

# Diabetes Quadruples Risk of Liver Disease

BY SUSAN LONDON

FROM THE ANNUAL MEETING OF THE AMERICAN ASSOCIATION FOR THE STUDY OF LIVER DISEASES

SAN FRANCISCO – Health care providers should be aware that adult patients with diabetes have a sharply increased risk for chronic liver disease and should be counseled accordingly, advised investigators with the Centers for Disease Control and Prevention.

In a U.S. population-based study reported at the meeting, the investigators found that diabetic adults had four times the rate of hospitalizations related to chronic liver disease, compared with their nondiabetic counterparts. Hepatitis C and “chronic hepatitis and cirrhosis” accounted for most of these hospitalizations in the diabetic group.

“The bottom line is that people with diabetes have associated liver disease, and this is something that providers should be aware of and they should take some sort of preventive measures toward

that, [things like] vaccinating against hepatitis B or counseling about decreasing alcohol intake,” lead investigator Dr. Kathy K. Byrd of the CDC’s Division of Viral Hepatitis said in an interview.

In fact, the study results provided some of the impetus behind the new rec-



**Physicians should vaccinate diabetes patients against hepatitis B or counsel them about alcohol intake.**

DR. BYRD

ommendation from the Advisory Committee on Immunization Practices that calls for hepatitis B vaccination among diabetic adults aged younger than 60 years, she said.

Dr. Byrd and her colleagues used the Nationwide Inpatient Sample (a nationally representative survey of hospital dis-

charge data) to assess rates of hospitalization related to chronic liver disease for the years 2001-2008. The sample captured information on roughly 7.5-8.2 million hospital discharges per year.

For each hospitalization, the investigators checked for the presence of diagnostic codes for hepatitis B; hepatitis C; chronic hepatitis and cirrhosis; malignancy of the liver or bile ducts; and alcoholic liver disease. They used National Health and Nutrition Examination Survey data to obtain population denominators for adults with and without diabetes.

Study results, reported in a poster session at the meeting, showed that the age-adjusted rate of chronic liver disease-related hospitalization during the entire study period was 1,546 per 100,000 for diabetic adults in the population, roughly fourfold higher than the rate of 398 per 100,000 for nondiabetic adults. For each of the five diagnostic codes, hospitalization rates in diabetic adults were two- to sixfold higher than those in their nondiabetic peers.

Hepatitis C, as well as chronic hepatitis and cirrhosis, were by far the two most common diagnoses within the diabetic group, each seen in about 40% of the hospitalizations, according to Dr. Byrd. Results also showed a temporal trend whereby the rate of chronic liver disease-related hospitalization increased by 34% among diabetic adults between 2001 and 2008 ( $P = .002$ ). When analyzed by specific diagnosis, there was a 55% increase in the rate for chronic hepatitis and cirrhosis, a 44% increase in the rate for malignancy of the liver and bile ducts, and a 34% increase in the rate for hepatitis C.

The rate of chronic liver disease-related hospitalization was consistently higher for men with diabetes than for women with diabetes. This hospitalization rate also increased by a greater extent during the study period among men with diabetes (by 46%;  $P = .001$ ) than among women with diabetes (by 24%;  $P = .058$ ).

Dr. Byrd reported that she had no relevant conflicts of interest. ■

## Metabolic Syndrome Strikes Hard in Psoriatic Patients

BY HEIDI SPLETE

FROM THE ANNUAL MEETING OF THE AMERICAN COLLEGE OF RHEUMATOLOGY

CHICAGO – Metabolic syndrome is significantly more common in patients with psoriatic arthritis than in those with rheumatoid arthritis, data on nearly 2,000 adults show.

Previous studies have suggested that metabolic syndrome is associated with “a state of chronic, low-grade inflammation,” said Dr. Asena Bahce-Altuntas of Albert Einstein College of Medicine in New York. “Since psoriatic arthritis [PsA] is characterized by inflammation of both skin and joints, we may be underestimating this cardiovascular risk in PsA,” she said at the meeting.

To compare the prevalence of metabolic syndrome in patients with PsA versus rheumatoid arthritis (RA), Dr. Bahce-Altuntas and her colleagues used data from the Consortium of Rheumatology Researchers of North America (CORRONA) registry, a prospective, observational cohort of 4,014 patients with PsA and 25,976 patients with RA in academic and private practices throughout the United States. Lipid profile data were available for 1,956 patients from the CORRONA registry: 294 with PsA and 1,662 with RA.

