review the diagnosis of de novo AIH in adult liver transplanted pts followed at our Center.
Methods: We included all the 130 adult pts (107 male; median age 54 yrs, range 16–66) who underwent cadaveric liver transplantation (LT) from 1988 to 2005 and were followed up at our Center. The indication for LT was viral hepatitis in 102 pts, alcoholic disease in 14, cryptogenic cirrhosis in 6 while AIH, hepatic fibrosis, Wilson disease, Caroli disease, Budd-Chiari syndrome and fulminant hepatic failure accounted for 1 pt each.
Results: Ten pts (4 male; median age 58.5 yrs) of 130 (7.7%) developed a form of otherwise unexplained graft dysfunction characterized by histological and serological findings of AIH after a median period after LT of 63 mo (range 9–144). Among them, 6 were transplanted for HCV cirrhosis, 3 for cryptogenic and 1 for alcohol related cirrhosis. All 10 pts showed liver tests abnormalities associated to mononuclear-cell infiltrate invading the limiting plate at liver biopsy. Antinuclear antibodies were detected in 5 pts, smooth muscle antibodies in 2, neutrophil cytoplasmic antigens antibodies in 1, while 2 pts showed anti-thyroid antibodies. The AIH scoring system was probable in 9 pts and definite in 1. Pts were treated with prednisone and azathioprine or mycofenolate, with regression of liver test abnormalities in 9. Reviewing cryptogenic cirrhosis, AIH scoring system probable in 2 pts and definite in the other (unrecognized AIH ab initio); all HCV pts developed features of de novo AIH during or soon after the treatment with pegylated interferon.
Conclusions: In our experience, in 9/10 pts previously labelled as de novo AIH a iatrogenic trigger or an understimated pre-LT disease was detectable: these results suggest to better characterize the cases currently defined as "de novo" AIH in post transplant setting.

148 HRAR SCALE, PSYCHIATRIC COMORBIDITIES AND THE SIX MONTH ABSTINENCE RULE AS PREDICTORS OF HARMFUL ALCOHOL RELAPSE AFTER LIVER TRANSPLANTATION

A. De Gottardi[1], L. Spahr[1], P. Gelez[2], I. Morard[1], G. Mentha[3], P. Majno[3], Ph. Morel[3], A. Hadengue[1], P. Paliard[4], O. Boillot[4], E. Giostra[1,3], J. Dumortier[1,4]. [1]*Department of Gastroenterology and Hepatology;* [2]*Division of Psychiatry;* [3]*Departments of Visceral and Transplantation Surgery, University Hospital, Geneva, Switzerland;* [4]*Liver Transplantation Unit, Hôpital Edouard Herriot, Lyon, France*
E-mail: andrea.degottardi@hcuge.ch

Background and Aims: The outcome after liver transplantation (LT) for alcoholic liver disease can be affected by relapse into heavy drinking. The aim of our study was to identify factors that could predict the recurrence of significant alcohol consumption after LT.
Methods: In the transplantation centres of Geneva (Switzerland) and Lyon (France), 387 patients were transplanted between 1989 and 2005 for alcoholic cirrhosis. Mean age was 51.3 7.5 y, 23.8% were women. Mean follow-up was 61.2 7.5 months. Relapse of alcohol consumption after LT was 11.9%. Duration of alcohol abstinence before LT, delay between listing and LT, psychiatric co-morbidities (anxious or depressive disorders) and High-Risk Alcohol Relapse (HRAR) score were analyzed in univariate analysis, together with demographic data. Multivariate logistic regression using factors that were significant in univariate analysis was finally performed.
Results: Relapse into harmful drinking – defined as a declared alcohol consumption over 40 g/day, associated with the presence of physical or mental alcohol-related damage – resulted in univariate analysis significantly associated with age >50 years ($p = 0.04$), duration of abstinence <6 months ($p = 0.02$), presence of a life partner ($p < 0.05$), psychiatric comorbidities ($p < 0.001$) and HRAR score >3 ($p < 0.001$). Relapse was 6.6% in patients without psychiatric comorbidities and up to 69.6% in patients with anxious troubles ($p < 0.001$). Using multivariate logistic regression, duration of abstinence <6 months ($p = 0.03$), psychiatric comorbidities ($p < 0.001$) and HRAR score >3 ($p = 0.001$) were independent factors of relapse. The presence of 1, 2 or 3 of these factors was associated with a relapse in 17.8%, 63.6% and 100% of patients, respectively. Patients without these risk factors relapsed in 4.8%.
Conclusions: The combination of an elevated HRAR score with a psychiatric comorbidity and an abstinence period of less than 6 months, might predict relapse. These findings, while waiting to be independently validated, provide additional parameters to predict return to heavy drinking and will likely contribute to ameliorate our practice.

