

HCV ADVOCATE WEEKLY NEWS REVIEW

Review of HCV, HBV and HIV/HCV Coinfection Related News and Highlights

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Feb 8, 2009

Public Encouraged to attend Hepatitis C Hearing

<http://www.ktnv.com>

Here's the latest concerning the Hepatitis "C" case that's affected thousands of people here in Nevada.

On Saturday, February 21st the State of Nevada Task Force on Hepatitis C will be holding a full legislative hearing in Carson City.

State officials will be hearing testimony on the prevalence of Hepatitis, the Nevada outbreak, and proposals for future programs from patients and the medical community.

The public is urged to attend, however, if you can't make it to the meeting, you can listen to the testimony "live" on the internet.

Just click here on the day of the hearing, then go to the menu on the right at "Live meetings - Listen and view" and clicking on it. The hearing may last several hours. This is an open hearing and the general public are welcome and encouraged to attend.

There will be a press conference immediately following the hearing in the building hosted by the Nevada Hepatitis C Task Force.

Be sure to stay with Action News for the latest developments concerning the Hepatitis C outbreak.

Feb 9, 2009

Oncostatin M May Be Promising Drug For Treating Viral Hepatitis And Liver Cancer

<http://www.sciencedaily.com>

ScienceDaily (Feb. 9, 2009) — The Department of Gene Therapy and Hepatology of the Center for Applied Medical Research (CIMA) of the University of Navarra has identified a molecule as possibly effective for improving the treatment of chronic hepatitis and liver cancer.

This research, coordinated by the doctors Jesús Prieto, Esther Larrea, Pablo Sarobe, Iranzu González and Rafael Aldabe, has been published in the *Journal of Virology*.

When organisms suffer a viral infection, dendritic cells (natural proteins produced as a response of the immune system to foreign agents) release type I interferon. The researchers of the CIMA observed that dendritic cells also produced Oncostatin M. "What was remarkable was the evidence that Oncostatin improved the effect of interferon in inhibiting the replication of viruses as well as noticeably increasing the antiviral response of the immune system", said Dr. Jesús Prieto.

These findings suggest that the combination of both molecules may be useful for treating viral diseases that do not respond to isolated treatment with interferon, something which occurs in patients with viral B or C chronic hepatitis. "In addition, it is possible that this combination could be effective for designing strategies against different tumor processes in which conventional therapy is unsuccessful", suggested Dr. Prieto.

The Center for Applied Medical Research has patented this therapeutic formula, based on the combination of type I interferon and oncostatin for oncology treatment and antiviral therapy. Its development for clinical application is being carried out by the Spanish biotechnology company Digna Biotech.

Adapted from materials provided by Basque Research.

Health and Beauty: Busting the myths about hepatitis C

<http://www.halifaxcourier.co.uk>

By Diane Crabtree

THE chances are we all know someone infected by hepatitis C.

So say the experts. The only problem is that many people don't even know they've got it.

And because the illness carries a stigma, many sufferers who know they have it, don't even tell their friends and family, let alone talk about it in public.

New research commissioned by the Department of Health backs this. It shows that around a third of people living in Yorkshire and Humber don't know that hepatitis C can only be passed on through blood to blood contact.

Now a major awareness campaign aims to reach out to an estimated 100,000 people in England who are unaware they have the infection and prevent others getting it.

It has the support of 55-year-old sufferer Stephen Barker of Hebden Bridge who is the chairman of the Peacock Project, a support group based in Calderdale and Kirklees.

Stephen was diagnosed in 1991 and believes the route of infection was either sharing needles when he was 16, or one of his tattoos. He says there are more than 2,000 known sufferers in this area, but figures are very conservative and thousands more local men and women will have the virus without realising it.

The Peacock Project is a drop-in centre which is open every two weeks. It is based in Huddersfield, but is moving back to Calderdale, where it started, next month, based at the Brunswick Centre, Halifax.

"We are the only support group in this area and get people coming to us from Bradford and Leeds as well as Calderdale and Kirklees. We have our own specialist nurse and are here to help sufferers and their friends and families."

Hepatitis C is a infectious disease caused by a virus which affects the liver.

An estimated 170 million people worldwide are infected and no vaccine is available at this time.

Celebrities who have gone public to encourage more people to get tested for the disease include Pamela Anderson, Natalie Cole, the late Anita Roddick, David Crosby and Marianne Faithfull.

The campaign coincides with the 20th anniversary of the virus being identified. Radio and press advertising will remind us all of life experiences that could have exposed us to infection such as injecting drugs or getting tattoos where equipment may not have been sterile.

Chief medical officer, Sir Liam Donaldson says: "Around 100,000 people in England are estimated to be unaware that they have hepatitis C. It can take years or even decades for symptoms to appear, if at all, and if left untreated can lead to liver damage and premature death.

Charles Gore, chief executive of the Hepatitis C Trust and president of the World Hepatitis Alliance says "Twenty years down the line, it's worrying to see the public still believe so many myths around hepatitis C. Education is absolutely essential to eradicating this problem. We are pleased to see the Department of Health campaigning on this issue, but it's now time for both the public and health professionals to take action.

We'd urge anyone who feels they might be at risk to get tested, and health professionals to be vigilant to diagnosing patients."

The Peacock Project – call 01422 438721 or log on at peacockproject.hepc.co.uk. The Hepatitis C Trust helpline is 0845 223 4424. Further information from nhs.uk/hepc or confidential information and advice, from the Hepatitis C Information Line on 0800 181 4114 (textphone 0800 0850859).

Hepatitis C sufferers haven't received promised federal money

<http://www.cbc.ca>

By Kathy Tomlinson, CBC News

Many claimants can't prove they received tainted blood decades ago

Thousands of Canadians afflicted with hepatitis C who were promised compensation by the Harper government in 2006 have yet to see a dime.

According to claimants, doctors and their lawyers, many have been unable to obtain hospital and medical records to support their claim because the records are long gone.

