



# Therapeutic Options of Hepatocellular Carcinoma

Chi-Leung Liu

Department of Surgery, The University of Hong Kong, Queen Mary Hospital

Hepatocellular carcinoma (HCC), a common tumor throughout the world, remains a major health problem in Asian countries, and its incidence is increasing in the Western world. It is the second leading cause of cancer death in China and Hong Kong. Hepatic resection remains the treatment of choice that can offer a meaningful chance of long-term survival for patients with HCC. A recent study from Queen Mary Hospital showed that the 3-year and 5-year survival rates after hepatic resection were 62% and 50%, respectively. More than 90% of the patients did not require blood transfusion in recent years. Careful perioperative and intraoperative management, including the use of parenteral nutrition, ultrasonic dissector, and the anterior approach technique, and the avoidance of routine abdominal drainage, contributed to the satisfactory operative outcomes. Several agents have been evaluated in the attempt to decrease the recurrence rate of HCC after hepatic resection. These included retinoids, interferon, radioactive iodine, and immunotherapy. However, their preventive value and the impact on survival need further investigation. Liver transplantation (LT) is a documented treatment in selected patients with HCC. Studies suggested that careful selection of small HCC without lymph node involvement or macrovascular invasion could lead to survival rates similar to those in non-HCC indications. However, broader application of LT for HCC is limited by paucity of liver grafts especially in Asian countries. Further studies are required for evaluation of the impact of live donor liver transplantation on patients with HCC. Percutaneous ethanol injection under ultrasound guidance achieves complete necrosis in 70 to 80% of solitary tumors less than 3cm in size. For patients with preserved liver function, a 5-year survival rate of >50% can be achieved. Radiofrequency ablation is a novel and promising treatment modality especially in patients with unresectable disease with impaired liver function. Its efficacy compared with surgical resection in patients with resectable disease needs further evaluation. For patients with unresectable disease, chemoembolization has been shown to provide survival benefits on prospective randomized studies and meta-analytical assessment. There have not been any definite data to support beneficial effects from systemic chemotherapy, tamoxifen, octreotide, internal irradiation, proton beam radiation, interferon treatment, and immunotherapy.