Report for the SSAT 2006 SSAT Stryker Traveling Fellowship for Surgeons in Private or Hospital-Based Community Practice

Venue: University of Louisville Hospitals, Louisville, KY
Date: February 1, 2007
Preceptor: Joseph Buell, MD

I would like to thank the Society for Surgery of the Alimentary Tract and Stryker for the opportunity to investigate techniques in laparoscopic liver resection that may be applicable to a community based practice and to resident training in a community setting. Up to now, laparoscopic liver resection has been performed only in larger university based centers. However, experience with open liver resections and experience with solid organ laparoscopic surgery, such as laparoscopic donor nephrectomy should provide the community-based surgeon with the necessary skills to master laparoscopic liver resection. With this in mind, I used the SSAT Stryker Traveling Fellowship to visit an experienced laparoscopic liver surgeon, Dr. Joseph Buell at the University of Louisville hospitals in Louisville, KY on February 1, 2007.

Dr. Buell offered a structured one-day program for visiting surgeons. He had scheduled two representative laparoscopic liver resections for the day. First, those of us visiting met early in the morning for breakfast and had an informal question and answer session with Dr. Buell and some of his associates about laparoscopic liver resection. We then were taken to the operating suites where we could observe his first case, a right hepatectomy for a large cavernous hemangioma. Dr. Buell did a superb job at explaining the various steps of his operation. We, of course, could follow on video screens. We were able to see the usefulness of the hand port in performing operations on the right liver. The operation went well, but there was enough time to discuss his maneuvers in terms of operative exposure, division of liver parenchyma, using more than one hemostatic device, and control of bleeding. Fortunate for us, Dr. Buell helped one of his younger colleagues with much of the case, which afforded us the opportunity to understand even the most fundamental of steps in the operation.

Between cases, we had another question and answer session over lunch. Dr. Buell was available to discuss the different ramifications of laparoscopic liver resection and some of his previous operations, which he had archived on DVDs. We also discussed the various tools available for laparoscopic liver resection that were commercially available and those that were on the horizon.

We then watched the second case, a patient with a large left-sided liver cyst. The benefit here was the opportunity to see the operative approach to the left liver as well as the right. The technique for left hepatectomy differed some in patient positioning and laparoscopic port placement. Again, the operation proceeded flawlessly yet methodically enough that we were able to grasp the different steps in isolating the left liver, mobilizing it, and dividing the parenchyma.

Following these operations, Dr. Buell made available DVDs on laparoscopic liver resection, including those operations we had observed. Our goup was an interesting and informative mix of respected and experienced hepatobiliary surgeons from institutions such as the Mayo Clinic and Massachusetts General Hospital. In that regard, the discussions among ourselves were just as instructive and helpful as those with Dr. Buell, as we each brought a different perspective on laparoscopic liver resection.

I was impressed by Dr. Buell's ability to perform an adequate and near anatomic liver resection laparoscopically just as would be done with the open technique. Unfortunately, I think there is a learning curve in these operations, and resident training in liver resection might be jeopardized until attending surgeons feel comfortable themselves performing the operations. However, there is no doubt that surgeons familiar with liver anatomy and experienced in open liver resection, provided they have solid organ laparoscopic skills, can perform laparoscopic liver resections in the community setting.

I am grateful to the SSAT and Stryker for affording me this most instructive opportunity to see, firsthand, laparoscopic liver resections. There was much to be learned that could not be gleaned from the literature or from didactic sessions at large meetings.

As a postscript, on March 28, 2007 and April 25, 2007 I successfully performed my first two laparoscopic liver resections (left lateral segmentectomy in each case) for hepatocellular carcinoma on patients with cryptogenic cirrhosis and HCV cirrhosis respectively. These procedures were combined with RFA of second contralateral lesions. The patients recovered uneventfully and each were dismissed four days later.

The only negative impact will be on fewer opportunities for surgical residents to perform major liver resections. Until I feel quite comfortable with laparoscopic techniques, I will not be able to involve the residents in any meaningful way. However, I am impressed that laparoscopic liver resection is a useful technique and provides easier patient recover. We are, of necessity, tracking operating room costs for laparosopic liver surgery and will hopefully be able to give a reasonably accurate cost comparison of laparoscopic and open methods after several cases.

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