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No touch isolation technique for the prevention of postoperative recurrence of hepatocellular carcinoma after liver transplantation-combined with Trans-arterial Radioembolization

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Abstract

Recently, trans-arterial radioembolization (TARE) was done in the patients who had advance stage hepatocellular carcinoma. Sometimes totally necrosis of tumor was reported after operation. No touch isolation technique is concept of preventing tumor spread during tumor operation. We expected that if we can use these technique and control all viable tumors before transplantation. We could get better outcomes in the hepatocellular patients.

We performed living donor liver transplantation using no touch isolation technique in the patients who had multinodular hepatocellular carcinoma and high AFP, PIVKA level after TARE and conventional TACE.

Case

36 year old female patient had liver cirrhosis with hepatitis B virus infection and multiple hepatocellular carcinoma in both lobe. Alpha-feto protein level was 850,000 PIVKA 136,000. At first, there were high change of recurrence, we did not consider liver transplantation. Hepatologist decided to do TARE and additional conventional TACE. After that treatment, AFP and PIVKA level were dramatically decreased, and there was no viable tumor in follow up CT after 3 weeks.

Living donor liver transplantation was done, donor was 32 year old her sister, there was no variation in the donor side. Total operative time was 4 hour 30 min and blood loss was 100cc. We did recipient hepatectomy using no touch isolation technique, suprahepatic and infrahepatic IVC were isolated and clamped. Then we clamped hilum and resected using high hilar dissection technique. Immediate postoperative period there was no acute complication, patients transferred to general ward at postoperative 4 days then discharged postoperative 14 days. Postoperative 1 month, patients is alive, there is no recurrence, and AFP level is 11.5 and PIVKA level is 33.

TARE(trans-arterial radioembolization) is good modality for pre-transplant treatment for far advanced stage case of hepatocellular carcinoma. No touch isolation technique during recipient hepatectomy might be helpful in advanced stage hepatocellular carcinoma patients.