"It's not my fault if there is no record kept at the hospital about my operation," Vancouver resident Giancarlo Mocellin said.

"They [the claims administrator] just want more and more and more [records] — and they keep asking for something that you don't have."

Most unapproved claimants, like Mocellin, received tainted blood decades ago.

They are among those who contracted the disease before 1986 and they were the last to be offered a settlement from the Canadian government through a fund valued at a maximum \$962 million.

'People are already suffering': claimant

"I don't really know why they have to make it so difficult," said Mocellin. "People are already suffering for it."

Mocellin, 65, is a retired welder, who said he was forced to retire early — at age 55 — partly because hepatitis C made him too tired to get through his workday.

He had surgery at St. Paul's Hospital in Vancouver for a bleeding ulcer in 1967. He remembers being told he received three units of blood.

Mocellin received \$10,450 in compensation through an earlier Red Cross class-action claim. Because of that, he received a letter from the administrator for the government settlement, inviting him to apply for money from the new fund.

St. Paul's Hospital says it is unable to locate records from Mocellin's 1967 ulcer surgery. (CBC) Since then, he has been unable to convince the administrator, Crawford Class Action Services, that he did receive blood, despite an exhaustive search of records and letters of support from his doctor.

"It's depressing," said Mocellin. "It can really put you down. It's an insult, in a way."

St. Paul's Hospital wrote a letter saying Mocellin had been there in 1967, but that the hospital was unable to find any detailed records from the time.

The Red Cross wrote that its system could not trace a blood recipient that far back.

Mocellin's family doctor, Man Kon Leung, wrote a letter stating, "The only risk factor is the blood transfusion. It is without hesitancy that I state that the probable cause of his infection was through his surgery."

Crawford responded that was not enough — that Mocellin now has to find a doctor who specializes in ulcer surgery and will say it is "more likely than not" that he received blood during surgery.

"If they can't accept my own doctor to do this, how am I going to get somebody who doesn't know me to do it? That is a big problem," said Mocellin.

"It's very difficult for me to understand what they are talking about."

The government set more stringent criteria for proving claims than the Red Cross did when it settled with the same claimants in 2004.

"I have a couple of people who are exactly in that situation who were previously transfused and there is no record," said Sigfried Erb, one of Vancouver's top liver specialists. "One was a hemorrhoid operation, the other was an operation on his hand.

"The patients don't know how to get proof — that's where the problem is," Erb said. "The government should help them."

Less than half of fund paid out

Kerry Eaton, vice-president of Crawford Class Action Services, said the agency has received 9,098 claims since August 2007 and 3,863 — 40 per cent — have not yet been approved.

He said \$398 million — less than half of the money available — has been paid out to claimants.

Crawford was contracted by the government to process all the claims at a cost to taxpayers of \$20 million. The deadline to apply is June 30, 2010 — and any monies not paid out will be returned to government coffers.

Liver specialist Sigfried Erb says his patients don't know how to get the proof they need to support their compensation claims. (CBC)

"I'm sure they [the government] are trying to make it very difficult, very difficult, to avoid paying people," said Mocellin.

Chronic infection by the hep C virus can cause inflammation of the liver, leading to scarring of the liver, cirrhosis and other complications including liver cancer.

Erb estimates one-quarter of his eligible patients have been unable to get approval for what he's convinced are legitimate claims. The ones having the most trouble, he said, are often those who need help the most.

"The longer ago you were transfused, the more likely you are to have worse disease, the more likely you are to be sick — and the less likely you are to have access to records that prove your case," said Erb.

"Most of them have no other source of income. Most of them are very poor. Most of them can't earn any money any more. They are waiting ... for a transplant, not earning any money ... and filling in paperwork."

Settlement documents show the minimum available payment is \$8,453 and the maximum \$408,834 — depending on the patient's age and severity of illness.

Millions in legal and administration costs

Claimants can hire a lawyer to assist with their claims, but the lawyer takes a significant cut of the final payment.

According to David Klein, a Vancouver lawyer who handles many of these cases, fees range from 20 per cent to 33 per cent of the payout.

Klein said his firm charges a flat fee of 29 per cent. But its failure rate on claims is "quite high," he said — about 40 per cent of the cases.

"These are people I believe contracted the disease through blood transfusion, but I just couldn't prove it," Klein said. "There are a lot of areas where you get bogged down in this."

He added, "And, unfortunately, if you have to hire a lawyer, you have to pay the legal fees — and what you pay also goes to cover the costs of all the firm's unsuccessful claims."

The cost of the settlement to taxpayers, so far, includes \$37.29 million for legal fees and \$20 million for administration.

"Pretty depressing, I would say," said Mocellin. "[Lawyers and administrators] can keep on making money out of people that should have received the money."

CBC News asked to speak with the new federal Health Minister Leona Aglukkaq about this, but her office replied by email that the minister "will not be available for this interview."

Even though he is entitled to compensation, Mocellin said he is abandoning his claim — out of sheer frustration.

"I'm just giving up. That's it. This is the end," he said.

Feb 10, 2009

Anadys Keeps Surging, as Hepatitis C Drug Data Trickles In

<http://www.xconomy.com/>

Luke Timmerman

The more data dribbles out of Anadys Pharmaceuticals, the more investors apparently like what they see. The San Diego-based biotech company said today that one of its experimental drugs for hepatitis C was effective at killing the virus in three more patients who took a low dose in a clinical trial, providing a bit of extra evidence to confirm the results that caused its shares to triple last month.

Anadys CEO Steve Worland provided the update yesterday in a presentation at the BIO CEO investor conference in New York. The company's stock (NASDAQ: ANDS) climbed 3 percent to \$6 at yesterday's close. It has continued its surge since Jan. 8, when the company said its **ANA-598** drug candidate was able to eliminate 99 percent of the virus from the blood, by itself, within 72 hours among the first eight patients in a clinical trial.

