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SATELLITE NODULES ARE A PREDICTIVE FACTOR FOR HEPATOCELLULAR CARCINOMA (HCC) RECURRENCE AFTER LIVER TRANSPLANTATION IN SELECTED PATIENTS WITH CIRRHOSIS. Aurélie Plessier, Liana Codes, Yann Consigny, Daniele Sommacale, Federica Dondero, Valérie Vilgrain, Claude Degott, Francois Durand, Valérie Paradis, Jacques Belghiti, Hôpital Beaujon, Clichy, France

Background: In patients with cirrhosis and hepatocellular carcinoma (HCC), liver transplantation is the treatment achieving the best results, provided strict selection criteria are used. However, recurrence still occurs in about 20% of patients. **Aims:** To assess the predictive factors for recurrence in patients listed for transplantation while accounting for widely accepted selection criteria (1 nodule < 5 cm, or 3 nodules or less < 3 cm). **Patients:** 69 consecutive patients receiving a liver transplant for HCC developed in a cirrhotic liver, and followed-up for at least 3 months were studied. They were transplanted between June 1991 and December 2001. There were 59 males and 10 females, with a mean age of 52+/-4 years. 59 of the 69 patients (86%) met selection criteria at the time of listing, and 10 did not (4 patients had more than 3 nodules, 5 had 2 or 3 nodules > 3 cm, and 1 had 1 nodule > 5 cm). Pre-transplantation therapy for HCC was performed in 43/69 (62%) patients (chemo-embolisation in 11 (16%), percutaneous ablation in 26 (28%) and both in 6 (9%)). In 7 of the 10 patients not fulfilling the criteria at the time of listing, therapy allowed to reach these criteria at the time of transplantation, as assessed by repeated magnetic resonance or computed tomography with contrast injection. **Methods:** Overall survival, disease-free survival and recurrence curves were assessed by the Kaplan-Meier method. Univariate analysis of time to recurrence with a log rank test was made to assess predictive factors of recurrence, using the following variables: characteristics of the tumor at registration and on the explanted liver, alpha fetoprotein levels, microvascular invasion, satellite nodules, capsule invasion, complete tumor necrosis, and tumor differentiation grade. **Results:** On the explanted liver, the selection criteria were not fulfilled in 14 patients who spent 4+/-5 months on the waiting list. HCC recurrence was observed in 7 patients, 6 of whom died. The mean time from transplantation to recurrence and from recurrence to death was 10+/-4 months and 4+/-5 months, respectively. The mean 5-yr overall survival, disease-free survival and recurrence rates were 59%, 52% and 12%, respectively. The number of recurrence according to the selection criteria are presented in the table. In univariate analysis, only presence of satellite nodules had a significant prognostic value ($p=0.0001$) for recurrence. As no recurrence was observed in the group with no satellite nodules, no relative risk could be estimated by a Cox model. The presence of satellite nodules was significantly associated with microvascular invasion (chi-square test, $p=0.01$). **Conclusion:** The selection criteria commonly used for LT and HCC lacked predictive value for recurrence. However, the presence of satellite nodules on the explant were highly predictive of recurrence. Therefore, in order to increase the eligibility of patients with HCC to LT without impacting on the outcome, techniques allowing to identify these satellite nodules should be developed.

Number of recurrences according to selection criteria at listing and in the explanted liver

Selection criteria at listing	Criteria in the explanted liver	Recurrence
Fulfilled 59/69 (86%)	Fulfilled 38/59 (64%)	2
	Not fulfilled 21/59 (36%)	4
Not fulfilled 10/69 (14%)	Fulfilled 7/10 (70%)	1
	Not fulfilled 3/10 (30%)	0

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INTEREST OF THE POST-TRANSPLANT SURVEY IN PATIENTS TRANSPLANTED FOR CRYPTOGENIC CIRRHOSIS. Founda Yilmaz, Jean-Charles Duclos-Vallée, Catherine Johanet, Anne-Marie Roque-Afonso, Michelle Gigu, Cyrille Ferry, Marie-Anne Petit, Jean-Francois Emile, Mylene Sebagh, Elisabeth Dussaix, Paul Prousse Hospital, Villejuif, France; Michel Reynes, Paul Brousse Hospital, Villejuif, France; Henri Bismuth, Didier Samuel, Catherine Guettier, Paul Prousse Hospital, Villejuif, France

Cryptogenic cirrhosis (CC) represents 5 to 30% of cases with cirrhosis. In series from North America, 50 to 70 % of CC are related to nonalcoholic steatohepatitis (NASH). In European series the proportion of NASH among CC remains unclear. The aim of the study was to find out retrospectively an etiological diagnosis by reviewing the pre- and post-liver transplantation (LT) course in our patients transplanted for CC. **Methods:** Since 1987, LT was carried out in 30/881 recipients who met criteria for an initial diagnosis of CC: no history of alcohol intake; anti-nuclear antibodies (Ab), smooth muscle Ab, anti-mitochondrial Ab and serological markers for hepatitis B and C viruses negative. Indication for LT was: Child C cirrhosis (27 patients), hepatocellular carcinoma on cirrhosis (2 patients) and hepatopulmonary syndrome (1 patient). For all patients, clinical and biological data were reviewed and completed. Specimens from native livers and all post-LT allograft biopsies including 1, 2, 5 and 10-year protocol and additional biopsies were reviewed. **Results:** Among the 30 cases included in the initial group, three cases were excluded (one for story for alcohol intake, one for focal preS1 and HBs Ag positivity on the native liver, one for the absence of cirrhosis on the native liver). The remaining 27 patients were 16 males and 11 females, with mean age 44.8 +/- 13.6 years. The clinicopathological analysis revealed out four main groups of patients: (i) cases with features of NASH (n=2), one of whom showed histological recurrence after LT, (ii) cases of incomplete septal cirrhosis (ISC) with vascular lesions (n=4), (iii) cases in whom the diagnosis of autoimmune hepatitis (AIH) was highly suspected (n=11), either by occurrence of a post-transplant hepatitis (n=9) with histological features highly suggestive of AIH (n=5), or by detection of autoAbs in post-LT period (n=6); (iiii) cases without any clinicopathological clues (n=10) either on the native liver or post-LT period. **Conclusions:** CC represent 3.5% of LT indications in our centre. NASH accounts only for a small fraction (7%) of our patients transplanted for CC. Definitive or highly probable diagnosis of AIH was made in about 40% of cases in this series, mainly from the clinicopathological study of post-LT period. The clinicopathological study of post-LT period allowed the definitive or highly probable diagnosis of AIH in about 40% of cases in this series. For 37% of the patients, the etiology of cirrhosis remains undetermined.

