

control), but were not a statistical significance with T stage (T2 v T3 v T4), M stage (M0 v M1) or TNM stage (stage 1+stage 2 v stage 3 v stage 4) in PC patients. The diagnostic sensitivity and accuracy of CA19-9 (>50U/ml) was 69.2% and 82.5%, respectively. No significant correlation was demonstrated between REG4 and CA19-9 (coefficient of determination R-squared = 0.11).

Conclusions: This study shows the potential of serum REG4 as a screening test for PC, especially for early PC. REG4 is considered to be a more useful marker in combination with CA19-9.

3562

POSTER

Results of laparoscopic lymphadenectomy in gastric cancer

F. Perna¹, A. Gori¹, S. Riccadonna¹, R. Sacchetti¹, D. Boni¹, E. Lenzi¹, M. Baraghini², M. Giannelli², P. Bechi², G. Pignata³. ¹Università degli Studi di Firenze, Dipartimento Area Critica Medico-Chirurgica, Firenze, Italy; ²Università degli Studi di Firenze, Dipartimento Area Critica Medico-Chirurgica, Firenze, Italy; ³Ospedale San Camillo, Dipartimento di Chirurgia Mini-Invasiva, Trento, Italy

Background: A D2 lymphadenectomy is a prerequisite for curative surgery of gastric cancer (GC). In the present paper our experience and results of laparoscopic D2 lymphadenectomy are reported.

Material and Methods: Between Jan 2001 and Oct 2006 54 consecutive patients with GC underwent a laparoscopic operation. Preoperative workup included endoscopy with biopsies, upper gastrointestinal series, abdominal ultrasound and computed tomography scan in all series. D2 lymph node dissection was performed in all but 8 patients (14.8%) who underwent because of carcinosis and/or poor general conditions D1 lymphadenectomy. All the patients had gastric adenocarcinoma, located in the upper, medium, and lower third of the stomach in 33.3%, 29.7%, 37.0% patients, respectively. We performed 18 total gastrectomies, 23 subtotal gastrectomies, 4 residual gastrectomies, 5 partial resections, 4 gastrectomies. A Roux-en-Y reconstruction was performed in 22 cases (40.7%), in 23 cases Hoffmeister (42.6%), in 9 cases (16.7%) with B-I reconstruction.

Results: Major complication rate was 12.5%. The most common complication has been pancreatic juice leakage or pancreatitis, which resolved after positioning of drainages in 5 cases whereas in 3 resolved with laparoscopic toilette or drainage of pancreatic abscesses. This complication is related to lymph node dissection along the upper margin of the pancreas and the Fredet fascia. Mean operative time for the laparoscopic procedure was 256±87 minutes with no significant difference between the procedures. The clear margin from the tumor was 5.4±0.5 cm (range 5–7). The mean number of dissected lymph nodes was 29 with a range of 9 to 65 (D1 12.76±3.7 vs D2 34.87±17.4; p<0.001).

Conclusions: If laparoscopic gastric operation for EGC with D1 dissection has been accepted for its good results, several authors claimed that this technique isn't feasible for advanced GC due to the technical difficulties of laparoscopic D2 resection. In our opinion D2 resection is the gold standard treatment for advanced GC since D2 lymphadenectomy was found to decrease locoregional recurrence to 33% of all recurrences. An R0 resection is by far the most important prognostic factor. Our study demonstrate that laparoscopic technique for advanced GC with a correct D2 lymphectomy is feasible and safe producing long-term good results.

3563

POSTER

Sentinel node mapping during laparoscopic distal gastrectomy for gastric cancer

E. Orsenigo¹, A. Tamburini¹, V. Tomajer¹, L. Albarello², S. Di Palo³, C. Doglioni², C. Staudacher³. ¹University Vita-Salute San Raffaele, Gastrointestinal Surgery, Milan, Italy; ²University Vita-Salute San Raffaele, Department of Pathology, Milan, Italy; ³University Vita-Salute San Raffaele, Gastrointestinal Surgery, Milan, Italy

Background: Lymph node metastasis is one of the most important prognostic factors in patient with gastric cancer. Therefore, gastrectomy with D2 lymphadenectomy is the standard surgical procedure in gastric cancer despite some authors demonstrated that D2 lymphadenectomy does not influence patient survival, especially in early-stage gastric cancer. Although the risk factors for lymph node metastasis have been clarified, it remains difficult to precisely predict the presence or absence of lymph node metastasis both before and during surgery. Recently, several studies evaluated the feasibility of sentinel node biopsy for gastric cancer. If sentinel node navigation surgery could be applied to such patients, then minimally invasive surgery with personalized lymphadenectomy might be possible. The next important issue in this field is the introduction of laparoscopic surgery in the treatment of gastric cancer, particularly for early-stage disease. Laparoscopic modified surgery based on sentinel node status

would be the goal of a minimally invasive approach for pathologically node negative early gastric cancer. We developed and have used a blue dye sentinel node mapping for laparoscopic sentinel node detection. The aim is evaluate feasibility and accuracy of sentinel node (SN) mapping with endoscopic submucosal blue dye injection during laparoscopic distal gastrectomy for gastric cancer.