The study now shows that ANA-598 is producing about the same amount of viral clearance from the blood with the three additional patients, who got the low dose of 200 milligrams twice a day, Worland says. The company expects to finish enrolling patients in the study by the end of this month, and hopes to present full results at the European Association for the Study of the Liver meeting in Copenhagen, Denmark, in April. The drug is considered important because it is a leader in its class of non-nucleoside polymerase inhibitors, and it ought to be easily combined with some of the 40 new drugs in various stages of clinical or animal testing across the

pharmaceutical industry, Worland says. Anadys believes its drug is standing out in the subset of drugs in the non-nucleoside class.

“The non-nucleoside class has been a tough nut to crack,” Worland said in the presentation.

An estimated 170 million people worldwide are infected with hepatitis C virus, a chronic liver bug that can lead to liver failure. A new generation of various virus-killing treatments are promising to change the standard treatment of pegylated interferon and ribavirin, which cures people less than half the time, and causes nasty flu-like side effects that last for almost a year. Cambridge, MA-based Vertex Pharmaceuticals is aiming to blaze a new path with a protease inhibitor drug to improve the cure rate, and shorten treatment. Another class of nucleoside polymerase inhibitors like one from Pharmasset and Roche are working their way through clinical development, ahead of Anadys.

Of course, the Anadys candidate is still very early in clinical trials. The company plans to run another early-stage study this year with healthy volunteers who will take its drug for 14 days, to get more of a sense of how it is absorbed in the body, as well as its safety over a longer period of time, Worland says. Then by mid-2009, the company hopes to start the first mid-stage study of its drug in combination with standard treatments, to see how well it does at improving clinical cure rates after the required 24 weeks. That study should provide an answer in the first half of 2010, Worland said.

But Worland also alluded to the possibility of a partnership in his speech to investors, since big drugmakers are looking to fill gaps in their portfolios with intriguing molecules like the one from Anadys. There is some evidence of Big Pharma interest in the field. Last month, Seattle-based ZymoGenetics signed a partnership with Bristol-Myers Squibb that’s potentially worth as much as \$1.1 billion in milestone payments, to develop a modified interferon drug with fewer side effects.

Luke Timmerman is the National Biotechnology Editor for Xconomy. You can e-mail him at ltimmerman@xconomy.com or call 206-624-2374.

Inflammation may be common thread behind nervous and heart rhythm problems in cirrhosis

<http://www.genengnews.com>

EUREKALERT

Findings may have application to bipolar disorder, post-menopausal depression

BETHESDA, Md. (Feb. 10, 2009) – Liver cirrhosis is the seventh leading cause of death in the United States, taking 25,000 lives per year. It is often the result of alcohol over-consumption or exposure to hepatitis C, either of which can damage the liver and prevent it from filtering toxins. These toxins then accumulate in the blood stream and eventually reach the brain where they disrupt neurological and mental performance, a condition known as hepatic encephalopathy.

Individuals with cirrhosis are also susceptible to a change in heart rhythm (decreased heart rate variability). Since cirrhosis, hepatic encephalopathy and heart rate variability are known to be

associated with inflammation, researchers have examined what role cytokines (inflammatory molecules) play.

A new study from The American Physiological Society suggests that these cytokines can lead to both the neurological and cognitive abnormalities and changes in heart rhythm in patients with cirrhosis. The results of the study may also apply to other conditions where heart rate variability is also decreased, such as bipolar disorder and post-menopausal depression.

The study, "Decreased heart rate variability in patients with cirrhosis relates to the presence and severity of hepatic encephalopathy," was carried out by Ali R. Mani, Sara Montagnese, Clive D. Jackson, Christopher W. Jenkins, Ian M. Head, Robert C. Stephens, Kevin P. Moore and Dr. Morgan. All are affiliated with the University College London Medical School, with the exception of Mr. Jackson, who is with the Royal Free Hospital, London. The study appears in *The American Journal of Physiology-Gastrointestinal and Liver Physiology*.

Three measurements

The study involved 80 patients suffering cirrhosis of the liver. Sixty-five (81%) of the patients had cirrhosis because of chronic alcohol abuse, although none had abused alcohol within three months of the study. Of the remaining 15 participants, seven had developed cirrhosis from chronic hepatitis while the remaining eight had developed the disease in various other ways. The participants were compared to a control group of 11 healthy people.

First, the researchers tested for the presence of hepatic encephalopathy by examining the patient's mental state. They conducted various cognitive tests and obtained an electroencephalogram (EEG). After examination, the study participants were classified as having either overt hepatic encephalopathy, minimal hepatic encephalopathy or no encephalopathy.

Second, they measured heart rate variability using an electrocardiogram. A healthy heart varies the rate at which it beats depending upon a variety of factors. For example, the heartbeat accelerates when inhaling and decelerates when exhaling. Reduced heart rate variability -- that is, a more regular heartbeat -- has been associated with systemic inflammation and with various neuropsychiatric conditions, such as bipolar disorder.

Third, in a subgroup of 18 patients, the researchers also measured for cytokines, which circulate in the blood as part of the inflammation. Among these cytokines was interleukin-6, a substance that plays a role in cell signaling as part of the body's response to inflammation.

Connected to inflammation

When the researchers began the study, they knew that cirrhosis of the liver leads to hepatic encephalopathy, systemic inflammation and reduced heart rate variability. It was not known whether and how they were related.

Their first major finding was that reduced heart rate variability and the presence of hepatic encephalopathy were very strongly connected. The second major finding was that blood levels of the inflammatory cytokines (including interleukin-6 levels) closely paralleled both the degree of neuropsychiatric impairment and reduced heart rate variability. This suggests that inflammatory response plays a role in these impairments.

Additional Findings

The researchers also found that:

- In patients with cirrhosis, there were significant concentrations of cytokines. By contrast, concentrations were below the level of detection among healthy volunteers.
- There was no significant differences in heart rate variability between patients with alcohol-related cirrhosis and patients with cirrhosis due to other reasons, such as chronic viral hepatitis.
- The risk of death increased as heart rate variability decreased.

