Adjuvant chemotherapy (ECF regimen) for patients with gastric adenocarcinoma.

BACKGROUND/AIMS: ECF (epirubicin 50mg/m², cisplatin 60mg/m² and 5FU 200mg/m²) is an active regimen in advanced gastric adenocarcinoma (GAC). We used ECF as an adjuvant therapy in a cohort of patients with GAC who underwent curative surgery and describe their results in terms of feasibility and outcome. METHODOLOGY: Forty-seven patients with locally advanced GAC underwent curative surgery followed by 4 to 6 courses of adjuvant ECF. Their median age was 59 years (range 32-74) and UICC stage was III-IV in 28 patients (59%).

Partial or total gastrectomy was performed in 49% and 47% of cases, respectively. RESULTS: Chemotherapy was well tolerated, the main grade 3/4 toxicities being neutropenia (47%) without severe infections, and anorexia (11%). Port adverse events were recorded in 17%. There were no treatment-related deaths. With a median follow-up of 65 months, the median overall- and relapse-free survivals were 50.1 months and 42.6 months, respectively. CONCLUSIONS: The adjuvant ECF regimen is safe and feasible in resected patients with locally advanced GAC. The survival in our series compares favorably with cohorts described by others, supporting our confidence on using adjuvant ECF for patients who decide to undertake such type of treatment. ECF might be a reasonable treatment arm to be used in randomized trials of adjuvant chemotherapy.

Pancreaticoduodenectomy for locally advanced gastric cancer.
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BACKGROUND/AIMS: This study was conducted to evaluate the therapeutic efficacy of pancreaticoduodenectomy (PD) in the patients with locally advanced gastric cancer. METHODOLOGY: 25 gastric cancer patients who underwent PD with gastrectomy were analyzed. The indications of PD were 1) suspicion of direct invasion to the pancreas head (n = 15), 2) invasion to duodenal second portion (n = 6), 3) both pancreatic and duodenal invasion (n = 3), and 4) conglomerated lymph node enlargement around the pancreas head (n = 1). RESULTS: Mean operation time was 349.5 (+/- 86.5) minutes and mean amount of RBC transfusion was 3.4 (+/- 2.1) units. Postoperative complications were encountered in 8 patients (32%), but re-operation was required only in 2 cases. No postoperative 30-day mortality occurred after PD. Overall the median survival was 16.5 months with a 5-year survival rate of 15.8%. Two patients with T2bN0M0 and T2bN1M0 stages were still alive for 11.5 years and 5.7 years without any evidence of cancer recurrence. CONCLUSIONS: Considering the acceptable postoperative morbidity rate and the long-term survivors in selected cases, PD could be considered as one of the therapeutic options for locally advanced gastric cancer.

Successful pylorus-preserving pancreaticoduodenectomy for a patient with carcinoma of the papilla Vater two years after living donor liver transplantation.
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Liver transplantation has been recognized as the treatment for various kinds of end-stage liver diseases. Standardized surgical technique, potent immunosuppressive agents and diligent postoperative care have made it
possible for patients to survive for a longer period. For this reason, recurrent primary disease and/or de novo malignancy regarded as chronic immunosuppressant have been paid a great deal of attention. Even pancreas cancer after liver transplantation is extremely rare and has never been successfully treated. Furthermore, cancer of the papilla Vater, which is less frequent than pancreas cancer after liver transplantation has not been reported as yet. In this paper we discuss the first case of cancer of the papilla Vater, which was successfully treated by pylorus-preserving pancreaticoduodenectomy two years after a living related liver transplantation using a left lobe. In addition, we discuss the type of malignancy after liver transplantation.

The posterior approach in pancreaticoduodenectomy: preliminary results.
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BACKGROUND/AIMS: We present our technical version of pancreaticoduodenectomy by posterior approach that enables a complete dissection of the right side of the mesenteric superior artery and of the portal vein, as well as a complete excision of the retroportal pancreatic process (or lamina), and report the preliminary outcomes of the first 10 selected patients. METHODOLOGY: Between 1 December 2005 and 1 March 2006 10 patients (7 males and 3 females) with a mean age of 60.6 years (range 45-81 years) were operated on using this technique. The patients were diagnosed with carcinoma of the pancreatic head (8 cases), ampullary carcinoma (1 case), and carcinoma of the distal part of the common bile duct (1 case). Invasion of the portal vein occurred in 2 of the 8 cases of carcinoma of the pancreatic head. RESULTS: No significant intraoperative incident was recorded. The mean operative time was 225 minutes (ranging between 180 and 240 minutes) and the mean blood loss was 372,25cc (range 150-800cc). Two cases of carcinoma of the pancreatic head that had a segmental resection of the portal vein needed vascular reconstruction which was performed by Goretex graft interposing. The pylorus-preserving procedure was used in 2 cases (ampullary carcinoma, and carcinoma of the distal part of the common bile duct, respectively). Postoperative complications consisted of intraabdominal hemorrhage from an arterial source of the pancreatic capsule (on the day of the operation necessitating reoperation for hemostasis) in one case, and pancreatic fistula (that required conservative treatment) in another case. No postoperative diarrhea, delayed gastric emptying episodes or postoperative deaths were recorded. There were no postoperative deaths. The mean length of hospitalization was 12.2 days (range 10-24 days). CONCLUSIONS: The posterior approach in pancreaticoduodenectomy offers an early selection of patients during the operation (in terms of resectability). As compared to the standard procedure, it enables an adequate lymphadenectomy that can be safely performed (by early dissection and isolation of the superior mesenteric artery), and avoids possible intraoperative accidents secondary to anatomical arterial abnormalities. This approach is particularly recommended in cases with portal vein invasion because it allows a „no-touch” resection.