Methods: 34 cases of gastric adenocarcinoma without serosal invasion and distant metastasis were prospectively enrolled in our preliminary study. At the start of the surgery, 2 ml of 2% patent blue was endoscopically injected into the submucosal layer at four points around the site of the primary tumor. Sentinel nodes were defined as nodes that stained the blue dye within 5 to 10 minutes after the dye injection. After identification and removal of sentinel lymph nodes, each patient underwent laparoscopic distal gastrectomy with D1 (n=2) or D2 (n=32) lymphadenectomy.

Results: Out of the 34 patients, 14 had positive nodules (41%). The mean number of dissected lymph nodes per patient was 31±10 (range 16–64). SNs were detectable as blue nodes in 27 (80%) of 34 patients. The mean number of blue nodes per patient was 1.5 (range 1–4). Only five (sensitivity 35%) of 14 N(+) patients had at least 1 metastatic lymph node among the SNs identified. Nevertheless, in early gastric cancer (n=18), three patients had lymph nodes metastasis. These early gastric cancer patients had at least 1 metastatic lymph node among the SNs identified (sensitivity 100%). There were no false negatives in early gastric cancer.

Conclusions: intraoperative SN mapping in gastric cancer is technically feasible. Blue dye SN mapping during laparoscopic distal gastrectomy seems to be an accurate diagnostic tool for detecting lymph node metastasis in patients with early-stage gastric cancer. Validation of this method requires further studies on technical issues, including selection of the tracers.

3564

POSTER

Histological response as potential prognostic factor after neoadjuvant chemotherapy (Ch) and chemoradiotherapy (CRT) for locally-advanced pancreatic cancer: preliminary results

A. Chopitea¹, J.A. Diaz-Gonzalez¹, J. Rodriguez¹, F. Pardo², L. Arbea¹, A. Viudez¹, J.J. Aristu¹, F. Rotellar², C. Montiel², J. Garcia-Foncillas¹. ¹Clinica Universitaria Navarra, Oncology, Pamplona (Navarra), Spain; ²Clinica Universitaria Navarra, General Surgery, Pamplona (Navarra), Spain

Background: Histological response to preoperative therapy has been found to be a positive prognostic factor in several gastrointestinal malignancies. The present study analyses the histological response after a combined protocol of Ch and CRT followed by surgery and its potential value as prognosis factor.

Material and Methods: 22 patients with diagnosis of non-metastatic pancreatic cancer were included. Median age was 60 years. Patients were staged with CT scan and endoscopic ultrasound (EUS). Treatment protocol consisted on three cycles of neoadjuvant Ch (gemcitabine 1,000 mg/m² and oxaliplatin 85 mg/m² day 1, and capecitabine 625 mg/m² bid x 7 days, every 14 days) followed by CRT: 50–54 Gy in 5–6 weeks with concurrent weekly oxaliplatin 50 mg/m² and daily capecitabine 825 mg/m² bid Monday to Friday. After 4–6 weeks patients were re-staged and surgical treatment indication was considered. Histological response was evaluated and categorised according to tumor necrosis, grade of fibrosis and residual tumor load. Major tumor response grade (TRG) was interpreted as presence of <10% of residual tumor cells in the surgical specimen, without metastatic lymph nodes.

Results: All of the 22 patients completed the planned neoadjuvant segment of treatment. None grade 3–4 adverse effects were observed during the neoadjuvant Ch. Median dose of radiotherapy was 53 Gy. During CRT 18% of patients developed any grade 3–4 toxicity. Clinical downstaging was achieved in 41% of patients after Ch and CRT. Twelve patients underwent radical surgery. Major TRG was observed in 5/12 (42%) patients. Most of these patients did not received postoperative adjuvant chemotherapy. Median time of follow-up for patients underwent surgery was 14 months. Median time to progression was 8.4 months for patients achieving major TRG and 5.1 months for those patients who did not reach major response. At time of last follow-up, all the patients with major TRG are alive, but 2/7 patients without major TRG are died.

Conclusion: Although preliminary data are presented, rates of major TRG after neoadjuvant chemo and CRT for resectable pancreatic cancer are encouraging. Histological response as measured by residual tumor load after neoadjuvant treatment may be useful as prognostic factor and additional investigation is warranted.