The authors concluded that inflammation plays a role in both the reduction in heart rate variability and the development of hepatic encephalopathy in patients with cirrhosis. In subsequent, yet unpublished research, they have found that treatment for hepatic encephalopathy not only improves mental function but also improves heart rate variability. This treatment also reduces blood levels of cytokines providing further evidence of a link between systemic inflammation, mental and cardiac function in this patient group.

Veterans to be Tested for HIV and Hepatitis after Improper Sanitization at Medical Clinic

<http://gpbnews.blogspot.com>

About 1200 military veterans need to undergo testing for HIV, hepatitis B and hepatitis C after personnel at the Charlie Norwood VA Medical Center discovered that rhinoscopes at an ear nose and throat clinic were improperly sterilized.

The testing involves veterans who underwent procedures in which the rhinoscopes were used at the clinic between January and November, 2008. Officials at the VA center, in Augusta, say the risk of infection is extremely small.

The disinfectant used to clean the scopes during that time period was designed for surfaces such as exam tables, and not one recommended by the rhinoscopes' manufacturer, although chemical activity is similar, according to Dr. John Brice, chief of medicine and acting chief of staff at the medical center.

Doctors use the rhinoscopes to exam sinuses and the upper airway passages of patients.

Brice says an employee was apparently not trained properly on the cleaning procedures. He says the problem began when a nurse at the clinic left, and rapid employee turnover followed. The problem was caught during an annual review of procedures at the clinic. Brice says the center is stepping up training procedures and increasing reviews there to quarterly, at the least. He says an investigation into the matter is ongoing, and that scopes, at this time, are being cleaned at another location.

Brice says the issue was confined to the clinic, and did not happen at the hospital there.

The center is this week sending out letters to the veterans who were possibly exposed to infections.

The VA center has a hotline for the veterans. For more information, call (706) 731-7229 from 8 a.m. until 4 p.m. on weekdays, or (800) 836-5561 after hours.

Adefovir Salvage Effective for HBV Recurrence in Lamivudine-Treated Patients

www.medscape.com

By Will Boggs, MD

NEW YORK (Reuters Health) Feb 10 - In liver transplant recipients with hepatitis B virus who develop lamivudine resistance, add-on therapy with adefovir is effective for salvage, according to a report in the February *Journal of Medical Virology*.

"In countries where hepatitis B immune globulin (HBIg) is too expensive, lamivudine monophylaxis and adefovir salvage for resistance can be considered for liver transplantation," Dr. Henry L. Y. Chan from The Chinese University of Hong Kong told Reuters Health. "For patients with detectable HBV DNA at the time of liver transplantation, the risk of lamivudine resistance is higher, and HBIg or a more potent antiviral agent should be considered."

In 24 patients who underwent liver transplantation for HBV, Dr. Chan and his colleagues studied the incidence and clinical course of lamivudine resistance and the response of lamivudine-resistant HBV to adefovir salvage.

Seven patients developed lamivudine resistant HBV mutants. Detectable HBV DNA and positive hepatitis B e antigen prior to transplant were associated with HBV recurrence, the researchers note.

All seven patients were treated with adefovir, 10 mg daily, for a mean of 150 weeks. Six patients had normal ALT within 6 months of starting the salvage treatment. At their most recent follow-up visit, two patients had undetectable HBV DNA, two had between 100-1000 copies/mL, and three had between 10,000 and 100,000 copies/ mL, according to the researchers. One patient had lost hepatitis B surface antigen.

In one patient, ALT levels persistently fluctuated and histologic studies continued to show mild viral hepatitis.

No genotypic resistance to adefovir was detected.

"Early treatment with adefovir dipivoxil when HBV DNA is still low is important to increase the chance of maintained virological suppression for lamivudine resistance," the authors write.

"In the future, monophylaxis with more potent antiviral agents (e.g., entecavir or tenofovir) without HBIg should be considered for liver transplantation," Dr. Chan said. "It may be associated with good viral control, low risk of resistance, and a lower cost than HBIg-containing regimes."

J Med Virol 2009;81:224-229.

Bevacizumab Plus Erlotinib Promising in Liver Cancer

www.medscape.com

By David Douglas

NEW YORK (Reuters Health) Feb 04 - Bevacizumab along with erlotinib shows considerable anti-tumor activity in patients who have advanced hepatocellular carcinoma (HCC), researchers report in the January 12th issue of the *Journal of Clinical Oncology*.

"I think the results of this trial are very encouraging," lead investigator Dr. Melanie B. Thomas told Reuters Health, "and suggest the combination is quite active in hepatocellular cancer. Most chemotherapy and biologic agents have shown none or minimal tumor responses in HCC."

Dr. Thomas of the Medical University of South Carolina, Charleston, and colleagues studied 40 patients with advanced HCC. All had received no more than one prior systemic treatment and none had disease that was amenable to surgical or regional therapy.

They were given bevacizumab 10 mg/kg every 14 days and erlotinib 150 mg per day orally, continuously over 28-day cycles.

Some 60% achieved 16-week progression-free survival. Median progression-free survival was 9.0 months and median overall survival was 15.7 months.

"Bevacizumab plus erlotinib showed a 25% response rate in this study," continued Dr. Thomas. "Overall survival is substantially longer than that published for sorafenib (10.7 months) but the only valid comparison is in a randomized trial. We are about to open a randomized phase II trial comparing bevacizumab plus erlotinib to sorafenib."

J Clin Oncol 2009;27.

Feb 11, 2009

EU-funded researchers develop novel, economical blood test for hepatitis C

<http://cordis.europa.eu>

An international team of scientists has developed a new, accurate and affordable blood test for hepatitis C that represents a major breakthrough in controlling the spread of this dangerous virus. The procedure is described in the journal *PLoS Medicine*, and is in part an outcome of the RiViGene ('Genomic inventory, forensic markers, and assessment of potential therapeutic and vaccine targets for viruses relevant in biological crime and terrorism') project, which was funded under the 'Policy support' Thematic area of the EU's Sixth Framework Programme (FP6).

