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Salvage plasmapheresis for post-hepatectomy liver failure in hilar cholangiocarcinoma : Case report
Modified ‘fundus first’ approach in single incision laparoscopic cholecystectomy

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Introduction

Although the role of plasmapheresis in liver failure is not clearly established yet, encouraging reports have addressed its efficacy in the setting of resections for primary liver malignancies, small-for-size syndrome after live donor liver transplantation, and acute liver failure.

Method

Patient was a 67 year-old male, 162cm, 66kg, visited our hospital with jaundice. He was diagnosed as hilar cholangiocarcinoma, type IIIa with hypertension, diabetes. Preoperative jaundice was resolved with percutaneous trans-hepatic drainage down to 1.51 mg/dl. Preoperative liver volumetry showed that Right lobe was 1127cc (68.9%) and left lobe was 508cc (31.0%).

During the evaluation, left anterior descending (LAD) and the left circumflex artery (LCx) stenosis was found on coronary angiography, LAD stent was inserted. Therefore we decided to delayed operation one month later.

Result

Rt. Hemihepatectomy and CBD resection and R-Y hepaticojejunostomy was performed at 11th September 2017. Operation time was 13hrs 45min, estimated blood loss was 1000cc. In the operation, liver looked cholestatic, two opening of Lt. bile duct were anastomosed to jejunum respectively. Pathology was reported as T2N0 of type IIIa hilar cholangiocarcinoma. Immediately after operation, his total bilirubin was 6.9 mg/dl and it increased up to 15.5 mg/dl at POD 4. We decided plasmapheresis for salvage from hepatic failure. Fortunately after one time of plasmapheresis, the bilirubin had started to decrease continuously with one to two mg/dl per day. The patient gradually recovered, and discharged with 0.78 mg/dl of total bilirubin at two week later of the plasmapheresis. On one year follow up evaluation, there is no abnormal liver function and recurrence of cholangiocarcinoma.

Conclusion

Even though his remnant liver volume was over than 30% of total liver volume, the reason of post-hepatectomy liver failure may be ‘not good quality of the liver’. The factors were related with were cholestasis with bile duct dilation,

diabetes, old age, long operation and blood loss. The use of plasmapheresis to decrease portal hyperperfusion and bilirubin after extensive hepatectomy. We hope this report will provide useful additional information on the short and long term effects of plasmapheresis, especially as supportive procedure after major hepatectomy,