Strong Link Between Gout, Metabolic Syndrome Found

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he prevalence of metabolic syndrome may be nearly three times higher among individuals with gout, compared with unaffected individuals, judging from results of a recent data analysis.

A link between gout and metabolic syndrome has been suggested by other investigators, but the degree of the overlap between the two conditions has remained unclear, according to study investigators Dr. Fyon K. Choi of the Arthritis Research Centre of Canada and his associates.

A total of 8,807 individuals aged 20 years or older participated in the third National Health and Nutrition Examination Survey (NHANES-III) from 1988 to 1994. A total of 233 had gout, according to self-report (mean age of 58 years). All individuals were assessed for metabolic syndrome; the condition was deemed to be present if an individual had at least three of the following five metabolic abnormalities: abdominal obesity, hypertension, hyperglycemia, low HDL cholesterol, high blood pressure, and high fasting glucose.

Prevalence of metabolic syndrome was approximately three times among the 231 individuals with gout and 25% among 8,574 individuals without gout. The prevalence rates of each of the five metabolic abnormalities associated with metabolic syndrome were higher among adults with gout. The prevalence of high blood pressure in individuals with gout was more than double the prevalence of those without. The link between metabolic abnormalities and gout was evident across subgroups of major associated gout risk factors including body mass index, hypertension, and diabetes, the investigators reported (Arthritis Rheum. 2007;57:109-15).

The interplay between hyperuricemia and high insulin levels caused by insulin resistance may explain the connection. Prevalence of hyperuricemia was 49% among individuals with gout and 18% among those without, according to the analysis by Dr. Choi and his associates.

Prevalence of metabolic syndrome increased from 27% among participants with gout aged 20-39 years to 72% among participants aged 40-59. Prevalence of metabolic syndrome among individuals without gout increased from only 12% in adults aged 20-39 years to 31% in those aged 40-59 years. Prevalence for metabolic syndrome in adults over age 60 years with gout (71%) was more substantial than in those without gout (49%).

Dr. Bruce Strober of New York University, New York, said that stopping the biologic makes it more likely the vaccine will be at its peak efficacy. "I think there are some tangential studies that show if you give some types of vaccines in the midst of biologic therapy, some immunologic readouts are reduced, but the clinical relevance of this has not been established," he noted. That live vaccines are contraindicated with biologics. As to the length of time for biologic discontinuation in the setting of live vaccine use, "you would like the biologic to be more or less inactive in the patient, so four to five half-lives," he said.

This estimate was shared by panelist Dr. Francisco Kerdel of Cedars Medical Center in Miami, who also raised the question of whether biologic treatment brings an increased risk of contractile disease, especially in regions with a greater number and variety of nefarious microbes. "When you talk about the granulomatous diseases being activated by the use of anti–(tumor necrosis factor), most of the time it applies to patients reactivating what they already have," he said. Dr. Strober suggested that physicians ask patients taking biologics about their future travel plans and vaccinations.

Flare-up of the disease itself is one of the foremost risks of stopping a biologic, especially efalizumab, Dr. Leonard noted. Disease rebound is less of a risk, however, with TNF-α antagonists.

Another challenging scenario that Dr. Leonard presented involved an elderly patient with psoriatic arthritis and heart failure (HF) who is unwilling to accept conventional treatment and insists on biologic therapy.

"I think you need to define the severity of HF," Dr. Strober said, adding that studies of esecanetop and infliximab showed that only patients with severe heart failure experienced problems on infliximab, and only on the highest dose of 10 mg/kg. He advised consulting with a cardiologist to determine if tumor necrosis factor inhibitors are an option. Even so, he suggested trying etanercept or alefacept for patients with heart failure.

The panel also discussed the issue of weight and body mass index with biologic therapy. Morbidly obese patients don't respond as well to etanercept, Dr. Kalb noted, but the biologics with weight-based dosing, efalizumab and infliximab, have demonstrated similar responses in patients with and without body mass index.

"Part of the difficulty in treating heavier patients may lie in weight-based dosing," said Dr. Strober.

The final scenario presented involved a patient on a biologic who is about to undergo elective surgery for chronic cholecystitis refractory to antibiotics. Dr. Leonard advised stopping the biologic and, if the case of etanercept, biologics might pose some effect on postsurgical wound healing. "I don't have any idea what these medicines are," he said. Dr. Kalb noted that many patients with Crohn's disease need surgery and that many continue taking infliximab.

Dr. Kerdel noted that if the cholecystitis patient is taking efalizumab, "I would continue [treatment], because I think the risk of having a rebound phenomenon would be greater than the risk of infection that we know of.

Dr. Leonard is a consultant for Amgen, Abbott, Genentech, and Centocor. Dr. Kerdel is a consultant for Abbott, Amgen, and Centocor. Dr. Kalb has been a consultant for the latter three firms, as well as for Genentech.

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