Pylorus-preserving pancreaticoduodenectomy: preoperative pancreatic function and outcome.
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BACKGROUND/AIMS: To investigate the effects of preoperative pancreatic function on gastric emptying, body weight, and quality of life after pylorus-preserving pancreaticoduodenectomy. METHODOLOGY: Thirty-one patients who underwent pylorus-preserving pancreaticoduodenectomy were divided into 2 groups according to preoperative pancreatic exocrine and endocrine function (normal vs. abnormal). Gastric emptying, body weight, and quality of life were evaluated before surgery, 1-2 months after surgery (short-term), and 6-12 months after surgery (long-term). RESULTS: Short-term body weight was significantly decreased in comparison to preoperative body weight regardless of preoperative exocrine and endocrine pancreatic function. Body weight returned to the preoperative level by 12 months after surgery in patients with normal preoperative pancreatic function but not in patients with abnormal pancreatic function. In both groups, gastric emptying was delayed at 1-2 months after surgery and then returned to the preoperative value by 12 months. Short-term quality of life did not differ from preoperative quality of life in either group, but long-term quality of life improved to beyond the preoperative level in both groups. CONCLUSIONS: Preoperative pancreatic function appears to significantly influence long-term body weight after pylorus-preserving pancreaticoduodenectomy.

Use of photodynamic therapy in malignant lesions of stomach, bile duct, pancreas, colon and rectum.
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Photodynamic therapy (PDT) using sensitizers, light, and oxygen can induce malignant cells to death and treat non-cancerous conditions. It is a predominant and attractive endoscopic technique which could palliate advanced gastrointestinal cancer and eradicate early neoplastic and pre-neoplastic lesions. After PDT, cells may become apoptotic or necrotic which depends on photosensitizer, dose, and cells’ genotype. Photosensitizers, used in PDT, are accumulated in mitochondria. This is the mechanism of cell death both in vitro and in vivo. In review we summarize the clinical use of PDT in malignant lesions of stomach, bile duct, pancreas, colon and rectum with various photosensitizers. Especially, porfimer sodium, a PDT photosensitizer, has been confirmed as a potent treatment in cholangiocarcinoma.

**Prognostic factors and outcome of resected patients for gastrointestinal stromal tumors.**

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**BACKGROUND/AIMS:** The aim of this study was to analyze the outcome of 33 patients with primary gastrointestinal stromal tumors (GISTs) who were observed and treated in a single teaching hospital and followed up prospectively. **METHODOLOGY:** Thirty-three GISTs patients (21 male; 12 female; mean age: 57 +/- 12 years; range: 23-76 years) between June 1994 and October 2004, were reviewed retrospectively. Patient, tumor, and treatment variables were analyzed to identify patterns of tumor relapse and factors affecting survival. **RESULTS:** Of 33 patients, 30 patients (91%) had primary tumor without metastasis, and all of them underwent complete surgical resection of gross disease. Three patients (9%) had metastasis. Among patients radically resected, the 5-year actuarial survival rate was 85%, and the disease-free survival was 76%. Among patients resected for cure, there were 6 recurrences. The mean time to recurrence was 22 +/- 11 months (range: 4-36 months), and liver was the prevalent site for relapsing disease (n = 5; 83%). After recurrence, survival at 2 and 3 years was 44% and 0%, respectively. **CONCLUSIONS:** GISTs are uncommon sarcomas. Tumor recurrence tends to be intra-abdominal. Investigational protocols are indicated to reduce the rate of recurrence after resection and to improve the outcome for patients with GIST.

**Probiotics reduce infectious complications after pancreaticoduodenectomy.**

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**BACKGROUND/AIMS:** Postoperative morbidity is a significant problem associated with pancreaticoduodenectomy. The clinical value of probiotics in surgical patients remains unclear. This study investigated the effect of probiotics on surgical outcome after pancreaticoduodenectomy. **METHODOLOGY:** Seventy patients with pancreaticobiliary diseases were randomly allocated to two groups before pancreaticoduodenectomy, one of which received probiotics perioperatively and the other served as controls. Postoperative infectious complications were recorded. **RESULTS:** Of the 70 patients, 64 completed the trial (30 receiving probiotics and 34 controls). The probiotics used in the study contained Enterococcus faecalis T-110, Clostridium butyricum TO-A, and Bacillus mesentericus TO-A. The probiotics were first administered immediately after admission, 3 to 15 days before the operation, and then reintroduced on the second postoperative day. They were continued until hospital discharge. Infectious complications occurred after pancreaticoduodenectomy in 25 patients (39%). The incidence of infectious complications in the probiotics group (23%, 7/30) was significantly lower than in controls (53%, 18/34) (P = 0.02). Mortality amongst all patients was 1.6% (1 patient in the control group). **CONCLUSIONS:** The use of perioperative probiotics reduced postoperative infectious complications after pancreaticoduodenectomy, making it a promising potential adjunct therapy for patients undergoing high-risk hepato, biliary, and pancreatic surgery.