Novel Biomarkers Of Portal Pressure In Cirrhosis

Tech ID: 23285 / UC Case 2013-293-0

BACKGROUND

A group of blood biomarkers has been identified for the diagnosis of complications due to cirrhosis. They correlate with the presence or absence of clinically significant increased portal pressure characteristic of chronic liver diseases. The clinically significant level of increased portal pressure is a required threshold for the presence of esophageal varices and their potential for inducing internal bleeding, a major complication in patients with chronic liver diseases.

There are approximately 200 million people with Chronic Hepatitis C infection worldwide; 1 million cirrhosis patients admitted to hospitals in Europe and the USA; 4 million with Hepatitis B or C in the USA; 10 million with non-alcoholic steatohepatitis (NASH) related to obesity and Diabetes type 2 in the USA. These chronic liver diseases may develop clinically significant portal hypertension with risk of developing esophageal varices.

At present the Standard of Care Guidelines for cirrhosis patients from the American Association for the Study of Liver Diseases recommends Esophagogastroduodenoscopy ('Upper Endoscopy') yearly or every other year.

The approximate cost of 'Upper Endoscopy' is currently $10,000 and the procedure is not without risk to the patient, and has been associated with significant adverse events (respiratory depression; internal bleeding and infections). All of the above patients would benefit from this biomarker screening, as well as any other patient presenting with previously undiagnosed liver symptoms.

This biomarker panel would be prescribed for any diagnosed liver patient or any patient presenting with possible liver symptoms to enable clinical decisions to be made for patient care in a medically and financially expeditious manner.

TECHNOLOGY DESCRIPTION

This invention by UCSD researchers has been developed into a non-invasive test to predict the hepatic vein pressure gradient (HVPG) in cirrhotic patients, which is a critical predictor of complications associated with cirrhosis.

STATE OF DEVELOPMENT

Currently, the test is able to identify patients with equal to or greater than 12mm Hg with 86% accuracy.

RELATED MATERIALS

- Buck M, Garcia-Tsao G, Groszmann RJ, Stalling C, Grace ND, Burroughs AK, Patch D, Matloff DS, Clopton P, Chojkier M. Novel inflammatory biomarkers of portal pressure in compensated cirrhosis patients. Hepatology. 2014 Mar; 59(3):1052-9. doi: 10.1002/hep.26755. Epub 2014 Jan 29. - 01/29/2014

PATENT STATUS

Country	Type	Number	Dated	Case
United States Of America	Issued Patent	10,054,600	08/21/2018	2013-293

CONTACT

University of California, San Diego
Office of Innovation and Commercialization
innovation@ucsd.edu
tel: 858.534.5815.

OTHER INFORMATION

KEYWORDS

cirrhosis, liver disease, portal venous pressure, diagnostic test

CATEGORIZED AS

- Medical
  - Diagnostics
  - Disease: Metabolic/Endocrinology
  - Screening

RELATED CASES

2013-293-0

La Jolla,CA 92093-0910
Fax: 858.534.7345