Fifth Annual BHIVA Conference for the Management of HIV/ Hepatitis Co-infection



# Dr James O'Beirne Royal Free Hospital, London

Wednesday 3 October 2012, One Great George Street Conference Centre, London

Fifth Annual BHIVA Conference for the Management of HIV/Hepatitis Co-Infection *in collaboration with BASL and BVHG* 



# Dr James O'Beirne Royal Free Hospital, London

COMPETING INTEREST OF FINANCIAL VALUE <u>&gt;</u> £1,000:			
Speaker Name	Statement		
James O'Beirne	None		
Date	22 September 2012		

Wednesday 3 October 2012, One Great George Street Conference Centre, London

#### "HIV-1-positive patients co-infected with Hepatitis C should be excluded from liver transplant

#### programmes"

# Against the motion

Dr James O'Beirne Consultant Hepatologist and Honorary Senior Lecturer UCL Institute of Liver & Digestive Health Royal Free Hospital

FIFTH ANNUAL BHIVA CONFERENCE FOR THE MANAGEMENT OF HIV/HEPATITIS CO-INFECTION

Wednesday 3rd October 2012



"We believe that HIV-positive individuals with wellcontrolled HIV disease and ESLD, regardless of the aetiology, should be considered for LT"

#### Liver Transplantation in Human Immunodeficiency Virus-Positive Patients

Deepak Joshi,<sup>1</sup> John O'Grady,<sup>1</sup> Chris Taylor,<sup>2</sup> Nigel Heaton,<sup>1</sup> and Kosh Agarwal<sup>1</sup> <sup>1</sup>Institute of Liver Studies, King's College Hospital, Denmark Hill, London, SE5 9RS, UK and <sup>2</sup>Department of HIV Medicine, King's College Hospital, London, United Kingdom



### The need for LT in HCV/HIV Co-infected patients

- 1/3<sup>rd</sup> of HIV+ve patients in UK & US infected with HCV
- Since the advent of cART liver disease is the leading cause of death in hospitalised patients with HIV
- HIV accelerates the course of HCV infection
- HCV cirrhosis and HCC is increasing in HIV+ve patients

# Controlled HIV infection is NOT a contraindication to Liver Transplantation

Puoti, M., Rossotti, R., Garlaschelli, A. & Bruno, R. Hepatocellular carcinoma in HIV hepatitis C virus. CurrOpin HIV AIDS 6, 534–538 (2011). Lacombe, K. & Rockstroh, J. HIV and viral hepatitis coinfections: advances and challenges. Gut 61 Suppl 1, i47–58 (2012).

# UK Liver Transplant – number of transplants and number on waiting list



# Outcome of patients wait listed for Liver transplant in the UK





#### Who should get a liver transplant?

"Where the risk of death without a liver transplant is greater than the risk of death from transplantation"

"Where transplantation is likely to result in a 50% chance of > 5 year survival with a quality of life acceptable to the patient"

Neuberger, J. & James, O. Guidelines for selection of patients for liver transplantation in the era of donor-organ shortage. Lancet 354, 1636–1639 (1999).

#### Liver Transplantation in HCV co-infection



### Outcomes of HCV/HIV Liver Transplantation in recent cohorts – what can we learn?

- 27 HIV+ve patients undergoing LT (17 with HCV, 2012 n=26)
- 37% HCC
- Median Age 45 years
- MELD at LT = 15
- Median donor age 48 years • 100 93 100 90 78 7676 80 ٢N 68 Low MELD at listing and LT 70 60 Younger donors 60 1 yr 50 🗖 3 yr 40 30 5 yr 20 10 Baccarani, U., Scudeller, L., Adani, G. L., Viale, P. & Tavio, M. Is liver HCV transplantation feasible in patients coinfected with human immunodeficiend HIV/HCV HIV/HCV virus and hepatitis C virus? Liver Transpl 18, 744 2012

### **Outcomes of HCV/HIV Liver Transplantation** in recent cohorts – what can we learn?

- Prospective multicentre cohort study
- 84 HCV/HIV co-infected LT patients 2002-2006 matched with non-• **HCV** controls
- Majority Genotype 1 ٠
- MELD at listing 15 MELD at LT 16 •
- **DRI 1.4**
- Donor age (median) 52

**Biopsy proven rejection** 38% HCV/HIV 20% HCV



recipients: a prospective and multicenter cohort study. Am J Transplant HCV/HIV 12, 1866–1876 (2012).

# Outcomes of HCV/HIV Liver Transplantation in recent cohorts – what can we learn?

- Exp ([(0.81966\* if genotype = 1] + [0.05748\* MELD pre-OLT] + [1.03540 if center <1 OLT in HIV-infected patients/year])</li>
- Risk score cut-off of 1.07795 classified the 84 recipients as having a low risk (n = 60 patients, 69%) or a high risk of death (n = 24 patients 31%)



Miro, J. M. et al. Outcome of HCV/HIV-coinfected liver transplant recipients: a prospective and multicenter cohort study. Am J Transplant 12, 1866–1876 (2012).

# Outcomes of HCV/HIV Liver Transplantation in recent cohorts – what can we learn?

Â

- Prospective study 89 patients 2003-2010
- 2 control groups
  - Matched
  - High risk group (>65 years old)

	HCV/HIV	HCV
Age	49	54
BMI	25	28
MELD@LT	20	20
HCC %	30	30
Genotype 1 %	80	80
Donor Age	37	42
NHBD %	17	4

Terrault, N. A. et al. Outcomes of liver transplant recipients with hepatitis C and human immunodeficiency virus coinfection. Liver Transpl 18, 716–726 (2012).

# Outcomes of HCV/HIV Liver Transplantation in recent cohorts – what can we learn?

## Multivariate analysis of factors associated with mortality:

CLKT BMI<21 Anti-HCV positive donor Older donor age

In patients without these risk factors survival no different to HCV patients >65 yrs

Terrault, N. A. et al. Outcomes of liver transplant recipients with hepatitis C and human immunodeficiency virus coinfection. Liver Transpl 18, 716–726 (2012).



Biopsy proven rejection 39% HCV/HIV 24% HCV



#### Optimising the outcome of HCV/HIV Liver Transplantation – lessons learned

- Younger donors
  - LDLT
  - Amyloid donors
- Avoid high DRI livers
  - DCD
  - HCV ab positive
- Avoid rejection
  - Drug interactions
  - New cART regimens
- No CLKT
- Transplant early
  - Lower MELD
  - Better nutrition
- Experienced centres



1842

THE NEW ENGLAND JOURNAL OF MEDICINE

Dec. 16, 1993

#### LIVER TRANSPLANTATION IN EUROPEAN PATIENTS WITH THE HEPATITIS B SURFACE ANTIGEN

DIDIER SAMUEL, M.D., RAINER MULLER, M.D., GRAEME ALEXANDER, M.D., LUIGI FASSATI, M.D., Béatrice Ducot, M.D., Jean-Pierre Benhamou, M.D., Henri Bismuth, M.D., and the Investigators of the European Concerted Action on Viral Hepatitis Study\*