Overall, 27% of PsA patients met criteria for metabolic syndrome, compared with 19% of RA patients. Also, several specific components of metabolic syndrome were significantly more common in PsA patients.

In particular, significantly more PsA patients than RA patients had triglycerides greater than 150 mg/dL (38% vs. 28%).

Significantly more PsA patients than RA patients were male (54% vs. 23%, respectively), and the mean age was significantly greater in RA patients than in PsA patients (62 years vs. 56 years, respectively). Howev-

er, after age, sex, and ethnicity were controlled for, the odds of metabolic syndrome remained significantly higher for PsA patients (odds ratio, 1.44).

Metabolic syndrome was defined as a body mass index greater than 30 kg/m<sup>2</sup> and any two of the following criteria: triglycerides greater than 150 mg/dL, HDL less than 40 mg/dL for men or less than 50 mg/dL for women, a diagnosis of hypertension, or a diagnosis of diabetes.

In a subanalysis of obese patients (133 PsA patients and 654 RA patients with a BMI greater than 30), the prevalence of metabolic syndrome remained significantly higher in PsA patients (60%) than in RA patients (49%), as did the prevalence of patients with triglycerides greater than 150 mg/dL (51% vs. 39%).

The study was limited by the small sample of PsA patients, and by the modified metabolic syndrome criteria that may have underestimated the prevalence of metabolic syndrome in both groups, said Dr. Bahce-Altuntas. However, the results suggest that metabolic syndrome and its components are significantly more common in PsA than in RA. “High triglycerides appear to drive the estimated increase in risk of metabolic syndrome in PsA vs. RA,” she noted.

The combination of skin and joint inflammation in PsA may contribute to the increased frequency of metabolic syndrome in these patients, but more research is needed, Dr. Bahce-Altuntas said. “More intensive interventions to modify these risk factors are warranted in PsA patients in order to reduce cardiovascular morbidity and mortality.”

These companies have supported CORRONA over the past 2 years: Abbott, Amgen, AstraZeneca, Bristol-Myers Squibb, Centocor, Genentech, Lilly, Pfizer, and Roche. Dr. Bahce-Altuntas had no disclosures. ■

## Comorbid Psoriasis Adds Hefty Economic Burden

BY BRUCE JANCIN

FROM THE ANNUAL CONGRESS OF THE EUROPEAN ACADEMY OF DERMATOLOGY AND VENEREOLOGY

LISBON – Psoriasis and diabetes are expensive diseases, and patients with both conditions experience a synergistic increase in health care utilization and costs that is significantly greater than the incremental economic burden imposed by each disease individually.

In other words, patients with comorbid psoriasis and diabetes have more hospitalizations and outpatient visits over the course of a year than would be expected simply from adding together the increased use typical of patients with psoriasis to that of patients with diabetes, compared with health care use by individuals with neither condition, Dr. Frank Zhang reported at the annual congress of the European Academy of Dermatology and Venereology.

This is an observation with important implications for health economics. These are two common diseases. Psoriasis affects 2%-3% of the world’s population, with 260,000 new cases arising per year in the United States alone. Psoriasis predisposes to insulin resistance, and psoriasis patients have a one-third greater risk of diabetes than the general population, noted Dr. Zhang of Celgene Corporation, Summit, N.J.

Because the economic impact of having both diseases had not been

addressed, he and his colleagues conducted a retrospective study of 106,128 patient pairs matched for age and gender, one member of each pair having psoriasis and the other free of the disease. The patients were drawn from the Thomson Reuters MarketScan Research Databases for 2004 through June 2009.

Sixteen percent of the psoriasis patients had diabetes, significantly greater than the 13% with diabetes in the control group.

Psoriasis patients with diabetes averaged 17 more hospitalizations per 100 patient-years and 5.8 more outpatient visits per year than did psoriasis patients without diabetes. Furthermore, patients with diabetes and psoriasis averaged five more hospitalizations per 100 patient-years and 6.3 additional outpatient visits per year, compared with nonpsoriatic patients with diabetes.

The most likely explanation for this synergistic health care burden in the dual-diagnosis patient lies in the complexity entailed in managing the two diseases simultaneously, said Dr. Zhang.

Total annual health care costs in patients with both psoriasis and diabetes averaged \$19,536, compared with \$13,589 for psoriasis-free patients with diabetes and \$5,539 in those who had psoriasis but not diabetes.

The study was funded by Celgene, where Dr. Zhang is employed. ■