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LIVER TRANSPLANT IN JEHOVAH'S WITNESSES. Olivier Detry, Dpt of Transplantation, University of Liège, CHU Sart Tilman B35, Liège, Belgium; Arnaud De Roover, Jean Delwaide, Jean Joris, Pierre Damas, Abdour Kaba, Michel Meurisse, Pierre Honore, University of Liège, Liège, Belgium

Background: For religious reasons, Jehovah's witnesses (JW) refuse transfusions of any blood product, including autologous or homologous predonated blood, platelets, fresh frozen plasma, coagulation factor concentrates. However they may accept solid organ transplantation. In this paper the authors present their experience of liver transplantation (LT) in JW. **Methods:** In a 3 year period, 18 JW patients were evaluated for LT. A hematocrit of 40% and a platelet level of 50.000/mm3 were considered as the minimal acceptable levels for LT. All patients received perioperative iron supplementation and erythropoietin. Two patients had percutaneous spleen embolisation to increase platelet level. High dose aprotinin was given during LT to limit fibrinolysis and meticulous surgical hemostasis was achieved using argon beam coagulation. Continuous circuit cell salvage and reinfusion whereby scavenged blood was maintained in continuity with the patient's circulation, was used. Veno-venous bypass was avoided during LT to minimize the coagulation disorders. Two patients received recombinant factor VIIa during liver dissection and at reperfusion. **Results:** Five patients were not considered for LT for various reasons. 13 were accepted but 4 died from complications of liver failure while they were in administrative and medical preparation for LT, before being listed. They had been looking for a center accepting to transplant them since more than 6 months and were in CHILD C when seen in the authors' center. Two did not get approval from their health care system to get LT in the authors' center and were not transplanted in their own country, as they did not find any center agreeing to transplant them. Seven patients were listed for LT and were successfully transplanted. Four of them were in CHILD C. Five received a cadaveric liver graft and 2 a right lobe from a live related donor. All adult patients were treated according to the patients' beliefs. One 6-y-old child received one unit of blood 15 days after LT, because of symptomatic deep anemia secondary to peritonitis due to perforated gastric ulcer. All patients are alive and well at follow-up. **Conclusion:** LT may be successful in carefully prepared JW patients who should not be a priori excluded from this life saving procedure.

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EXPERIENCE OF TRANSPLANT TEAM: A REAL IMPACT FACTOR ON PATIENT SURVIVAL IN LIVING RELATED RIGHT LOBE LIVER TRANSPLANTATION. Zeki Karasu, Yaman Tokat, Yildirim Yuzer, Elif Lebe, Fulya Gunsar, Galip Ersoz, Ulus Akarca, Murat Kilic, Murat Zeytinlu, Yucel Batur, Ege University, Izmir, Turkey

Since there is a critical shortage of cadaveric livers available for transplantation, living donor liver transplantation (LDLT), especially for adults is getting more popular. The right-lobe graft has become preferred option over the left lobe, because of availability of more hepatic mass, and better anatomic position for biliary and vascular surgery. However, LDLT operation is a very complex procedure and a learning curve is to be expected for all members of transplant team. **Patients and methods:** From September 1998 to May 2002, 46 adult-to-adult right-lobe LDLT were performed at Ege University Medical School Hospital, with increasing frequency over time. Patient records were retrospectively reviewed for recipient survival, and graft survival. **Results:** Of the 46 patients, 36 were male. Median age was 43 (range 17-60). According to United Network for Organ Sharing (UNOS) status, 2 patients were status I with a diagnosis of fulminant hepatic failure, 19 recipients were status IIA, and 25 were status IIB at time of transplantation. Mean follow up was 8.1 months. If the patients subdivided as 18 patients who are transplanted earlier and 28 patients transplanted later, 1-year survival rate was 72% and 92% respectively. There was 5/18 and 2/28 early patient lost in earlier and later transplanted group respectively. Since there was no chance to find second organs for those patients who lost their organs (and also their lives), patient and graft survival rates were the same. Donor survival rate was 100% and all donors returned to normal activity. **Conclusion:** Our results suggest that 1) LDLT can be a safe and effective procedure, decreasing the waiting-list mortality problem while freeing organs for the other recipient candidates not having potential living donors, especially in countries, like ours, experiencing difficulties in finding cadaveric donors, 2) There is a learning curve with this complex procedure, 3) Increased dissemination of information and experience from experienced centers to other institutions may shorten that learning curve.