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POSTER

Prognostic significance of resection line involvement after gastric cancer surgery: a single western centre experience

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Background: Curative gastrectomy represents the treatment of choice for gastric cancer. A variety of clinicopathologic features, such as resection line involvement (RLI) has been suggested as prognostic indicators for gastric cancer. The aim of this study was to investigate whether microscopic positive margins are detrimental to the outcome of gastric cancer patients treated with gastrectomy.

Methods: Among 1087 consecutive patients who had undergone gastrectomy with curative intent for gastric cancer between January 1990 and December 2008, 116 patients (10.7%) had positive resection margins on final histology.

Results: Among these 116 patients, 48 had proximal and distal involved margins, 33 had proximal involved margins, and 35 had distal involved margins. No one patient had reoperation. The mean distance between proximal gastric margin and the neoplasia was 4 ± 3.8 (min 0, max 21) and from the distal margin and the neoplasia 4 ± 3.9 (min 0, max 24). In the multivariate analysis the TNM stage and status of the oesophageal margin were the only independent prognostic factors for survival. The negative margin group had a significantly longer median survival time ($P < 0.00001$). When both groups of patients were stratified according to nodal stage, a positive resection margin determined a worse prognosis only in patients with node-positive disease (mean survival time: 63 months vs. 21 months, $P = 0.0001$). In early gastric cancer (EGC) the resection margin involvement did not influence survival. On the contrary, in more advanced diseases the positive margins is a negative prognostic factor for survival.

Conclusions: A positive gastric or oesophageal margin is an independent poor prognostic factor for long-term survival in stomach cancer in advanced disease or node positive patients.

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Minimally invasive esophagectomy for cancer: monoinstitutional experience

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Background: Minimally invasive esophagectomy is rapidly emerging as a suitable surgical alternative to the open technique. Our retrospective study aimed to evaluate the feasibility and efficacy of laparoscopic and thoracoscopic esophagectomy.

Methods: This retrospective study consider 41 consecutive patients treated with minimally invasive esophagectomy for cancer in our Institution from May 2002 to December 2007.

Results: Patients were 33 men (80.5%) and 8 women (19.5%) that underwent minimally invasive esophageal resection. Mean age was 65 ± 10 years (range 37–80). Surgical indication was: adenocarcinoma ($n = 23$, 56%), and squamous cell carcinoma ($n = 18$, 44%). Ten patients (24.4%) received neoadjuvant radiochemotherapy. Transhiatal laparoscopic esophagectomy was employed in 6 cases (14.6%), while in the remaining 35 cases a combined laparoscopic gastric mobilisation and right transthoracic incision ($n = 19$) or thoracoscopic approach ($n = 16$) was performed. Esophagogastric anastomosis was performed in the left neck ($n = 30$) or intrathoracic ($n = 11$). The mean operative time was 430 ± 80 min (range 290–630). Conversion rate was 35% (7% during the abdominal operation and 28% during the thoracic operation). The mean time of hospital stay was 22 ± 12 days (range 10–64). The median critical care unit stay was 3.6 ± 5.4 days (0–26). In 10 patients (24.4%) there was an anastomotic leakage that no required a surgical treatment. Perioperative mortality was 4.8% ($n = 2$). The histological examination demonstrated a radical excision (R0) in 92% of the cases; in the remaining 3 there was a positive radial margin. Stage of the neoplasm was: stage I in 9 patients (22%), IIa in 5 (12.2%), IIb in 8 (19.5%), III in 15 (36.6%), IV in 2 (4.8%). In 2 patients, previously treated with neo-adjuvant therapy, there was a complete pathological response. The mean number of lymph node retrieved was 17 ± 11 (max 52). The mean time of follow-up was 17 months, whereas the mean survival was 28 months. Overall patient survival was 75% and 45% at 1 and 3 years, respectively.

Conclusion: In our experience, laparoscopic surgery for cancer of the oesophagus appears to show satisfactory results as regards the operative outcome, the number of resected lymph nodes and resection margins.

