

Lean diabetics 'more likely to die' from liver disease

**Study shows they face higher risk
than overweight counterparts**

Samantha Boh

Diabetics are three times more likely to die from severe liver disease – fatty liver being the most common cause – than those without the condition, a local study on over 63,000 Chinese Singaporeans has found.

And the surprise finding is that lean diabetics are at a higher risk than their overweight counterparts to die from non-alcoholic fatty liver disease (NAFLD).

Diabetes and obesity are known globally to raise the risk of NAFLD, which occurs when fat accumulates in the organ, and it becomes scarred and cannot function properly.

"At first I thought it could be a double whammy, overweight people who also have diabetes should have the higher risk," said Professor Koh Woon-Puay, who is from Duke-NUS Medical School and principal investigator of the study, at a media briefing yesterday.

"But paradoxically and contrary to my expectations, among lean people, the effects of diabetes increase their risk even more."

More research has to be done to find out why this is the case, though the researchers postulate that it could be due to more aggressive screening of overweight diabetics or individual genetic profiles.

People with low body mass index (BMI) could also have increased waist circumference, generally considered a better marker for NAFLD.

The researchers used data from the Singapore Chinese Health Study, which recruited middle-aged and elderly Chinese living

in Singapore between 1993 and 1998, and correlated that with information from the Singapore registry of births and deaths through to the end of 2014. A total of 5,696 had diabetes, and 16 died from NAFLD.

In comparison to a person without diabetes and with a low BMI of under 23, an overweight diabetic is three times more likely to die from NAFLD.

But a diabetic with a low BMI has an even higher risk – he is 5.5 times more likely to die from it.

The paper on the findings will be published in the scientific journal *Liver International* next month.

Prof Koh said the findings have important implications here and in other Asian populations, where patients develop diabetes at lower BMI levels compared to those in the West.

Dr George Goh, first author of the study, said the findings suggest that diabetics should be more actively screened for liver disease.

"The message is that if you have diabetes, regardless of your BMI, you are at risk of fatty liver disease," said Dr Goh, who is a consultant at Singapore General Hospital's department of gastroenterology and hepatology.

He is also leading an ongoing study of diabetics to screen and assess the severity of NAFLD among Chinese, Malays and Indians.

The two-year project, which involves 400 patients and will end in December this year, will also try to understand the factors that can reduce the development of NAFLD.

Over 400,000 people here are diabetics, it is estimated.

The incidence of NAFLD is rising, according to a study by SingHealth doctors, and could well be affecting half of the adults here.

samboh@sph.com.sg