Approximately 170 million people worldwide are infected with the hepatitis C virus (HCV), which causes liver cirrhosis (scarring) and liver cancer. The virus is usually spread through contact with the blood of an infected person, for instance by transfusion using unscreened blood or the use of inadequately sterilised medical instruments. Between 3 and 4 million people are newly infected every year. Treatments are not only costly but are also often ineffective.

In wealthy countries, donated blood is routinely screened for HCV using a commercially patented test called an RT-PCR assay. This test detects small amounts of HCV's RNA (ribonucleic acid), which allows the virus to replicate itself, and looks for a part of the viral genome called 5'-NCR.

In poorer countries, the use of this test is well beyond the means of most laboratories. A test might cost over USD 100 (EUR 77), of which USD 10 go to licensing fees alone. Also, the effectiveness of the test varies according to the strain (or genotype) of the virus, which differs amongst geographic regions.

To limit the spread of HCV, routine screening of blood used for transfusions in developing countries is essential; for this to be feasible, the test must be both effective and affordable. In the current study, the researchers looked for a new way to identify different strains of the virus using approximately 600 blood samples from the UK, Germany, Brazil, Singapore and South Africa.

Screening for all major strains of the virus is important for everyone, according to the researchers. 'In Asia, for example, we often find different hepatitis C viruses from ours,' said Dr Jan Felix Drexler of Bonn University. 'But when a tourist becomes infected in Thailand and subsequently donates blood in Germany, we must be able to diagnose these blood samples without fail, too.'

The researchers found that a test for a different part of the HCV genome, the '3'-X-tail element', accurately identified low concentrations of the viral RNA in a wide range of samples, and was also able to determine the quantity of viral RNA in these samples. This means that their test is just as effective, or perhaps more so, than the commercial assays currently in use.

'We are, at least, just as sensitive as the two best standard procedures,' commented Professor Christian Drosten of Bonn University, adding that 'This is true for all types of virus.' And, as Dr Drexler noted, 'This would be a significant breakthrough for containing the disease. After all, transfusions are a major source of propagation.'

The protocol used in the X-tail assay is robust, stable, effective and freely available; as such, it has the potential to improve blood safety in developing countries by providing a cheap and effective alternative to proprietary HCV assays. Indeed, the new test has already been used successfully to measure viral load in blood samples from 127 patients in a Brazilian laboratory at a fraction of the usual cost. Such measurement is important for monitoring therapeutic success and reducing the costs of treatment.

'For anyone wishing to use this test, we can also supply the control reagents,' said Dr Drexler. In contrast, commercial suppliers do not share the precise nature of their assays.

The RiviGene project, which ended in 2008, studied the genome sequences of security-relevant viruses, and sought to develop simple and robust identification methods for all viral genetic signatures. The genomic information collated by the consortium is used to investigate functional aspects of virus biology.

For more information, please visit:

PLoS Medicine:
<http://medicine.plosjournals.org/>

University of Bonn:
<http://www1.uni-bonn.de/>

Hospitalisation and disability are higher amongst HIV patients with hepatitis C coinfection

www.aidsmap.com

Liz Highleyman & Michael Carter

HIV-positive individuals co-infected with hepatitis C virus are hospitalised longer, visit emergency departments more often and spend more days disabled than people with HIV alone, according to new data presented on Tuesday at the Sixteenth Conference on Retroviruses and Opportunistic Infections in Montreal, Canada.

An estimated 15% to 30% of HIV positive people also have chronic hepatitis C - though rates as high as 90% have been seen in some groups of injecting drug users. But the burden of disease and utilisation of health care by co-infected patients has not been well studied.

In this analysis, investigators compared hospitalisation, emergency department visits and disability amongst HIV-positive individuals with and without hepatitis C.

The researchers collected data from participants in the ACTG Longitudinal Linked Randomized Trials (ALLRT, also known as ACTG A5001) cohort, comprising treatment-naïve and treatment-experienced HIV-infected individuals enrolled in selected randomised clinical trials of antiretroviral therapy sponsored by the US AIDS Clinical Trials Group.

Each year, participants provided information about their use of health services during the previous four months, including number of nights in hospital, number of visits to an emergency department and two measures of disability: number of days spent in bed and number of days forced to cut back on work or other daily activities. Reasons for hospitalisation were not collected. Disability could not be attributed to interferon-based therapy for hepatitis C, since very few patients received such treatment.

The analysis included 3082 HIV positive patients, who collectively contributed just over 81,000 person-months of follow-up data, with a median follow-up period of 28 months per person. A total of 359 patients (12% of the cohort) were co-infected with HIV and hepatitis C.

Compared with participants who had HIV alone, the co-infected patients were slightly older (average 40 vs 43 years), more often women (16% vs 21%), more often of "non-white" race/ethnicity (48% vs 63%) and much more likely to be current or former injecting drug users (4% vs 50%).

Both groups had about the same median CD4 count (approximately 245 cells/mm³) and median HIV viral load (40,000 copies/ml). To determine the effect of immune function, participants were divided into four CD4 cell strata.

The researchers found that HIV/hepatitis C co-infected patients at all CD4 counts spent more time in hospital than those with HIV alone: 99 vs 54 hospital nights per 100 person-years if they had fewer than 100 cells/mm³, 33 vs 16 nights if they had 100 to 200 cells/mm³, 15 vs 5.2 nights if they had 201 to 350 cells/mm³, and 2.5 vs 2.6 nights if they had more than 350 cells/mm³.

A similar pattern was seen for emergency department visits: 18 vs 17 visits per 100 person-years for patients with less than 100 cells/mm³, 12 vs 6.3 visits for those with 100 to 200 cells/mm³, 13 vs 3.7 visits for those with 201 to 350 cells/mm³, and 2.5 vs 2.6 visits for those with more than 350 cells/mm³.

