

EFFECTS OF LARGE PORE HEMOFILTRATION IN A SWINE MODEL OF FULMINANT HEPATIC FAILURE. O. Detry (1), N. Janssen (1), E. Cavalier (2), P. Delanaye (1), J.P. Cheramy-Bien (2), P. Honoré (1), J.O. Defraigne (2), B. Lambermont (1). (1) Ulg Sart Tilman, Liège, Belgium, (2) University of Liege, Liège, Belgium.

**Introduction** : Systemic inflammatory response might be involved in pathogenesis of brain oedema and intracranial hypertension complicating fulminant hepatic failure (FHF), by inducing an increase in cerebral blood flow and brain water content. We recently demonstrated in endotoxic shock models in the pig, that large-pore membrane hemofiltration (LPHF) with a 80 kDa cutoff may induce a significant IL-6 and IL-10 clearance and an improvement of hemodynamic stability and survival.

**Aim** : In this study, we used the validated ischemic FHF model in the pig, to evaluate the effects of this 80 kDa LPHF on intracranial pressure (ICP) and cerebral blood flow (CBF) and on hemodynamic parameters, in relation with the clearance of proinflammatory cytokines and the blood liver tests.

**Methods** : 15 pigs were randomised in three groups : sham, FHF, and FHF + LPHF. FHF was performed by porto-caval anastomosis and hepatic artery and bile duct ligation. All pigs were monitored over the following 6 hrs. In the FHF + LPHF group, LPHF was instituted for 4 hrs, from Time 2 to 6 hrs. Hemodynamics, CBF and ICP were continuously recorded. Blood samples (ammonia, lactate dehydrogenase (LDH), aspartate and alanine transaminases (AST, ALT), aromatic amino acids, total bilirubin, glucose, lactate, IL-6, IL-10, TNF- $\alpha$ ) were collected before liver devascularisation (T0), and after two (T2) and 6 (T6) hrs.

**Results** : The FHF groups developed blood characteristics of liver failure, without difference between FHF, and FHF + LPHF, two groups that developed intracranial hypertension. Despite a cytokine clearance, there was no significant difference in CBF and ICP between FHF and FHF + LPHF.

**Conclusion** : In this ischemic FHF pig model, LPHF with a 80 kDa cutoff did not improve liver tests, nor CBF or ICP.

THE EVOLUTION OF LAPAROSCOPIC LEFT LATERAL SECTIONECTOMY WITHOUT PRINGLE MANEUVER : THROUGH RESECTION OF BENIGN AND MALIGNANT TUMORS TO LIVING LIVER DONATION. B. Van Den Bossche (1), F. Berrevoet (1), M. Sainz-Barriga (1), B. De Hemptinne (1), R. Troisi (1). (1) University Hospital, Ghent, Belgium.

**Introduction** : Laparoscopic left lateral sectionectomy (LLS) has gained popularity for its safety and reproducibility, being performed in case of benign and malignant tumours. We report herein the evolution of our experience of laparoscopic LLS for different indications including living liver donation.

**Aim** : We report herein the evolution of our experience of laparoscopic LLS for different indications including living liver donation.

**Methods** : We reviewed the medical files of 37 consecutive patients undergoing laparoscopic LLS for benign, primary and metastatic liver diseases and in case of living liver donation in our institution between January 2004 and January 2009. The mean patient age was of  $53 \pm 15$  years and the M/F ratio of 10/27. Resection of malignant tumours was indicated in 19/37 (51%) patients.

**Results** : All patients but three (deceased for metastatic cancer disease) are alive and well after a median follow-up of 20 months (range 8-46). Liver cell adenomas (72%) were the main indication between benign tumours and colorectal liver metastases (84%) were the first indication in malignancy. One case of live liver donation was performed. Sixteen patients (43%) had a previous abdominal surgery whereas 3 (8%) had a LLS combined to bowel resection. The median operation time was of 195 min. (115-300) and the median blood loss was of 50 ml (0-500). No transfusions were required. Mild to severe steatosis was noticed in 7 (19%) patients and aspecific portal inflammation in 11 (30%). A median free-margin of 3 mm (3-27) was achieved in all cancer patients. Overall recurrence rate in colorectal liver metastases was of 7 (44%) but none recurred at the surgical margin. No conversion to laparotomy was recorded and the overall morbidity was of 8.1%. The median hospital stay accounted for 6 days (2-10).

**Conclusion** : Laparoscopic left lateral sectionectomy without portal clamping can be safely performed in patients with benign and malignant liver diseases accounting for minimal blood loss and overall morbidity, free resection margins and a favourable outcome. As ultimate step of learning curve, laparoscopic LLS could be routinely proposed potentially increasing the donor pool in living-related liver transplantation.