149 COMPLICATIONS IN LIVING LIVER DONOR ACCORDING TO CLAVIEN'S CLASSIFICATION: AN EUROPEAN EXPERIENCE

A. De Roover[1], O. Detry[1], N. Meurisse[1], C. Coimbra[1], J.P. Squifflet[1], M.H. Delbouille[1], M.F. Hans[1], J. Monnard[1], J. Delwaide[3], A. Kaba[2], J. Joris[2], M. Meurisse[1], P. Honore[1]. [1]*Department of Liver Surgery and Transplantation;* [2]*Department of Anaesthesiology and Intensive Care;* [3]*Department of Hepatogastroenterology, University of Liege, CHU Sart Tilman B35, Liege, Belgium*
E-mail: Oli.Detry@chu.ulg.ac.be

Aim: Living donation has been proposed as a way to partly overcome the actual organ donor shortage. For liver transplantation in adults, living donation is a risky procedure, especially for the right lobe donors. The authors evaluated their experience in live liver donation with classification of the donor complications according to the widely accepted Clavien's scale (Ann Surg 2004; 240: 205).
Methods: Sixteen living liver donations for adult recipient (14 right lobes, 2 left lobes) were performed during a 5 year-period in an European centre. All the donors and the recipients were prospectively followed. A systematic abdominal CT scan was performed before discharge. Blood analyses were performed at regular intervals. No patient was lost to follow-up. Definitions for each grade in the system are: grade I, deviation from the normal postoperative course but without the need for therapy; grade II, complication requiring pharmacologic treatment; grade III, complication with the need for surgical, endoscopic or radiological intervention (IIIa/b: without/with the need for general anesthesia); grade IV, life-threatening complication requiring intensive care; grade V, death.
Results: Surgical morbidity was recognized in 7 donors (43%). No deaths occurred. The numbers of patients with complications were: grade I, 0 (0%); II, 4 (chronic pain, blood transfusion, chronic portal vein occlusion, urinary infection) (24%); IIIa, 2 (bilioma, pleural effusion, both treated percutaneously under local anaesthesia) (12%); IIIb, 2 (incisional hernia, laparotomy for hemorrhage) (12%); IV, 0; V, 0.
Conclusion: Clavien's system is a useful tool to classify the complications after live liver donation. This experience confirms that living liver donation is not a benign procedure, but most of the postoperative complications may be successfully treated without sequel if diagnosed early.

150 CADAVERIC WHOLE LIVER TRANSPLANTATION FOR NON-ACETAMINOPHEN FULMINANT HEPATIC FAILURE: A 20-YEAR EXPERIENCE

O. Detry[1], A. De Roover[1], C. Coimbra[1], J.P. Squifflet[1], J. Delwaide[3], A. Kaba[2], J. Joris[2], M.F. Hans[1], MH. Delbouille[1], J. Monnard[1], J. Belaiche[3], M. Meurisse[1], P. Honore[1]. [1]*Department of Liver Surgery and Transplantation;* [2]*Department of Anaesthesiology and Intensive Care;* [3]*Department of Hepatogastroenterology, University of Liege, CHU Sart Tilman B35, Liège, Belgium*
E-mail: Oli.Detry@chu.ulg.ac.be

Background and Aim: The aim of this study is to report the 20-year experience and the results of liver transplantation (LT) for non-acetaminophen fuminant hepatic failure (FHF) of a transplant center

working within the Eurotransplant allocation system in order to assess the long-term results of LT in these instable patients.
Methods: Amongst 345 LT, 29 (8%) were performed for FHF. All patients reached the established criteria for bad prognosis as established by the Clichy' s group. All patients underwent standard medical therapy. Patients in encephalopathy stage III were intubated for airway protection, if necessary. Continuous veno-venous hemofiltration was used for renal support. No patient underwent intracranial pressure monitoring. All surviving patients were regularly controlled at the out-patient clinic and none was lost to follow-up. Mean follow-up was 101 months.
Results: Most frequent causes of FHF were HBV (38%) and drug-related (17%). Three patients were in encephalopathy stage II, 10 in stage III and 16 in stage IV, at time of LT listing. Mean factor V level was 16% (range: 5–31%). Mean waiting time between listing for HU LT and availability of a liver graft was 23 hours (range: 4–49 hours). One-month, one-, five- and ten-year patient survival was 79%, 72%, 68% and 68%, respectively. Causes of early death were mainly multiple organ failure and primary non-function. One-month, one-, five- and ten-year graft survival was 69%, 65%, 51% and 38%, respectively. Causes of retranplantation were mainly ABO incompatibility of the first graft and primary non-function. One patient develops brain death during the peritransplant period and one has neurological sequelae. All the other surviving patients have a very good quality of life, with two young HBV patients having three children posttransplant. One HBV patient developed HBV recurrence despite HBIG prophylaxis.
Discussion. This experience showed that excellent long-term survival may be obtained in FHF patients that reach the Clichy's criteria, at a price of a high rate of retransplantation.