Co-infected participants also fared worse than those with HIV alone when looking at days of disability: 481 vs 253 days per 100 person-years if they had less than 100 cells/mm³, 139 vs 104 days if they had 100 to 200 cells/mm³, 79 vs 66 days if they had 201 to 350 cells/mm³, and 57 vs 46 days if they had more than 350 cells/mm³.

After adjusting for possible confounding factors including age, sex, race, history of injection drug use, opportunistic infections, current CD4 cell count and HIV viral load, the researchers found that HIV/hepatitis C co-infection remained a significant predictor of longer hospitalisation (relative risk [RR] 1.9), more frequent emergency department visits (RR 1.7) and more disability days (RR 1.4).

These findings led the researchers to conclude that HIV/hepatitis C co-infected patients "have significantly increased rates of health care utilization and disability days, generating substantial additional burdens on the system of care for HIV-infected patients in the United States."

Reference

Linac, B. et al. The effect of HCV co-infection on health care utilization among HIV-infected subjects: The ACTG Longitudinal Linked Randomized Trials, Study 5001. Sixteenth Conference on Retroviruses and Opportunistic Infections, Montreal, abstract 102, 2009.

Disease prevention, care of elderly face state cuts

<http://www.desmoinesregister.com>

JASON CLAYWORTH • jclayworth@dmreg.com

Proposed budget cuts mean thousands of Iowans could go without treatment for sexually transmitted diseases, while others would be without nursing health care, smoking cessation treatment and health insurance for children living in low-income families, the director of the state's health department told lawmakers this morning.

The service cuts would take place if lawmakers approve Gov. Chet Culver's budget as recommended last month, Tom Newton, director of the Iowa Department of Public Health, told lawmakers today during meeting of the budget subcommittee that oversees the department.

The department's budget is expected to fall from \$67 million to \$63.8 million in the fiscal year that begins July 1.

“Obviously we’re going to try to do the best we can with the resources we have available to us but we would be liars if we said there wasn’t going to be any impact,” Newton said.

Lawmakers, both Democratic and Republican, said they are deeply concerned about the consequences. Sen. David Hartsuch, R-Bettendorf, said cuts to disease prevention would cost the state more in the long run.

Hartsuch, a member of the subcommittee, is a medical doctor. He particularly pointed out concern with such consequences as 360 fewer Iowans would be treated for tuberculosis and 570 fewer tested for hepatitis C.

“When you have an infectious disease, it’s sort of like stamping out forest fires,” Hartsuch said. “You have to do it quickly. If we’re not providing adequate resources to do that, we’re going to pay for it in the long run.”

Rep. Lisa Heddens, House chairwoman of the subcommittee, noted that it’s possible that the federal stimulus package could help make up the gap. Lawmakers regularly make adjustments to budget proposals, she noted.

“Our charge is to have a better understanding of the governor’s recommendations,” Heddens, D-Ames, said. “We need this information so we can prioritize.”

Earlier federal stimulus packages appropriated billions of dollars for wellness programs. One current version contains nothing, Newton noted. His department is not counting on federal money.

State cuts could, additionally, jeopardize other federal matching programs and result in even more drastic cuts, Newton said. His department has not estimated how much federal matching grants could be reduced by the governor’s recommendations.

Here’s a list of some of the consequences the \$3.2 million cut to the state’s health department would have, according to Newton.

- 4,500 people would not be treated for chlamydia or gonorrhea, which are sexually transmitted diseases.
- 1,055 children would not receive diphtheria, tetanus and Pertussis vaccines.
- 2,300 fewer Iowans would have smoking cessation treatments.
- 835 fewer Iowans would use the 1-800-BETSOFF because of fewer advertising dollars to promote the hotline.
- 1,600 fewer low-income children would receive health services.
- 1,000 fewer veterans would receive information on hepatitis C while 570 fewer people would be tested.
- 1,800 fewer elderly Iowans would receive local public health nursing visits.

MD: Wrong Valve Carries Hepatitis, HIV Risks

<http://www.wsmv.com>

Reported By Deanna Lambert



All V.A. Medical Centers Surveyed After Colonoscopy Health Instrument Issue

NASHVILLE, Tenn. -- Medical staff from the Tennessee Valley Healthcare System offered apologies and took questions from the media Tuesday morning, but they didn't have many answers.

Watch This Story

"We still don't understand how this incorrect valve with the right length tube came into existence," said Dr. Walter Smalley. "We don't know if it came to us from the manufacturer or if someone, in an effort to clean things here, took things apart (and) put things back together the wrong way."

Olympus manufactures the equipment, and, according to a representative, the valves and tubes come attached to each other.

After the colonoscopy procedure, some parts are supposed to be thrown away and others reused. The parts that are reused are sent to the hospital's sterilization, processing and distribution unit.

The root problem is that two valves that look very similar. One is used for patients' procedures; the other is used for cleaning. To prevent future problems, medical personnel have attached a blue clip, clearly indicating that the instrument is not for patient use.

According to the quality assurance director with the Department of Veterans Affairs, the manufacturer has never had a report of the wrong valve connected to the tube.

All 153 V.A. Medical Centers were then surveyed.

"It was only Murfreesboro that had this problem," said William Duncan, M.D.

On the 10 to 15 setups in Murfreesboro, only one setup had the wrong two-way valve.

But one wrong setup has many major risks:

"Those main risks are Hepatitis B, Hepatitis C and HIV," said Smalley.

V.A. officials said their investigation is complete and that no one has transmitted a disease or experienced major sickness as a result of all this already.

Officials also said no staff have been fired or forced to resign over the matter.

If you've had a colonoscopy at the York V.A. Center between April 2003 and last December, there's a dedicated phone line available to answer your questions. You can call 1-877-345-8555 Monday to Friday, 8 a.m. to 7 p.m. (CST).

