table 5); however, only 27% gave exact data that the extent of lymph node dissection involved at least group 2 nodes according to the JRSGC, resulting in an R2 resection. A large group of participants (37%) does not perform systematic lymph node dissection.

The preferred type of reconstruction following total gastrectomy is the Roux-en-Y type of esphagojejunostomy with end-to-end or end-to-side anastomosis. This is done exclusively by