NAC of Benefit in Early-Stage Acute Liver Failure

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BOSTON — Intravenous *N*-acetylcysteine increases transplant-free survival in patients with early-stage acute liver failure, Dr. William Lee said at the annual meeting of the American Association for the Study of Liver Diseases.

However, the drug appears to hold little benefit for patients in the later stages of the disease. "These patients typically survive only a very short period of time, and it's probably not of value to them," said Dr. Lee of the University of Texas Southwestern Medical Center at Dallas.

He presented the results of a randomized, controlled trial in which 173 patients with acute, non–acetaminophen-related liver failure received either *N*-acetylcysteine (NAC) or placebo. The patients' mean age was 41 years. Their liver failure had a variety of etiologies, including viral hepatitis B (21%), drug-induced liver injury (26%), and autoimmune hepatitis (15%).

Patients were stratified into early- and late-stage liver failure by their hepatic encephalopathy scores. Early-stage patients (115) had a score of I (forgetfulness, agitation) or II (disorientation, asterixis). Late-stage patients (58) had a score of III (somnolence) or IV (coma).

Patients in the active group received an initial loading dose of NAC 150 mg/kg, followed by continuous infusions at lower doses for the next 72 hours.

Overall survival at 3 weeks was not significantly different between the active and placebo groups (70% vs. 67%). Nor was there a significant difference in transplant-free survival (27% vs. 45%). However, when Dr. Lee examined survival by encephalopathy grade, significant differences did emerge. Mean transplant-free survival in those with encephalopathy grades I and II was 52% in the active group, compared with 30% in the placebo group. NAC was associated with an 11-fold increase in the chance of transplant-free survival.

Overall, there were no significant differences in transplantation between the active and placebo groups (32% vs. 45%), length of hospital stay, or organ failure.

Although the drug appears both safe and effective at improving transplant-free survival for early-stage patients, "it is not a substitute for early referral for liver transplant," Dr. Lee emphasized.

The study was funded by the National Institute of Diabetes and Digestive and Kidney Diseases and the Food and Drug Administration's orphan products division. ■

Consider Quality Of Life Before Liver Transplant

COLORADO SPRINGS — The time has come to consider incorporating anticipated quality of life into decision making regarding liver transplantation—and the Model for End-Stage Liver Disease score is a good place to start, Dr. Eric T. Castaldo said at the annual meeting of the Western Surgical Association.

His prospective study included 209 liver transplant recipients who completed the Short Form–36 health-related quality of life evaluation on four occasions during their first year post transplant. The study showed that the higher the pretransplant MELD score—in other words, the worse their physiologic functioning because of liver disease—the greater their subsequent self-rated improvement in quality of life, said Dr. Castaldo of Vanderbilt University, Nashville, Tenn.

The pretransplant MELD score was significantly related only to the physical component of quality of life on the SF-36. It did not predict posttransplant scores on the mental domains of quality of life, he added.

"Previously, most of the decision making on who should receive a procedure like liver transplant was based on expected survival and perhaps certain complication rates. One of our overarching goals here was to … move on to both objective and subjective quality of life after transplantation," said senior investigator Dr. C. Wright Pinson.

"The significance of today's analysis is it's totally prospective. Based on this additional data, I think we're willing to begin to explore the idea that objective and subjective quality of life outcomes data should be included," noted Dr. Pinson, director of the transplant center and professor of surgery at Vanderbilt.

—Bruce Jancin

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