Half of HIV/HCV co-infected early responders are cured with 72-week treatment

www.aidsmap.com

Liz Highleyman & Michael Carter

HIV/HCV co-infected individuals who achieve a complete early response to interferon-based therapy for chronic hepatitis C have a 51% chance of achieving a sustained virological response using an extended 72-week course of treatment, researchers reported on Tuesday at the Sixteenth Conference on Retroviruses and Opportunistic Infections in Montreal, Canada.

Raymond Chung from Massachusetts General Hospital in Boston reported the latest results from the American SLAM-C (Sustained Long-term Antiviral Maintenance with Pegylated Interferon in HCV/HIV Co-infected Patients) trial, also known as ACTG A5178.

Co-infected individuals tend to respond less well to interferon-based therapy than people with hepatitis C virus (HCV) alone, and this study was designed to look at extended treatment and long-term pegylated interferon maintenance in non-responders.

SLAM-C consisted of three steps. First, 329 HIV/HCV co-infected patients were treated with 180 mcg/week pegylated interferon alfa plus weight-based ribavirin (1200mg/day for those weighing more than 75kg and 1000mg/day for those 75kg or less) for 12 weeks. At this point, participants were tested to see if they had achieved early virological response (EVR), that is, at least a two log₁₀ decrease or undetectable (less than 600 IU/ml) HCV viral load.

In step 2, early responders continued to receive pegylated interferon plus ribavirin for a total duration of 72 weeks, while non-responders dropped ribavirin and continued on the same dose of pegylated interferon monotherapy. (The standard duration of hepatitis C treatment for co-infected people is 48 weeks regardless of HCV genotype.) Results from non-responders in step 2 were reported at last year's Retrovirus conference.

This year's report focused on step 3, looking at the 183 patients (56%) who achieved a partial or complete early virological response. Of these, 169 opted to continue on combination therapy through 72 weeks. Information about sustained virological response (SVR) - continued undetectable HCV viral load 24 weeks after the end of treatment - was available for 146 participants.

In the continuing group, most (89%) were men, the median age was 48 years, 52% were white, 29% were African-American, and 15% were Hispanic. This represented a shift from 43% white and 37% African-American in the original full study population, reflecting the fact that more blacks were non-responders.

Participants generally had well-controlled HIV disease, with 89% on antiretroviral therapy, 86% with HIV viral load below 50 copies/ml, and the median CD4 count was 316 cells/mm³ (lower than the median of nearly 500 cells/mm³ in the original population). Finally, just over three-quarters had hard-to-treat HCV genotypes 1 or 4, nearly one-third had prior interferon treatment experience, and 9% had cirrhosis.

About three-quarters of early responders were classified as having achieved complete EVR,

defined as HCV viral load below 600 IU/ml, while the remainder were classified as having achieved partial EVR, with at least a two log₁₀ drop, but 600 IU/ml or higher.

Overall, 51% of patients who achieved early virological response went on to achieve sustained virological response. The SVR rate was about twice as high amongst patients with HCV genotypes 2 or 3 compared with genotypes 1 or 4 (82% vs 42%, respectively). Participants with previous unsuccessful treatment attempts were half as likely to achieve sustained response as treatment-naïve patients (30% vs 60%, respectively).

Furthermore, participants who had achieved complete EVR were nearly four times more likely to achieve sustained virological response than those with partial EVR (62% vs 17%, respectively).

As expected, the overall SVR rate was lower amongst African-Americans (38%) than amongst "non-black" patients (57%). This disparity was also seen in the partial responder group, but amongst patients who achieved complete EVR, the difference in SVR rates between blacks and whites was not statistically significant (54% vs 65%, respectively).

Many patients found extended duration therapy difficult to tolerate, and just over one-third (35%) stopped treatment before 72 weeks. The most common adverse events were known interferon or ribavirin side-effects such as muscle aches, depression, and blood-cell deficiencies. Fatigue and poor quality of life were the most frequently reported reasons for stopping therapy. A majority of early discontinuations and drug dose reductions due to side-effects occurred during the final 24 weeks of treatment.

Given the large disparity in sustained virological response rates between complete and partial early responders, Dr Chung noted that failure to achieve complete HCV clearance by week 12 identifies most patients who will not go on to achieve sustained response, thereby allowing likely non-responders to avoid further futile therapy.

Reference

Chung R et al. SLAM-C (ACTG A5178): Role of early virologic response in extended therapy with PEG-interferon and weight-based ribavirin in HCV/HIV co-infection. Sixteenth Conference on Retroviruses and Opportunistic Infections, Montreal, abstract 103LB, 2009.

Feb 12, 2009

More effort needed to curb hepatitis: experts

www.reuters.com

By Tan Ee Lyn

HONG KONG (Reuters) - Governments must do more to raise awareness and curb rising incidences of chronic hepatitis B and C, diseases that affect more than 500 million people in the world, a leading expert on the disease said on Thursday.

Both can cause permanent damage to the liver, including cirrhosis, or scarring, and liver cancer if they are not properly controlled. They result in a combined 1.5 million deaths a year.

"Governments are absolutely not doing enough," said Charles Gore, president of the World

Hepatitis Alliance, a group representing hepatitis patients in many parts of the world.

"It's one of those circular problems. Awareness is low, so it's not on the priority list. Funds are not put into it, there is very little advocacy and nobody is doing anything to raise awareness.

"We are talking 500 million people with hepatitis B or C, with 1.5 million deaths annually. HIV is 33 million (number of people infected) and 2.1 million deaths. It's the same ballpark in terms of mortality, but in terms of awareness, it is nowhere."

Hepatitis B is endemic in parts of Asia and Africa, and the chief mode of transmission is from mother to child.

Worldwide, there are 360 million hepatitis B carriers and up to 130 million of those are in China. Between 10-17 percent of the Chinese population are carriers, depending on the area.

Worldwide, there are 170 million people with chronic hepatitis C, which is mostly transmitted through needle sharing. About 150,000 new cases occur annually in the United States and in Western Europe, and about 350,000 in Japan.

