Heart Failure Is No Longer Deadlier Than Most Cancers

BY BRUCE JANCIN
Denver Bureau

MUNICH — Five-year survival of patients with heart failure has been dire, worse than for many cancers. But therapeutic advances in the last 2 decades mean that today, for the first time, that's no longer true, according to a large Swedish study.

"Heart failure has become less malignant than the most common forms of cancer at the population level," Simon Stewart, Ph.D., said at the annual congress of the European Society of Cardiology.

Indeed, while most cancer-related survival rates have improved substantially in Sweden, as elsewhere, during the last 2 decades—with the glaring exception of lung cancer—heart failure survival rates have increased at twice the pace.

"Heart failure survival rates are now equivalent to those for large bowel cancer," added Dr. Stewart, head of preventive cardiology at the Baker Heart Research Institute, Melbourne.

He presented a population-based study of 770,484 patients hospitalized in 19 Swedish counties during 1988-1999 for heart failure, acute MI, or the six most common types of cancer. Collectively, these counties included 85% of the nation's population.

A total of 321,951 patients were admitted for heart failure, while 218,664 were hospitalized for large bowel, prostate, breast, lung, bladder, or ovarian cancer.

Thus, heart failure was roughly 50% more common than were all six common cancers as a cause of hospital admission.

Among patients aged 60 years, 5-year survival was 70% in men and 75% in women with heart failure, compared with 57% in men and 61% in women with large bowel cancer. In contrast, 5-year survival in 60-year-olds with lung cancer was 18% in men and 20% in women.

Here's how the prognosis for heart failure improved during 1988-1999: Each year during the study period, 5-year survival increased by an average of 7.1% in men and by 6% in women with heart failure.

Meanwhile, 5-year survival improved by 3% per year in patients with large bowel or breast cancer. The prognosis for lung cancer remained unchanged.

Dr. Stewart observed that this study may actually underestimate the survival gains in heart failure patients. Evidence indicates Swedish primary care physicians have assumed a more active role in managing heart failure. They are making a strong effort to keep patients out of the hospital.

Thus, the admission threshold has probably increased over the past couple of decades, and it's likely many patients present in the hospital with more advanced heart failure than was formerly the case. ■

Metformin Reduced Heart Failure Morbidity, Mortality

BY BRUCE JANCIN
Denver Bureau

MUNICH — Metformin-treated diabetic patients with heart failure had strikingly lower morbidity and mortality than did those on oral sulfonylureas, in a long-term observational study.

"Our data suggest metformin is probably safe—and potentially effective—in congestive heart failure patients compared to treatment with sulfonylureas alone," Dr. Chim C. Lang reported at the annual congress of the European Society of Cardiology.

The safety issue is key. Heart failure has long been considered a relative contraindication to metformin because of a supposedly increased risk of drug-related, potentially fatal, lactic acidosis. The concern has its origins in problems with phenformin, another insulin-sensitizing biguanide. But several lines of evidence suggest the concern over metformin has little or no merit, said Dr. Lang of Ninewells Hospital and Medical School, Dundee, Scotland.

How best to manage diabetes in patients with heart failure is a pressing issue, particularly in light of problems with the use of thiazolidinediones in this setting. Metformin could be a cheaper and safer alternative in this common clinical situation. Heart failure is present in an estimated 25%-40% of all adults with diabetes, Dr. Lang said. The incidence of heart failure in type 2 diabetic patients is 30.9 cases per 1,000 person-years, the cardiologist noted.

He reported on all 774 type 2 diabetic patients who developed new-onset chronic heart failure in Tayside, Scotland, during 1994-2003. Ninety were managed with metformin monotherapy, 381 with sulfonylurea monotherapy, and 303 with both.

At 10 years of follow-up, 60% of patients in the metformin group were dead, compared with 77% who received sulfonylureas alone and 66% with combination therapy.

Patients managed with sulfonylureas alone tended to be older, to be sicker, and to have worse renal function, and were less likely to be on β-blockers and aspirin, so those differences were adjusted for in a Cox regression analysis. The result: an adjusted 28% relative risk reduction in mortality with metformin alone.

The mortality curves diverged within the first year of follow-up. At 1 year, 90% of patients in the metformin group remained alive. They had an adjusted 55% relative risk reduction in 1-year mortality compared with the sulfonylurea-only group, while patients on both forms of therapy had a 34% relative risk reduction.

The combined risk of death or all-cause hospitalization was reduced by 26% in the metformin group compared with those on sulfonylureas alone. However, there was no significant difference between the sulfonylurea-only and combination therapy groups in the combined end point.

