



Liver F.O.C.U.S

Factual, Open, Current, Useful, Straightforward

Welcome to the second edition of *Liver Focus!* Published twice yearly it will **inform** you about the research taking place into liver disease at the National Institute for Health Research (NIHR) Birmingham Liver Biomedical Research Unit (BRU) based at the Centre for Liver Research. This newsletter provides **updates** on the progress of studies and **highlights** research activities with the aim to cut through the medical jargon and give useful information in plain English.

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Being an organ transplant recipient can literally change your life

Written by Alan Hyde, PPI member and Liver Transplant Recipient



Alan Hyde before, and 14 Months after a liver transplant

The loss of a loved one is heartbreaking, but knowing that others could benefit from their organs may bring some comfort. I was the recipient of a liver transplant 12 years ago and know very well how a transplant changes lives. At the time of diagnosis I had been given less than 2 years to live. What life were my wife and 9 year old son going to have without me? Thankfully, a suitable donor was found and I underwent a liver transplant which has transformed my world beyond all recognition.

Words cannot express my feelings and gratitude for what has been done for me. I have seen my son grow up and family life restored to normal. I wake up in the morning and am once again able to do the things I took for granted. I know the difference that donated organs can make but some people never get the chance to receive one and die whilst waiting for a suitable donor.

At present there are over 7500 people waiting for suitable transplants and medical advancements have increased the numbers of people that can benefit. Unfortunately, over 400 people a year die whilst waiting for a suitable transplant. Most donated organs and tissues come from people who have died, however, a living person can donate some organs. Blood, stem cells and platelets can also be donated.

Every day I think of my donor without whom I would not be here today. If you needed a transplant to save your life or to give you a better quality of life, would you

accept the gift? If the answer is yes and you are willing to receive, why not be willing to give?

Organ Donation is the greatest legacy you will ever leave behind. **Please** join the organ donor register.

To read Alan's full story visit:

www.AFHLiverTransplantSupport.co.uk

For more information on donation visit:

www.UKTransplant.org.uk

For liver information visit

www.birmingham.ac.uk/liver or

www.britishlivertrust.org.uk

WHAT IS HEPATITIS?

A Quick Guide *Written by Catherine O'Donnell
Clinical Nurse Specialist*

Hepatitis means inflammation of the liver and there are many causes. Viral hepatitis is caused by a virus that attacks the liver causing it to become inflamed. There are several types of viral hepatitis; the most common are hepatitis A, B, and C. Hepatitis B and hepatitis C can lead to long term liver damage, cirrhosis (scarring of the liver) and liver cancer.

Hepatitis A is spread by direct contact with an infected person's faeces or by contaminated food or water. Hepatitis A will cause a short term illness (under six months) and does not lead to long term infection of the liver. Once a person has recovered from the infection they will then have natural immunity against the hepatitis A virus.

The World Health Organisation (WHO) estimates that there are 350 million people who carry the **hepatitis B** virus worldwide. Hepatitis B is infectious and can be spread by blood and body fluids. Globally the most common way to transmit the virus is from mother to baby at the time of birth. Following delivery, babies can be protected against hepatitis B by vaccine. It is very important that close family members of anyone infected are offered screening and vaccination for hepatitis B.

In the United Kingdom, having unprotected sex or sharing intravenous drugs and equipment are the most common ways of spreading the hepatitis B virus. Most people who have hepatitis B will not know they have the

infection or when they acquired it. Not all patients with hepatitis B need to have treatment. However, they should be seen by a specialist on a regular basis to monitor the infection with a blood test.

It is estimated that 170 million people worldwide have **hepatitis C** infection and within the UK it is estimated that 400,000 people carry the virus. It is transmitted by blood to blood contact and can be spread by: **Blood transfusion** before 1991, **intravenous drug use, using infected needles or equipment** (for drug use, tattoos or body piercing), **sexual activity** (low risk) and it can also be transmitted from **mother to baby** (low risk).

Like hepatitis B, hepatitis C can cause liver cirrhosis and may lead to liver cancer. Most people do not know they have caught hepatitis C as the signs and symptom at the time of acquisition of viral hepatitis are similar to having a cold. Most people find out they have the virus when they are undergoing investigations for other medical problems or when they ask their doctor for a blood test.

Hepatitis C is a curable liver disease but treatment is not successful for everyone. There have been some very promising new drug developments in hepatitis C treatment. These new drugs are used with interferon and ribavirin which give the patient a better chance to clear the virus. These new drugs come with difficult side effects and close monitoring is very important.

