

## Laparoscopic Liver Resection for Left Lateral Section: The Most Standardized and First Surgical Option

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**Introduction:** Owing to development of surgical devices, laparoscopic liver resection (LLR) has been popular in the world. In Japan, LLR of left lateral section (LLS) and other partial liver resection was officially recognized in 2010. Nowadays, especially LLR for LLS has become a standardized procedure and recognized as a training procedure for learning LLR. In this session, we present our procedure of LLR for LLS and summarize our institutional data and Japanese situation for LLR.

**Procedure:** A patient is placed in supine position with the legs spread. Four or five trocars are inserted. First of all, round ligament, falciform, coronary, left triangular and hepato-gastric ligaments are divided in order to fully mobilize the LLS. Next, liver parenchyma is transected along the line of falciform ligament. In our institution, parenchymal transection is performed using harmonic scalpel and ultrasonic dissector without Pringle maneuver basically. In hemostasis, we prefer to use monopolar electro cautery with saline dripping and bipolar electro cautery. Parenchymal transection is performed until becoming easy insertion of an endoscopic linear stapler. Finally, remnant Glissonian sheath and liver parenchyma are cut by an endoscopic linear stapler. A resected specimen is retrieved in a bag and removed from the navel port.

**Surgical outcomes:** In our institution, 99 LLRs were performed for 86 patients from 2010 to 2014. Of them, 40 LLRs (40%) were performed for LLS (S2/3 partial resection (n=26), S3 segmentectomy (n=3), left lateral sectionectomy (n=11)). If patients were limited to whom underwent one part resection of LLS (n=30), their median values (25, 75th percentile) of operating time, blood loss, and postoperative hospital stay were 167 (114, 259) min., 20 (6, 127) ml and 7 (5, 8) days, respectively. There was no severe morbidity and no mortality. During the same period, there were only 2 patients who underwent open one part liver resection of LLS (One had a >10 cm larger tumor, and another had a tumor contacting to the root of left hepatic vein.). Therefore, the ratio of performing LLR for one part resection of LLS was 93%.

**Conclusions:** In our institution, LLR of left lateral section has become safe and standardized. Although there are some exceptions, LLR for left lateral section is already the first surgical option.