

Hepatobiliary and Pancreatic Surgery

Introduction

In hepatobiliary and pancreatic surgery division, we manage quite a few diseases, because the recent development of various diagnostic techniques has increased the number of borderline malignancies and benign tumors in these days. Limited resection which preserve organ function, is indicated for patients with benign or borderline malignancies. However, some diseases such as invasive pancreatic cancer, gall-bladder cancer, hilar and intrahepatic cholangiocarcinoma are still associated with dismal long-term prognosis. Therefore, both medical and surgical oncology groups as an integrated clinical activity collectively treat the hepatobiliary and pancreatic tumors. As a result, our treatment regimens have developed in close co-operation with medical oncologists and radiologists.

Routine Activities

This division includes four attending surgeons, one chief resident, and four to five residents. The out patients clinic is open 5 days a week. We have staff meetings 3 times a week, and discuss the treatment strategies from medical and surgical points of view. We have a case conference of imaging diagnosis on every Tuesday in co-operation with radiologists and medical oncologists, and a monthly pathologic conference with pathologists.

Treatment strategy for HCC is based on number of lesions, tumor size and liver function. Surgical treatment is feasible in patients with relatively good liver function (Child-Pugh: A or B). When the number of tumors is 3 or less and each tumor is smaller than 30 mm in size, the efficacy of surgical treatment is similar to that of percutaneous ablation therapy. Nevertheless, in those having tumor over 31 mm, we believe that hepatectomy is the most effective for achieving local control, if the liver function tolerates

the hepatic resection. Even for the cases of which main tumor size is over 70 mm, or those having intrahepatic metastases in the contralateral lobe, aggressive surgery is available. In addition, when residual tumors are observed in the remnant liver, we can treat the patients with additional intraoperative ablation therapy or transcatheter arterial embolization following the operation. In the patients treated with such a debulking surgery, the survival rates at 1, 3 and 5 years were 55, 33, and 19%, respectively.

The prognosis for patients with pancreatic cancer is dismal, and standard therapeutic strategy is not yet established. The result of multi-institutional prospective randomized study comparing between extended radical and standard techniques of pancreaticoduodenectomy presented that the former could not improve the prognosis for patients with pancreatic cancer. Although surgical resection offers the only hope of long-term survival, it is clear that additional therapy is needed. In order to improve the treatment results, IORT had been indicated to the patients in addition to the surgical resection, but efficacy of IORT is still controversial. Therefore, we conducted a multi-institutional prospective randomized trial, comparing therapeutic efficacy between surgery alone and that with IORT. The patients with resectable pancreatic cancer are preoperatively randomized into the IORT group or surgery alone group. The former group received 25 Gy IORT to the tumor bed after curative resection. On the other hand, we have been trying to progress limited surgery, such as duodenum-preserving pancreas head resection, local resection of inferior head of the pancreas and partial pancreatic resection, for the patients with borderline malignancies and benign tumors (intraductal papillary-mucinous neoplasm, solid-pseudopapillary tumor and endocrine tumor).

In biliary tract cancer, we perform surgical therapy for the patients without distant metastases. We think that extended hepatic resection is necessary for the patients with gallbladder cancer and hilar cholangiocarcinoma. In the patients with advanced gallbladder cancer, we perform systematic S4a+5 hepatectomy or extended right hepatectomy. In those with hilar cholangiocarcinoma, we perform right or left hepatectomy with resection of the caudate lobe. In those with disease requiring more than a right hepatectomy, transileocecal portal embolization is performed before the surgery.

Since the opening of our hospital, we have aggressively performed hepatic resection for liver metastasis from colorectal cancer. Extended lobectomy plus partial resection is considered as the upper limit of hepatectomy. Overall 5-year survival rates after initial hepatectomy was 48%.

New Development in 2003

The complete removal of cancer is one of the most important factor in the successful treatment of patients undergoing surgery. However, in bile duct cancer, aggressive hepatic resection causes a high risk of hepatic failure. Frozen section is one of the modalities used to determine the surgical margin and surgical approach. It is sometimes difficult to diagnose atypical cell at the surgical margin of the bile duct, and prognostic value of the surgical margin is unclear. We are planning to establish histologic classification system for atypia in the bile duct diseases and to clarify prognostic value of the surgical margin by analysis using multi-institutional data.

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	2001	2002	2003
HCC	68	56	67
CCC	2	4	3
Liver metastasis	55	64	54
Biliary tract	26	23	29
Pancreas	36	30	35
Others	27	33	26
Total	214	210	214