

# New Study Shows Tocotrienols Reverse Fatty Liver Disease By Dr. Marilyn Arguillas, MD, FPCP, FPSG, FPSDE

BY MICHAEL ASH / TUESDAY, 08 OCTOBER 2013 / PUBLISHED IN ABSTRACTS

Reading Time: 3 minutes

AMERICAN ASSOCIATION FOR  
THE STUDY OF LIVER DISEASES



**Marilyn Arguillas** is a gastroenterologist with a special interest in liver diseases particularly non-alcoholic fatty liver disease, chronic hepatitis, cirrhosis and liver cancer. She is chair of Internal Medicine-Gastroenterology at Davao Doctors Hospital in Davao City, Philippines. She was a member of the Executive Council of the Asian Pacific Association for the Study of the Liver (APASL) from 2006- 2010 and the President of the Hepatology Society of the Philippines from 2010-2012. In

June of 2013 her findings on tocotrienols and fatty liver disease were presented as a Poster of Distinction by the Asian Pacific Association for the Study of the Liver (APASL) conference in Singapore.

**I use mixed tocotrienols** for my patients with non-alcoholic fatty liver disease (NAFLD) and non-alcoholic steatohepatitis (NASH), which is the more severe form of NAFLD. NASH has the potential to progress to liver fibrosis, cirrhosis, liver failure, and rarely, liver cancer. I aim to prevent, delay or even stop the progression of liver fibrosis.

Mixed tocotrienols are isomers of Vitamin E which have been shown to have beneficial effects in patients with NAFLD. Dr. Enrico Magosso and colleagues presented a fascinating study on the effectiveness of tocotrienols at the AASLD (American Association for the Study of Liver Diseases) Annual Meeting in Boston in 2010, which I attended. They studied 56 patients with ultrasound proven fatty liver who were given a dose of mixed tocotrienols (200 mg twice a day) for one year with complete remission of the fatty liver in 56%, compared to only 23% in the placebo group (see FOCUS April 2013)

Our centre at Davaos Hospital then followed up with our own study. My colleague Eduward Thendiono, MD, and I found that mixed tocotrienols significantly decrease what is known as “liver stiffness”. We presented our findings in a poster session of distinction entitled The Effect Of Vitamin E (Mixed Tocotrienol) on The Liver Stiffness Measurement Measured by Transient Elastography (FibroScan) among NAFLD Patients.

Liver stiffness serves as an accurate, indirect measurement of liver fibrosis. The noninvasive measurement of liver stiffness (LS) by ultrasound (Fibroscan) has revolutionized the diagnosis of liver diseases. LS is an excellent marker of fibrosis and cirrhosis. Liver stiffness has been measured for chronic hepatitis B and C, but where NAFLD is concerned, treatment mainly focused on decreasing ALT levels. There is only one study on fibrosis and NAFLD, and that used liver biopsy. Our study is therefore the first of its kind.

We studied 67 patients with NAFLD for three months. Patients were divided into two groups (treatment group and control group). Both groups were placed under lifestyle modification—which included nutrition counselling and advice about exercise. The treatment group, however, also was placed on mixed tocotrienols in a dose of 100 mg once daily for three months. Body Mass Index (BMI), ALT and Liver stiffness were measured at the beginning and the end of the study. Of the total patients, 38 out of 67 improved and showed a decrease in liver stiffness—and 30 of those were in the tocotrienol group (79%) (chi square analysis;  $p < 0.05$ ). This is a significant finding. Mixed tocotrienols not only reverse ultrasound-proven fatty liver, but they improve liver fibrosis based on transient elastography.

This paper was accepted for Oral Presentation as a Poster of Distinction by the Asian Pacific Association for the Study of the Liver (APASL) conference in June of 2013. I feel the science is very promising and certainly deserves larger clinical trials in order for clinicians to have confidence using mixed tocotrienols to treat NAFLD and NASH patients.