

Combined treatment is the hope to improve prognosis of liver cancer

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Xiaoping Chen, Academician of the Chinese Academy of Science, Professor and Chairman of the Department of Surgery, Director of the Institute of Hepato-Pancreato-Biliary Surgery and Hepatic Surgery Center of Tongji Hospital, Tongji Medical College, Huazhong University of Science and Technology. He earned his M.D. from Tongji Medical College in 1985 and was further trained in the United States and Germany. In 1992, he received the International Scholar title from the American Cleveland Medical Communication Center. In 1996, he earned the American Sackler Chinese Doctor Annual Award. The next year, he became the first recipient of the Wu Mengchao Hepatobiliary Surgery Foundation Award. In 2002, his study entitled "Series of research and technique amelioration in hepatic surgery" won him the first Chinese Medical Association Award. He was elected the director of the Hepatic Surgery Group of the Chinese Medical Association in 2002 and then president of the Chinese Chapter of the International Hepato-Pancreato-Biliary Association in 2003. His basic and clinical application research on hepatic surgery won him the National Science and Technology Progress Award in 2004.

Dr. Chen has a clinical practice focused on hepato-pancreato-biliary surgery. He cares for patients with a broad spectrum of malignancies, including liver, bile duct, and pancreatic cancers. He also serves as director of the institute of organ transplantation and specializes in clinical liver transplantation. In addition to his clinical practice and administrative responsibilities, Dr. Chen is an active investigator in the field of cancer biology and cancer clinical trials. He has published over 500 peer-reviewed articles in these fields and has had continuous funding from the National Nature Science Foundation of China for more than 10 years.

Dr. Chen is the editor-in-chief of the national medical textbooks *Surgery, Contemporary Surgical English Essentials, Elementary Techniques of Surgical Intervention, Surgical Frequently Used Experiment Methods* and *Foundation of Animal Models, Hepatectomy, and Progress of Hepato-pancreato-biliary and Splenic Surgery*. He is also the editor-in-chief, associate editor, and/or reviewer for more than 30 domestic and international journals.

Liver cancer is the fifth most common malignancy and the second leading cause of cancer-related mortality worldwide. Surgical resection is widely accepted as the only potentially curative therapy for hepatocellular carcinoma (HCC), the most predominant type of primary liver cancer worldwide. Despite this, the prognosis and 5-year disease-free survival rate of HCC remain poor.

Hepatitis B virus (HBV) infection and HBV-induced cirrhosis are the main causes of HCC in China. Hepatectomy is the most effective method for treating HCC. However, liver resection can lead to recrudescence of hepatitis in patients with chronic HBV infection and may result in hepatic insufficiency. Postoperative hepatitis

occurred in patients with HBV-related HCC who underwent liver resection. The reactivation of viral replication occurred after liver resection in some patients, and an increased HBV DNA level was seen in patients who underwent major hepatectomy. Perioperative antiviral therapy for HBV-related HCC attracted increasing attention from hepato-pancreato-biliary surgeons.

Hepatic resection for HCC has been considered a safe procedure in cirrhotic patients because of the lower postoperative mortality and morbidity rates as well as improved long-term results. This progress has been mainly owing to improved perioperative management and better patient evaluation, but the selection criteria remain

controversial. According to the guidelines published by the EASL and AASLD in 2001 and 2011, surgical resection was only recommended in non-cirrhotic patients or in those who have cirrhosis but still have well-preserved liver function, normal bilirubin, and a hepatic vein pressure gradient of <10 mmHg. However, recent studies reported that liver resection resulted in better outcomes for cirrhotic HCC patients compared to transcatheter arterial chemoembolization (TACE) and radiofrequency ablation (RFA). Therefore, hepatectomy remains a therapeutic option, even for patients with cirrhosis.

Hepatectomy is the first-line therapy for early-stage liver cancer. Liver transplantation is also an option for improving long-term outcomes. In this column, Dr. Xiong's group investigated the efficacy of salvage hepatectomy for treating recurrent hepatic cancer after RFA. This study demonstrated that salvage hepatectomy provides satisfactory outcomes in patients who underwent RFA to treat early-stage liver cancer with postoperative recurrent stage I tumors.

The prognosis of HCC is generally unsatisfactory. The tumor stage, presence of portal vein thrombosis, and the AFP level are proposed predictors of prognosis. Circulating tumor cells attracted researchers' attention and reportedly predicted HCC outcomes. Dr. Hua's interesting study found that a larger neutrophil-to-leukocyte ratio (NLR) predicted poorer postoperative survival for cirrhotic patients with HCC and concluded that the preoperative NLR would be a simple and effective independent predictor for patients with HCC after hepatectomy. Further multicenter studies with adequate sample sizes are required to provide sufficient evidence for supporting this conclusion.

Malignant fibrous histiocytoma (MFH) is a mesenchy-

mal tumor that is mainly composed of fibroblasts and histiocytes and rarely occurs in the pancreas. Owing to the lack of data, there are no guidelines for the treatment of MFH of the pancreas. It was reported that, of 16 patients with primary pancreatic MFH, approximately 50% died within 1 year. MFH is difficult to diagnose because of the lack of specific symptoms and imaging findings, and the lesions in the pancreas are quite similar to those of pancreatic cancer. The liver is the second most common site of metastasis that mainly spreads through the circulatory and lymphatic systems. In this column, Dr. Zhai reported a 37-year-old man with primary MFH of the pancreas with liver metastasis. The patient underwent pancreaticoduodenectomy and ethanol ablation of the liver lesions and received 4 cycles of ifosfamide and doxorubicin chemotherapy. After 8 months, the tumor recurred in the liver but not in the pancreas. The patient is still alive 13 months after the diagnosis despite the lesions in the liver increasing in size after therapy.

In the past 20 years, great progress has been made in the treatment of liver cancer owing to improved perioperative management, better patient evaluations, improved surgical techniques, and improved understanding of liver anatomy. Combination therapy including surgery, TACE, RFA, and sorafenib would help to improve long-term outcomes. This column presents some new opinions in the treatment of liver disease or predicting prognosis, and it would be helpful for clinicians in the field of hepatopancreato-biliary surgery.

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News & Events

Chen Xiao-Ping Elected as the Academician of Chinese Academy of Science

On Dec. 7th, the press conference of Chinese Academy of Science (CAS) was held to announce the latest results of new members election. Prof. Chen Xiao-ping from Tongji Hospital was elected as the new CAS member, becoming the first medical sciences academician in Hubei Province.

Obtained his Doctor of Medicine in Surgery from Wuhan Medical College (now Tongji Medical College of Huazhong University of Science and Technology) in 1985, Chen, currently, is the director of Surgery Division and dean of Hepatic Surgery of Tongji Hospital. He is also the president of the Asian-Pacific Hepato-Pancreato-Biliary Association (A-PHPBA), is a leading innovator in surgery of the liver, pancreas and biliary system.

Under the instruction of two renowned mentors – QIU Fa-zu, a pioneering surgeon from China and member of the Chinese Academy of Sciences and WU Zai-de, Chen has devoted his energy and time in surgical reform and innovation for the past 40 years and has led an exceptional career developing techniques in the field of hepato-pancreato-biliary surgery which helped to save thousands of patients' lives.

Chinese Academy of Science was founded in 1949 and it has developed into a comprehensive and large national scientific institution consisting of six divisions respectively in mathematics and physics, life and medical sciences, earth sciences, information technical sciences and technological sciences. Right now, it has over 700 academicians called CAS Members and 70 foreign members.

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