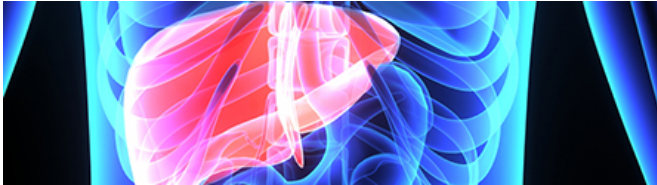


MRI successful new test for liver damage, experts say

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Credit: University of Nottingham

Magnetic Resonance Imaging (MRI) could offer a new non-invasive test for liver damage that could transform the care of patients with cirrhosis, say experts in Nottingham.

In a paper published in the *Journal of Hepatology*, the researchers from The University of Nottingham and Nottingham University Hospitals NHS Trust have demonstrated that MRI can be successfully used to estimate the pressure in the circulation of the liver.

Cirrhosis - scarring of the liver caused by long-term damage - kills 4,000 people in the UK every year 700 people with the condition need a [liver transplant](#) to survive.

The accumulation of this scarring can prevent the blood from flowing effectively within the liver and the resulting build-up of pressure in liver circulation leads to the formation of varicose veins in the oesophagus and stomach, as well as an accumulation of fluid in the body.

The condition can be life-threatening for patients – a rupture to one of these veins can be potentially fatal.

Doctors currently measure this pressure by passing a long catheter through the jugular vein in the neck into the liver. This highly invasive and expensive test carries a small but significant risk of

complications and is only available at specialist liver centres.

The team led by Professors Guruprasad Aithal and Susan Francis, and based at the National Institute for Health Research (NIHR) Nottingham Digestive Diseases Biomedical Research Unit, have developed the use of an MRI scan to assess [high blood pressure](#) in the liver circulation, the degree of liver scarring and changes in the liver blood flow.

The technique is patient-friendly and can be performed using standard MRI scanners widely available across the NHS.

Professor Aithal said: "These scans can be done as outpatients, to pre-empt potential consequence of high blood [pressure](#) in liver circulation so that treatment can be instituted ahead of time.

"It can also help us to monitor whether treatment is effective. This MR technique has the potential to transform care of patients with [liver](#) cirrhosis and accelerate the discovery and development of new treatments."

More information: Naaventhana Palaniyappan et al. Non-invasive assessment of portal hypertension using quantitative magnetic resonance imaging, *Journal of Hepatology* (2016). [DOI: 10.1016/j.jhep.2016.07.021](#)

Provided by University of Nottingham

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