Successful treatment does not offer the patient immunity and they can become infected with hepatitis C again if they put themselves at risk.

What clinical trials are currently taking place relating to Hepatitis?

Here is a clear introduction to one of the current studies taking place at NIHR Birmingham Liver BRU.

Trial Title: ITherix

Technical Description: *A Phase I Study of Hepatitis C Virus (HCV) Entry Inhibitor (ITX 5061) in Liver Transplant Recipients with HCV infection*

Hepatitis C virus (HCV) infection is common and often damages the liver. It can cause the liver to fail and can also cause the development of liver cancer. This is a reason why some patients need a liver transplant. It is known however that after liver transplant, the virus infects the transplanted liver and indeed infection occurs in the first two days after the operation.

There is currently no treatment available to prevent this re-infection although some patients are offered antiviral treatment drugs to eliminate the virus at some stage after transplantation. This treatment is more difficult after transplantation than in patients who have not had a transplant and it is frequently ineffective.

ITX 5061 is a new drug that is designed to stop the virus from entering the newly transplanted liver. The main reason for this study is to make sure the new study drug is safe to take and also to see whether it stops the new transplanted liver in patients from being infected with the HCV. This is the first study

of ITX 5061 in patients with liver disease and consequently there is not much information about the effect of giving the drug to these patients. Because we are studying how the virus gets into the transplanted liver we first need to gather more information about the virus in the blood. Therefore, we take blood samples from patients who are just having a liver transplant (control group 1) then we compare the blood results against those patients who will have a liver transplant and the new study drug (group 2). The aim is to include 23 adult patients with HCV who are currently under the care of liver specialists in the Birmingham Liver Transplant Unit.

Group 1 (13 patients) – Participants will receive a liver transplant and will NOT receive the new study drug (ITX 5061).

Group 2 (10 patients) – Participants will receive the new study drug just before the liver transplant then each day for a total of 7 days.

All participants will receive the normal transplant care. Recruitment for this trial is likely to end in summer 2013.

How the study is progressing: As of today 13 patients have received a transplant for Group 1, and 3 patients have received a transplant and the new study drug for Group 2. *To request eligibility information for this study, email: Liverresearch@contacts.bham.ac.uk*

LOVE YOUR LIVER 2012: A national campaign by the British Liver Trust to raise awareness of the liver and promote good liver health throughout the UK



By Dr Andrew Holt, Consultant Hepatologist Liver Unit, Queen Elizabeth Hospital, Birmingham

Sitting on the top floor of a double-decker bus performing FibroScan's on passers-by was proving to be a challenge, not least because the bus's occupants were causing it to sway like a trawler in a force 9 gale. Sea sickness was one problem I hadn't foreseen when I offered to help with the Love Your Liver campaign!

Nausea aside, it was staggering to see the degree of public interest the campaign aroused. People had

travelled considerable distances specifically to get their liver scanned, and the bus was full of passers-by taking advantage of the free information and literature on offer. It was obvious that the campaign had excited the public's curiosity, and the positive message that the campaign sent out seemed well received. Those visiting the Birmingham bus were fascinated to learn about liver health, and keen to understand how they could make the dietary and lifestyle changes necessary to keep their liver in top condition!

In most UK cities liver disease remains a poorly recognised and under-resourced health issue. Campaigns like 'Love Your Liver' play a vital role in improving public understanding of both the importance of liver health and the availability of effective treatments for many liver diseases, and the British Liver Trust has done a fantastic job in raising the profile of liver health through these initiatives.

So here's to the next 'Love Your Liver' campaign – although I'll make sure I strap myself to the rigging the next time I climb the stairs of that bus!

Meet the NIHR Birmingham Liver BRU Patient and Public Involvement Panel (also known as our 'PPI Panel'!)

Have you ever wondered who represents the interests of the patients who participate in clinical trials? Well, you will be relieved to hear that there is a group of volunteers who give up their time and help ensure that trials fully reflect the needs and views of the public, as well as considering the needs of the patient.

Some of these people are liver transplant recipients, some are carers, and some are members of the public who simply have an interest in liver disease and clinical trials. They meet twice a year to learn about the progress of existing trials, discuss planned new trials, increase their knowledge of liver disease through workshops and presentations, find out about liver research undertaken at the NIHR Birmingham Liver Biomedical Research Unit, and they also help to compile Liver FOCUS! They are known as the PPI panel (Patient and Public Involvement) and they do a wonderful job. Thank you!