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The incidence, risk factors and prognostic implications of venous thromboembolism in patients with gastric cancer

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Background: This study was conducted to determine the incidence, risk factors and prognostic implications of venous thromboembolism (VTE) in patients with gastric cancer (GC).

Methods: Using prospectively collected databases, GC patients diagnosed between May 2003 and April 2008 ($N = 2,085$) were consecutively enrolled. The occurrence of an objectively defined VTE was identified.

Results: Two-year cumulative incidence of VTE after the GC diagnosis was 3.8%. In multivariate models, significant predictors of developing VTE were advanced stage (\geq stage II), older age (≥ 60 years), and no major operation (P -values < 0.05). Although perioperative pharmacologic thromboprophylaxis was not routinely performed, the VTE incidence after major abdominal operation was only 0.2%. When VTE cases were classified into pulmonary thromboembolism (PTE), extremity venous thrombosis (EVT) or intra-abdominal venous thrombosis (IVT), IVT (62%) was more common than EVT (21%) or PTE (17%). Patients receiving chemotherapy developed EVT/PTE more frequently than IVT; however, during untreated or treatment-refractory periods, IVT developed more frequently than EVT/PTE (P -values < 0.05). In risk-adjusted multivariate models, although the EVT/PTE development was a significant predictor of early death when compared with no occurrence of VTE ($P < 0.05$), IVT did not affect survival.

Conclusion: The incidence of VTE in Korean patients with GC was similar to that in Western reports. Advanced stage, older age and no major surgery increased the risk of VTE. Considering different clinical situation and prognostic impact between EVT/PTE and IVT development, therapeutic approach should be also different.

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Clinical outcome of endoscopic mucosal resection (EMR) in stage I esophageal cancer

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Background: When a tumor invades to the muscularis mucosa or submucosal layer (T1a-MM or T1b, in Japan), clinical stage I (cSt I) esophageal cancer (EC) has 10–50% risk of lymph node metastasis (LNM). Surgery, though very invasive, is the standard radical therapy for the patients (pts.) with such stage EC. Endoscopic mucosal resection (EMR), which conserves the esophagus, is a minimally invasive and attractive therapeutic modality for such pts. However, the clinical outcomes of EMR for these pts. have been not fully elucidated.

Methods: We conducted retrospective analysis of the clinical courses of 44 pts. who underwent EMR for newly diagnosed T1a-MM or T1b-MM EC between 1994 and 2007 at our hospital, and who could be followed up for at least 1 year. Statistical analysis was performed by the Kaplan-Meier methods and the Cox proportional hazard model. A P value of < 0.05 was considered statistically significant.

Results: Patients decided on the following treatments immediately after EMR based on informed consent and their general condition; 2 underwent surgery, one underwent prophylactic chemotherapy (CHT) and 41 selected follow-up without any additional therapy. Of the 41, 20 selected this course by choice, 12 because of severe concurrent disease; 2 because of poor performance status and 7 because of other multiple primary cancers (MPCs). Twelve pts. died; 2 were cause specific; (4.5%), 8 from MPCs, 1 from severe concurrent disease, and, 1 from unknown causes. Median age was 67 years old (range 53–80), and 5 were female. No critical complications were noted. Median follow-up time was 1542 days (375–3786). 5 developed LNM. One with prophylactic CHT, was followed by surgery, and another was followed by CHT, who showed cause specific deaths later. Other 3 pts. followed by chemoradiotherapy, has not shown cause specific death. Overall and cause specific survival rates at 5 years were 67.3% and 91.8%, respectively. Multivariate analysis revealed that severe concurrent disease including MPCs, and the experience of 5-Fluorouracil based CHT for MPCs significantly influenced survival ($p = 0.035$, HR 11.783 (95%CI 1.197–116.007) and $p = 0.011$, HR 6.542 (95%CI 1.139–37.562), respectively). 8 and 6 pts.