Citing the example of Britain, Gore said the country had no figures on hepatitis B, but that 5,000 people were being treated for hepatitis C, with up to 15,000 new infections a year.

"Prevalence is increasing, which shows we are not getting this awareness out there and changing people's behavior," Gore said ahead of a hepatitis conference in Hong Kong over the weekend.

Nancy Leung, a hepatitis specialist doctor in Hong Kong, said more needed to be done to educate the public on the importance of vaccination for newborn babies, who must receive three jabs - immediately after birth, at one month and at sixth months.

While an increasing number of countries have universal vaccination, coverage is not full or is inefficient.

"If the mother doesn't see the importance, they don't bring the child back (in 6 months) and it is ineffective vaccination even if the system is in place," Leung said.

(Editing by Bill Tarrant)

Feb 13, 2009

Amarillo Biosciences Partner CytoPharm Approved to Enroll 165 Patient Phase 2 Hepatitis C Trial in Taiwan

<http://money.cnn.com>

Amarillo Biosciences, Inc. (OTCBB: AMAR) today announced that the Taiwanese Department of Health has approved an application to test Amarillo Biosciences' low dose oral interferon in a Phase 2 hepatitis C clinical trial. CytoPharm, the Company's partner in Taiwan, will fund and conduct a clinical trial of 165 chronic hepatitis C patients in Taiwan. The patients will receive one of two different dosages of oral human interferon alpha or placebo.

The aim of the trial is to reduce the relapse rate for those patients who have completed the standard combination therapy, consisting of high dose injectable interferon alpha and Ribavirin given orally. Although most patients respond to the standard therapy, up to 50% of those with certain viral genotypes relapse after treatment. The trial is expected to start in the 2nd quarter of 2009 and to be completed in 2010.

Approximately 170 million people are chronically infected with hepatitis C virus worldwide. The incidence of cirrhosis in chronic hepatitis C patients is 10 to 20%, and 1 to 5% develop liver cancer. Infections are transmitted primarily by direct contact with blood through transfusions not screened for hepatitis C virus, inadequately sterilized needles and syringes, sexual and perinatal transmission. There is no effective vaccine against hepatitis C virus.

In addition to studies on hepatitis C, under the terms of the License and Supply Agreement, CytoPharm will be testing oral interferon in human studies of chronic active hepatitis B and influenza.

About Amarillo Biosciences, Inc.

Amarillo Biosciences, Inc. is a U.S. biotechnology firm operating in global partnership with the Hayashibara Group, which also holds 11% of Amarillo Biosciences shares and has provided over \$18 million in loans, grants and equity investments. The Company's primary focus is extensive and ongoing R&D into the use of low-dose, orally administered interferon as a treatment for a variety of conditions, including Sjogren's syndrome, Behcet's disease, and opportunistic infections in patients who are HIV positive. In its 23-year history, the Company has invested nearly \$39 million to establish oral interferon as a therapeutic agent. The majority of those funds were invested in clinical trials in an effort to achieve FDA approval for interferon. Additional information is available on the web site at <http://www.amarbio.com/>.

About CytoPharm

CytoPharm is a closely held company focusing on the development of biopharmaceuticals for virus-infected diseases and cancers. It was founded in 2002 by Ho Tung Chemical, Vita Genomics, and banks and venture capital firms. It acquired core technologies from Gene Trol Therapeutics, Inc., a California-based company through M&A. Its product pipelines contain a series of cytokines induced by its proprietary technologies, used for hepatitis, and cancers. Currently, its product is under clinical trials in China. Both CytoPharm and Vita Genomics are affiliates of Ho Tung Chemical Inc., one of the largest petrochemical companies in Taiwan, and a publicly traded company whose 2007 revenues were approximately NTD 48 billion.

Alios gets \$24M for hepatitis C work

<http://www.fiercebiotech.com>

By John Carroll

The South San Francisco start-up Alios BioPharma has rounded up commitments on \$24 million in venture capital and plans to use the funds to start advancing its preclinical programs toward proof-of-concept. Novo Ventures and Novartis Ventures led the round--which will be delivered in tranches, starting with \$8.4 million--with participation from the Roche Venture Fund.

"The lead program is a hyperglycosylated Interferon molecule," CEO Lawrence Blatt, PhD, tells

FierceBiotech, which has the potential to become a best-in-class therapy for hepatitis C. The biotech company is working on an advance that it hopes will allow for weekly dosing without any loss of biologic potency. Alios also licensed in a program from the Cleveland Clinic that focuses on blocking viral replication and stimulating production of Interferon.

A veteran CSO from InterMune, Blatt first got Alios started with angel financing in 2006 and has since grown the company to 11 workers. He now plans to add a few bench scientists to the payroll and is quick to acknowledge that he couldn't have picked a better time to recruit new talent.

"There have been a lot of layoffs in the Bay Area, he adds, "and there's a wealth of fantastic candidates."

Bristol-Myers Squibb donates \$1.17m to hepatitis C projects

<http://www.hayspharma.com>

The Bristol-Myers Squibb Foundation is to donate \$1.17 million (£804,000) towards the prevention of hepatitis C as part of its Delivering Hope programme.

China, India and Taiwan will benefit from the money, which is being spent on education and awareness about the disease, plus studies of it, detection measures, care and treatment.

It will go to a number of enterprises in the countries, such as the Liver Disease Prevention and Treatment Research Foundation in Taiwan and the Shanghai Charity Foundation in China.

"The programmes these organisations propose exemplify our Bristol-Myers Squibb Foundation mission of addressing health disparities in communities where the need is greatest," said John Damonti, president of the institution.

It is estimated that 170 million people around the world are infected with hepatitis C, with 94.5 million of these living in the Asia-Pacific region.

Last month, Bristol-Myers Squibb announced that it has entered a global collaboration with ZymoGenetics to develop a novel type-three interferon which is currently in phase-one trials, being studied for hepatitis C.