

Ancient strain of hepatitis B may explain high rates of liver cancer in NT

Tuesday, 28 July 2015

Researchers are investigating a new strain of hepatitis B only found in the Northern Territory (NT) which may explain the high rates of liver cancer in the NT.

To mark World Hepatitis Day 2015 (today, Tuesday, 28 July) Menzies School of Health Research (Menzies) researchers have enrolled their 150th patient in *Characterising Hepatitis B in Northern Australia Through Molecular Epidemiology* (CHARM), a ground-breaking long-term cohort study that has discovered there is only one subtype of the Hepatitis B Virus (HBV) in the NT.

Menzies infectious diseases specialist Dr Josh Davis explains that hepatitis simply means inflammation of the liver but that there are many causes such as viruses, alcohol and some medicines. The most common cause in the Northern Territory is HBV.

“Genotype C4 hepatitis B is unique to northern Australia and seems to be more aggressive than the strains found elsewhere,” Dr Davis said.

“Like all organisms, HBV can be divided into subtypes, and in all other regions of the world there are several subtypes of HBV within the population. However in the NT, there is only one subtype of HBV, and this has only ever been found in northern Australian Indigenous people,”

“We think C4 entered Australia at the same time as humans did about 50 000 years ago. Now the most common way of contracting the virus is at birth from the mother or from exposure to blood in early childhood” Dr Davis added.

“Part of the reason for the CHARM study is to assess whether different treatments are needed and if the genotype leads to a different prognosis.”

Dr Davis believes that C4 is a more aggressive strain of the virus, but cannot be certain since the strain has not been found anywhere else. The NT already has a high rate of liver cancer, which can be caused by HBV, and he believes C4 is one of the reasons for this.

Dr Davis explains that it isn't all bad news. “Prevention of liver cancer is possible by diagnosing hepatitis B and offering treatment,” he said.

“Since universal vaccination, the prevalence of chronic HBV infection is falling – from about 10 per cent of all adults born in the pre-vaccine era prior to 1990 to about three per cent born afterwards,” he said.

“So although the vaccine may not be perfect, it is still having a big impact on reducing HBV as a long-term problem”.

ENDS

Media note:

Josh is an infectious diseases specialist and an early career researcher at Menzies. Josh is currently based at Newcastle, New South Wales, where he is working as a part time senior staff specialist at John Hunter Hospital. For more information about Dr Joshua Davis, visit his researcher profile: http://www.menzies.edu.au/page/Our_People/Researchers/Josh_Davis/

As an alternative face to face contact, Associate Professor Tong is an infectious diseases physician with research interests in infectious diseases affecting Indigenous people. He aims to combine clinical epidemiology with molecular genetic approaches to better understand the patterns and transmission of diseases due to agents such as hepatitis B:

http://www.menzies.edu.au/page/Our_People/Researchers/Steven_Tong/

Media contact:

Erin Neil, communications and marketing officer 08 8946 8658

communications@menzies.edu.au

Menzies Background

Menzies School of Health Research is Australia's leading Medical Research Institute dedicated to improving Indigenous, global and tropical health. We have a 30 year history of scientific discovery and public health achievement. Menzies works at the frontline, joining with partners across the Asia-Pacific as well as Indigenous communities across northern and central Australia. We collaborate to create new knowledge, grow local skills and find enduring solutions to problems that matter.