The Changing Outlook for Patients With Cancer in the Liver

Not long ago, primary and secondary cancers of the liver were thought to be universally fatal conditions, but recent developments in the management of these malignancies have changed this perception. Major liver resection, once a rare exercise in surgical derring-do, is now a common operation in most tertiary referral hospitals. If the liver lesion cannot be resected, it can be frozen, injected, heated, or perfused with various agents.

Primary hepatic cancers are among the most common malignancies in the world. The significant survival rates reported by Chi-leung Liu, MB, BS(HK), and associates in this issue attest to the progress that has been realized in the management of these highly lethal malignancies. Secondary hepatic cancers are also common. Most patients with metastatic colorectal cancer who develop a recurrence after a colon resection will have metastasis in the liver.[1-5] If no other extrhepatic disease is found, resection of deposits in the liver with adequate pathological margin has yielded remarkably good long-term survival rates.[5,6] More recently, data have been published suggesting that repeat resection for recurrent metastases may achieve similar long-term survival benefits.[7] The successful surgical treatment of metastatic colorectal disease is an extraordinary biological phenomenon in light of experience with most other types of cancer.

However, most patients with hepatocellular cancer or metastatic colorectal cancer are not candidates for resection at presentation. Fortunately, several nonresectional therapeutic options - cryosurgery, chemoembolization, and regional perfusion with chemotherapeutic agents - are available for patients with an unresectable liver tumor. In this issue, Junsung Choi, MD, reports on regional transcatheter therapy for hepatic neoplasms, and Ramon Sotomayor, MD, and T. S. Ravikumar, MD, FACS, present a comprehensive study on their experience with cryosurgery in the treatment of hepatic tumors.

The good results following liver resection and the existence of therapeutic options for patients with unresectable tumors make the selection of the resectable subset of patients an important step in the patient evaluation. Numerous suggestions have been made regarding the most efficient preoperative imaging schemes to evaluate for resectability, with legitimate differences of opinion about the usefulness of these tests. Computed tomography (CT), delayed CT, arterial portography with CT (CTAP), magnetic resonance imaging, ultrasound, and intraoperative ultrasound (IOUS) have all been described as useful preoperative imaging techniques in patients being considered for hepatic resection.[8-12] While CTAP is very sensitive, it also has a relatively high false-positive rate.[13] At many centers,IOUS and CTAP have been found to be essentially equivalent in the ability to determine resectability of liver tumors.[14,15] For this reason, both techniques are used at our institute: CTAP to identify those patients deserving exploration with intent to resect, and IOUS to confirm the preoperative findings and to evaluate those areas sometimes indicated as "false positive" by CTAP. Laparoscopic ultrasound appears to be equivalent to IOUS and may replace CTAP as the modality of choice for selecting patients for resection.[16] Laparoscopic ultrasound requires general anesthesia and operating room resources, but it may be a useful step just prior to abdominal exploration for liver resection.

No doubt, the current enthusiasm for liver resection as treatment for primary and secondary liver cancers will encourage more aggressive management of patients with these malignancies. There is evidence, however, that patient selection may be an important factor in long-term survival - maybe as important or more important than the surgical management used. For example, patients with primary colorectal cancer metastases in the liver have a surprisingly long survival even without treatment. This observation emphasizes the importance of evaluating new treatment algorithms in the context of prospective, randomized trials.[17] We may then have a firmer notion of what is the best treatment for these cancers that were considered so dire just a few years ago.

Richard C. Karl, MD
Juan C. Bolivar Professor of Surgical Oncology
H. Lee Moffitt Cancer Center & Research Institute
Tampa, Florida

References