The study was funded by the British Heart Foundation. ■

Inflammatory Marker May Flag Higher Cardiac Mortality Risk

BY MITCHEL L. ZOLER
Philadelphia Bureau

TORONTO — An elevated serum level of a novel inflammatory marker, YKL-40, was linked with a significantly increased risk for all-cause death and cardiovascular death in a study of more than 4,000 patients with a history of myocardial infarctions or angina.

"This is the first time that YKL-40 levels were tested in patients with cardiovascular disease," Dr. Jens Kastrup said at the 14th World Congress on Heart Disease.

Results from prior studies showed that serum levels of YKL-40 are high in patients with ST-elevation myocardial infarctions and in those with stable coronary artery disease. Elevated serum levels following a myocardial infarction eventually subside back close to normal. YKL-40 levels are also elevated in cancer patients, and results from other studies have suggested that YKL-40 may be a prognostic marker in cancer patients, said Dr. Kastrup, director of angiogenesis research at the Heart Centre of Rigshospitalet in Copenhagen.

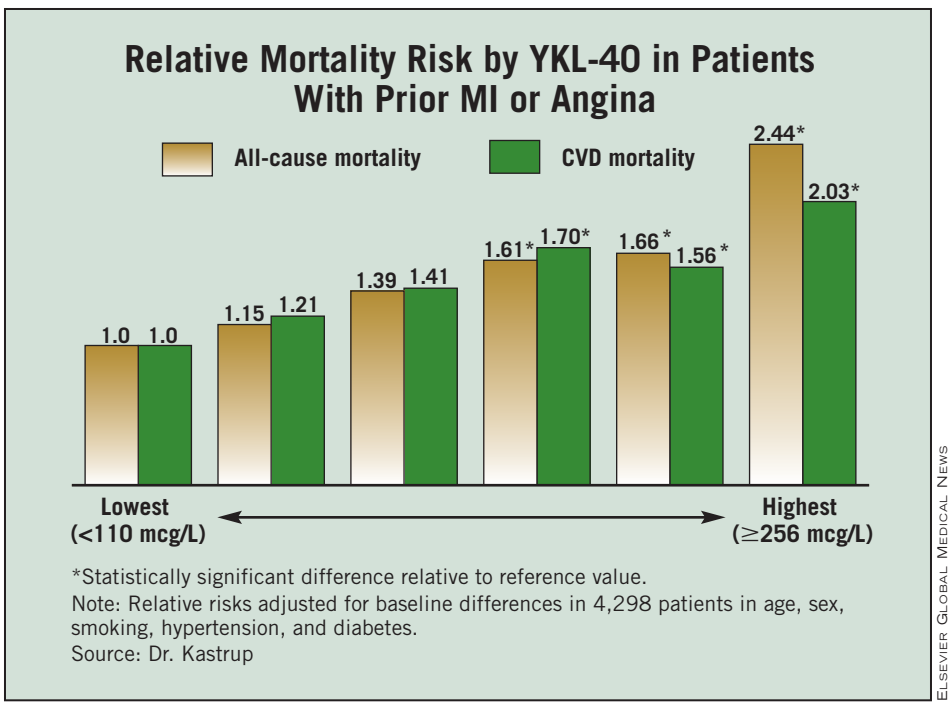
YKL-40 is measured by an investigational immunoassay made by Quidel Corp. of San Diego. Quidel provided assays used in the current study but did not provide any other research support. Dr. Kastrup said that he and his associates had no other financial relationship with the company and that Quidel had no role in the design or conduct of the study, in the collection, analysis, or interpretation of the results, or in the preparation, review, or approval of the report from the study.

'This is the first time that YKL-40 levels were tested in patients with cardiovascular disease.'

DR. KASTRUP

Serum specimens were used from 4,298 patients with a diagnosis of myocardial infarction (about two thirds of the patients) or angina who had been enrolled in an earlier trial that had compared the efficacy of 2 weeks of treatment with clarithromycin against placebo (BMJ 2006;332:22-7).

The median level of YKL-40 in all patients from this study was 110 mcg/L, compared with a normal value of 30-40 mcg/L, Dr. Kastrup said at the congress, sponsored by the International Academy of Cardiology. The patients were divided into six groups based on their serum levels, ranging from the lowest group, which had serum values of less than 110 mcg/L, up to levels of 256 mcg/L or greater in the subgroup with the highest serum levels.



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During an average follow-up of 2.6 years, the rate of all-cause death rose with the serum level of YKL-40, with the highest rate of death in patients in the subgroup with the highest serum level. After adjustment for baseline differences, patients with the highest level of YKL-40 were about 2.4-fold more likely to die than were patients in the subgroup with the lowest level of YKL-40, a significant difference. Similar analyses showed that patients with the highest levels of YKL-40 were also significantly more likely to have a cardiovascular disease death than were patients with the lowest level (see chart). ■