151 BLOODLESS CADAVERIC LIVER TRANSPLANTATION: EXPERIENCE WITH JEHOVAH'S WITNESS RECIPIENTS

O. Detry[1], A. De Roover[1], C. Coimbra[1], J.O. Monnard[1], M.F. Hans[1], M.H. Delbouille[1], A. Kaba[2], J. Joris[2], J.P. Squifflet[1], J. Delwaide[3], M. Meurisse[1], P. Honore[1]. *[1]Department of Liver Surgery and Transplantation; [2]Department of Anaesthesiology and Intensive Care; [3]Department of Hepatogastroenterology, University of Liège, CHU Sart Tilman B35, Liège, Belgium*
E-mail: Oli.Detry@chu.ulg.ac.be

Background and Aim: Modern medical management is marked by a trend to a decreased use of blood products or to transfusion-free strategies. In liver transplantation (LT), the use of blood products (red cells, platelets, plasma components) was reduced these last ten years due to better medical and surgical management, but the interest of transfusion-free LT is debated. The authors developed a transfusion-free LT program for Jehovah's witnesses (JW), and analysed its outcome to evaluate the potential interest of bloodless strategies in LT for the JW and non-JW LT recipient population.
Methods: Over an 8-year period, 15 selected JW underwent LT in the authors' department, including 5 right lobes living related LT and one pediatric LT. We analysed herein the outcome of the 9 adult patients (4 males, 5 females, mean age: 48 years) who underwent cadaveric whole LT. They received preoperative erythropoietin therapy, with iron and folic acid to increase preoperative haematocrit (Ht). A cell saving system was used during the surgical procedures. No patient was lost to follow-up (mean: 48 months).
Results: No blood product was used in the whole follow-up. During the operative procedure a mean of 1.190 ml (range: 300–2.600 ml) were scavenged by the cell-saving system, allowing the reinfusion of a mean of 422 ml (range: 0–1000 ml) of concentrated red cells. Due to preparation, Ht level rose from 38.3±1.9% at first visit, to 44.3±1.8% just before LT ($p < 0.05$). Postoperative day 1 mean Ht was 34.4±1.9%, significantly lower than the pre transplant level ($p < 0.05$), and further decreased during the post transplant period (mean lowest Ht: 31.2±1.9%, $p < 0.05$). Mean Ht at discharge was 34.1±2.1%. No patient experienced complication linked to anemia. Graft and patient survival is 100% at follow-up.
Conclusions: These excellent results justify the development of a bloodless LT program for JW patients. They also raise questions on the interest of a randomised evaluation of bloodless strategies in non-JW patients undergoing LT.

152 CHANGES IN DONOR DEMOGRAPHICS AND THE USE OF MARGINAL LIVER GRAFTS FOR TRANSPLANTATION IN THE UNITED KINGDOM

L.R. Devey[1], P.J. Friend[2], J.L.R. Forsythe[3], S.J. Wigmore[1]. *[1]Liver Research Laboratory, University of Birmingham, Birmingham; [2]Nuffield Department of Surgery, John Radcliffe Hospital, Oxford; [3]Scottish Liver Transplant Unit, Royal Infirmary of Edinburgh, Edinburgh, UK*
E-mail: science@devey.net

Aims and Background: The sequelae of ischaemia reperfusion injury (IRI) in liver transplantation range from primary non-function to early graft failure. Organs at higher risk of this complication are termed "marginal", and include livers from older donors, those with longer ischaemic times, or steatotic organs.
Methods: Prospectively collected records concerning 7315 liver offers, 6540 retrievals and 6127 transplants in the UK from 1996–2006 were reviewed in detail.
Results:

1. An increasing gap between supply and demand. Annual waiting list registrations rose from 719 to 934 over the time period whereas the total number of transplants fell from 666 to 601. The number of patients who died or were removed from the waiting list due to deterioration increased from 69 in 2001–2 to 122 in 2005–6.
2. Donors are becoming older. The mean age of liver donors rose 5.8 (3.6–8.0) years from 38.6 to 44.4. This was partly attributable to a reduction in the numbers of donors dying through road traffic accidents (1996–7 117 donors, 2005–6 63 donors, mean age 26 years), and partly due to a rise in of 4.6 (2.7–6.4) years in the mean age of intracranial haemorrhage donors.
3. Fewer donor organs are useable for transplantation. The proportion of livers used for transplantation fell from 81% to 78% of those offered for retrieval. The number of organs not used due to "marginal status" increased from 41.7 to 54.7 ($p = 0.05$).
4. Intrinsic quality control. There was no change in the degree of steatosis of implanted livers over time. The rate of primary non-function was constant at 1.8%. Recipients of "moderately steatotic" organs were exposed to an additional absolute risk of 2.4%, equating to a number needed to harm of 42 patients.

Discussion: The number of organs useable for liver transplantation is decreasing. Despite this, quality of implanted organs is maintained, and the rate of primary non-function is constant. Given the small additional risk of primary non-function, the use of marginal organs might be justified. Intention to treat analysis of liver transplant schemes might reward more efficient use of organs.