L-R: **Back Row** Graham Bunch (guest), Kathryn Protheroe, Maureen George, Peter Devine, John Kirby, Alan Hyde, Amross Richards, Kevin MacCabe. **Front Row** John Parkes, Patricia Parkes, Megan Kirby. *Five PPI members were unavailable for this photo – Ian Soady, John Gibbs, Bernard Kelly, Kushall Rugjee and Ron Stratton.*

To enquire about becoming a member of the Birmingham Liver PPI panel, please contact:

Liverresearch@contacts.bham.ac.uk

The Big Bang Fair, NEC, Birmingham

29,000 Energetic Children, 9 Hours Entertaining, 1 Extremely Successful Event!

The NIHR Birmingham Liver Biomedical Research Unit took part in the Big Bang Fair on Saturday 17th March which was held at the NEC. This event is specifically aimed at children aged 5-18 years to show them how exciting science and engineering can be. 29,000 children attended, many of whom were fuelled up on the free sweets which were being given out. Despite it being a very long day for our volunteers, they all said how rewarding it had been and how much fun the visitors seemed to have.

The stand's activities included an 'I'm A Celebrity' style box that children could put their hands in and blindly feel a normal liver compared to a liver with cirrhosis (jelly filled with popcorn feels just like a cirrhotic liver). There was also a tunic with detachable organs that children had to stick back in the correct places and label and a celebrity quiz showing why Homer Simpson may have a liver problem. **Our congratulations to everyone involved in this fun and educational event!**





FOCUS ON: Professor David Mutimer

David is a highly respected Liver Consultant based in Birmingham, this edition we take a closer look at his background and the focus of his work

David Mutimer works in Hepatology and is a Consultant Physician to the Liver Unit at the Queen Elizabeth Hospital. He came to Birmingham in 1989, coincidentally the year of discovery of the hepatitis C virus. Since arriving in Birmingham his clinical and research interests have focused on the management of patients with chronic viral hepatitis, including patients with hepatitis B or hepatitis C infection.

During the 20+ years since his arrival, there have been dramatic developments in the understanding and treatment of chronic viral hepatitis. David has been Principal Investigator or Chief Investigator in more than 50 clinical trials that have evaluated new antiviral treatments. Viral hepatitis is also a very important cause of disease after liver transplantation. Protocols to prevent damage to the transplanted liver by hepatitis B virus have been developed locally and are widely adopted. Ongoing work in this area hopes to prevent and treat hepatitis C damage to the transplanted liver by the use of recently developed and specific antiviral drugs. In 2012 David was conferred the title of Professor in Clinical Hepatology.

Have you ever thought about participating in a clinical trial but were unsure what to expect?

Elaine Chinnery was diagnosed with Primary Biliary Cirrhosis in September 2000. In 2011 she heard about a new trial regarding a possible PBC treatment and 'took the plunge' as a participant.

Since diagnosis Elaine's condition had gradually worsened. She joined the PBC Foundation and regularly met with other sufferers – mainly for moral support but also to find out more information regarding the condition. During a seminar she met Professor James Neuberger, a liver consultant at Birmingham Queen Elizabeth Hospital. Elaine was later referred to his clinics in Birmingham, whilst also continuing to visit a clinic in Llanelli.

The itching, weight loss, exhaustion, infections, yellowing of the skin and irritability that can accompany PBC were starting to take their toll. Through her contact with the Queen Elizabeth Hospital she learned of a clinical research trial involving a possible new treatment for PBC. After enquiring, Elaine received detailed information about the trial. Despite reservations about the distance from her home in Wales to the treatment clinic in Birmingham, and the commitment involved with the trial,

she felt it was something she needed to do that could, potentially benefit her, and also others! After passing the screening tests Elaine's first infusion of the drug took place a week later.

Dr Chris Corbett was running the trial. Diana Hull was Elaine's dedicated nurse, whom Elaine describes as "a real gem". "Diana looked after me, ensured I ate properly, kept me fuelled up on cups of tea and even ensured my travelling expenses were reimbursed. Both she and Dr Corbett answered all my questions and made me feel reassured and relaxed throughout. Each time I attended the clinic I received 'first class' treatment, my needs were completely catered for and thorough examinations were undertaken. My health and welfare was of paramount importance to them. It was incredibly reassuring to know I was being so well looked after and I had the full support of Diana, Dr Corbett and my husband."

