Video Symposium I

Left Hepatectomy by Glisson's Approach Using Hanging Maneuver

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As a kind of topic of this symposium, 'left sided hepatectomy', I present here 'left hepatectomy by Glisson's approach using hanging maneuver' as video.

The patient was 61-year-old female with recurrent fever and abdominal pain for 6 months. Three and a half years ago, she had pylorus-preserving pancreaticoduodenectomy (PPPD) for common bile duct cancer staged T2N0.

Surgical Technique

The abdomen was entered under upper midline incision along the previous inverted L-incision for PPPD. Adhesiolysis was done before the falciform ligament was found to be used as a guide to dig into the hilum. The umbilical portion of left Glisson's pedicle (LGP) was exposed by incising the overlying liver parenchyma. After retracting the lateral segment of the liver, the lesser omentum was incised to expose the papillary process of caudate lobe of liver. The ligamentum venosum (LV) is ligated and divided at the junction with the root of the left hepatic vein near the suprahepatic inferior vena cava. A large curved clamp was introduced just at the right of the origin of the umbilical portion of LGP and passed through behind the LV, which led to encircling of LGP and LV, but saving the caudate Glisson's pedicle. A tape for hanging was seized with the clamp and pulled back with the clamp. Therefore, the hanging tape was positioned with the upper end at the left side of left hepatic vain and the lower end between the right and left Glisson's pedicles, simultaneously excluding the caudate Glisson's pedicle from transection. Occlusion of the encircled LGP and LV revealed the demarcation line on the liver surface that corresponds to the transection plane. The parenchymal transection is performed with the ultrasonic dissection device along the line with both ends of the tape oriented and pulled up for the transection plane and continued cephalad and posteriorly aiming at the tape until the tape is exposed. After the parenchymal transection, the occluded LGP and LV is divided en masse. The left hepatic vein is divided.

Key Comments

1. Upper midline incision is used even in previous operated case with a bigger incision.
2. The transection plane in this technique saves the caudate Glisson's pedicle to do no harm to caudate lobe. If the lower end of hanging tape is placed between the right and left Glisson's pedicles along the LV, the caudate Glisson's pedicle may be subject to injury because it is on the transection plane.
3. The upper end of hanging tape is positioned at the left side of left hepatic vain for safe use of hanging maneuver because dissection between the middle and left hepatic veins may be worrisome and dangerous to surgeon at certain circumstance.
4. LV is also resected with anatomic left liver.