Milk Thistle Shows Potential for Hep C

August 15, 2008 By Tim Horn

A medicinal compound in milk thistle, a flowering member of the daisy family, may benefit liver function in people infected with HIV and the hepatitis C virus (HCV), according to the results of a small New York study reported at the XVII International AIDS Conference in Mexico City.

Treatments that improve liver function in HIV-positive people with hepatitis C are urgently needed, explained lead study author George Carter of the Foundation for Integrative AIDS Research (FIAR), which is based in Brooklyn, New York. There is an increased risk for liver damage and death in people coinfected with both viruses, compared with those infected only with HCV. Standard treatment with pegylated interferon and ribavirin is not often curative in people infected with both viruses—especially in those with HCV genotype 1 and in African Americans. In turn, there is significant interest in medications that can help protect the liver without causing significant side effects or harmfully interacting with antiretrovirals (ARVs) used to treat HIV.

The fruit of the milk thistle (Silybum marianum)—a flowering plant native to the Mediterranean regions of Europe, North Africa and the Middle East—contains silymarin, an extract that has purportedly been used in Europe as a treatment for liver disease and jaundice since the 16th century.

Animal studies suggest that silymarin may have various benefits to the liver, such as protecting and promoting the growth of certain types of liver cells. There have also been some human studies, although they have not yielded any firm conclusions—notably regarding its safety and effectiveness as a treatment for viral hepatitis, including hepatitis C.

To explore milk thistle's potential as a treatment for people living with HIV and HCV, Carter and his colleagues—researchers at the Mount Sinai School of Medicine in New York City—conducted a clinical trial involving 21 coinfected patients who received either a placebo or a three-times-daily milk thistle formulation from Thorne Research containing 80 percent silymarin. About half of the study volunteers were men, and the vast majority were either African American or Latino.

Fifteen of the 21 volunteers completed 52 weeks of follow-up; discontinuation rates were similar in both groups. Carter reported no significant lab test abnormalities in either group during the study, nor did his group find either a beneficial or negative effect on patients' CD4 counts, HIV viral load or HCV viral load. The fact that there was no significant change in HIV viral load, notably among those on HIV therapy, suggests that milk thistle does not have any significant interactions with commonly used ARVs.

Carter's group found differences in aspartate aminotransferase (AST) levels—a liver enzyme—between the two groups after 52 weeks. The level dropped, on average, by 8.5 IU/L in the milk thistle group, compared with an increase of 27.9 IU/L in the placebo group. While this difference was not statistically significant—meaning it could have been due to chance—the downward trend in the silymarin-treated patients and the upward trend in the placebo-treated patients are notable.

"Milk thistle was safe in this study population, with no clinically significant interactions with antiretroviral therapy," the authors concluded in their published abstract. "The trend toward reduction in AST suggests possible benefit and deserves further study."
