Background: Laparoscopic hepatectomy is a common procedure that has been reported frequently [1-3]. However, laparoscopic liver resection of tumors which was located in segments 5 and/or 8 remains a technically difficult procedure because it required two transection planes [4]. And also there were a number of branches of the hepatic vein and small glissonean pedicles compared to other hepatectomies. Here, we present the case of a pure laparoscopic right anterior sectionectomy (RAS) for hepatocellular carcinoma (HCC).

Methods: HCC (3 cm × 4 cm) was in segment V. After performing cholecystectomy, anterior glissonean pedicle was isolated by using with Golden-finger™ (Ethicon). Pringle maneuver was done during the hepatic parenchymal transection [5]. For the transection of the hepatic tissue, the Cavitron Ultrasonic Surgical Aspirator (CUSA) was used. Small hepatic vein branches along the middle and right hepatic vein and small glissonean pedicles were sealed and divided with a ENSEAL™ (Ethicon). iDrive™ Ultra Powered Stapling device (Medtronic) was used for division of right anterior and posterior glissonean pedicle separately. Hanging maneuver was performed for transection of remnant the liver parenchyma after complete dividing the graft from both hepatic veins. Anterior section of liver graft was removed through the lower abdominal transverse incision using the endo-bag.

Results: Totally laparoscopic right anterior hepatectomy for HCC was performed successfully without intraoperative complications and transfusions. The operation time was 300 mins, and the estimated blood loss was less than 200 ml. On postoperative day 5, computed tomographic scan showed no pathological findings. The patient was discharged on postoperative day 7 without any complications.

Conclusions: Totally laparoscopic RAS was feasible operative procedures in patients with anteriorly located tumor of the liver.