Elaine attended the research centre in Birmingham every other week for six infusions of the drug. At the start of the trial she also underwent weekly tests.

Elaine has described her experience of being part of a clinical trial as positive and rewarding. "The itching appears to have stopped and I feel better in myself. I am very glad I took part and would recommend trial participation to anyone in the hope that this research will benefit them, and others."

Do you have PBC? You may be suitable for this clinical trial

The trial that Elaine was involved in is called 'PIANO' which is an acronym for 'Primary Biliary Cirrhosis: Investigating A New Treatment Option using NI-0801, a fully human anti-CXCL10 monoclonal antibody'.

There is a shortage of suitable participants for this trial so we are sending out a request for patients. Here is some more information about the trial.

In PBC damage to the liver is caused by white blood cells that enter the liver and then become activated to attack and destroy the bile ducts. This leads to liver damage and eventually cirrhosis. Work from the Centre for Liver Research in Birmingham has shown that a protein called CXCL10 is particularly important in this process. It is secreted by bile ducts and attracts the white blood cells that cause liver damage. Blocking this should reduce numbers of white blood cells entering the liver and thereby reduce or prevent liver damage.

A Swiss Biotech company called NovImmune has developed an experimental drug which has been found to

be safe in early testing in humans. Profs David Jones from Newcastle and David Adams from Birmingham have worked with NovImmune to design a clinical trial to test the potential of their drug to treat patients with PBC.

The new drug is an antibody; antibodies are proteins that help protect the body from infection and can be "designed" to bind to and inactivate other proteins.

Treatment can be given at several centres throughout the UK and travel costs will be reimbursed for anyone taking part in the trial. Please contact us immediately if you are interested. Liverresearch@contacts.bham.ac.uk.

Who are the Clinical Trials Research Nurses in the NIHR Birmingham Liver Biomedical Research Unit?

Meet the Research Nurses

Senior Research Sister, Emma Burke

Emma is the Senior Research Nurse in Hepatology at the Queen Elizabeth Hospital. She has worked in research for 10 years but came to the liver unit in 2009 to work with Dr Mutimer on viral hepatitis clinical trials. Since then she has set up eight Hepatitis C trials and one Hepatitis B trial, all of which are at various stages of recruitment. The Hepatitis C studies conducted are trials for patients new to treatment, relapsed on treatment, not responding to treatment, and treatment of patients post liver transplant. This exciting portfolio of studies offers patients a potential increased chance of cure by taking part in trials, and hopefully an increased chance of cure for future patients. Emma's details can be found on the Hepatitis C Trust website under clinical trials.

Emma is happily married with two children and a cat named Barney. She loves eating out and spending time with her family.

Work telephone: Tel: 0121 414 8284



Research Sister, Kathryn Rodden

Having spent 7½ years in cardiac, liver and general intensive care, Kathryn decided to embark on a career in research. As the newest member of the liver research team, Kathryn is currently working closely with Emma and Jo in their clinical trials as well as being responsible for a Phase 4 trial relating to patients without cirrhosis of the liver but with Chronic Hepatitis B.

Kathryn enjoys gardening, walking Jake the dog and spoiling her grandson.

Work telephone: 0121 414 8284

Research Sister, Jo Grayer

In 1990 Jo commenced as a Staff Nurse on the Liver Unit in Birmingham and has worked in all areas including medicine, surgery and Intensive Care. Since 2003 she has been a research sister based at the NIHR Liver Biomedical Research Unit within the University of Birmingham and in her current role she is responsible for recruiting patients for international Phase 2, 3 and 4 trials, especially those involving liver transplant and PBC (Primary Biliary Cirrhosis), NASH (Non-Alcoholic Steatohepatitis) and Alcoholic Hepatitis patients. She is currently recruiting for trials for all of these liver diseases.

Out of work, Jo enjoys reading, gardening and going to comedy shows.

Work telephone: 0121 414 8284



Questions and feedback:

Do you have any questions or comments? Have you undertaken any fundraising work for liver research? Do you want to suggest an item for the next edition of Liver Focus? If so, please contact Diana Hull at the Centre for Liver Research on Liverresearch@contacts.bham.ac.uk or Donna Wiles on 0121 414 6955

Useful links:

www.birmingham.ac.uk/liver & www.britishlivertrust.org.uk (A PDF of this newsletter can be found on both websites)

The NIHR Birmingham Liver Disease Biomedical Research Unit is a partnership between the University Hospital Birmingham NHS Foundation Trust and the University of Birmingham.

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