# Night Sweats May Pose CHD Risk in Menopause

The presence of flushing, however, was not associated with risk of CHD in this study.

### BY KERRI WACHTER

#### FROM MENOPAUSE

ight sweats, but not hot flushes, appear to significantly increase the risk of coronary heart disease, based on the results of an analysis of more than 10,000 women in Sweden and the Netherlands.

"Our data show that women with night sweats have a 33% increased CHD risk as

Major Finding: In menopausal women,

night sweats were associated with an increased risk of coronary heart disease in analyses adjusted for age (HR, 1.39), multiple variables (HR, 1.33) and

 analyses adjusted for age (HR, 1.39), multiple variables (HR, 1.33), and cardiovascular risk factors (HR, 1.25). There was no link with hot flushes.

**Data Source:** An analysis of 10,787 women in two large cohort studies.

**Disclosures:** The authors did not disclose any financial conflicts of interest.

compared with asymptomatic women. [Body mass index], blood pressure, and total cholesterol level could not totally explain this association, because after adjustment for these factors, symptoms of night sweats were still associated with a slightly, borderline significantly increased risk of CHD," wrote Gerrie-Cor M. Gast, Ph.D., and her coinvestigators (Menopause 2011;18:146-51).

The researchers merged two large cohorts of women of menopausal age – the Eindhoven Perimenopausal Osteo-

porosis Study (EPOS) and the Women's Health in the Lund Area (WHILA) study – to examine possible associations between menopausal vasomotor symptoms (VMS) and risk of CHD. EPOS is a prospective cohort study among 6,700 Dutch women aged 46-57 years, who participated in a screening program established to assess determinants of low bone mineral density during 1994-1995. The WHILA Study comprises 6,917

Swedish women aged 50-64 years who participated in a health screening procedure that took place between 1996 and 2000.

Women with prevalent cases of CHD were excluded, leaving in 10,787 women for the analysis (4,790 from EPOS and 5,997 from WHILA). Both studies were linked to databases that allowed the researchers to gather information about causes of death.

The association between VMS and incident CHD was investigated using Cox regression models; women who reported that they had no VMS were used as the reference category. The analyses were based on a mean follow-up of 10.3 years. In total, 48% of all women reported symptoms of flushing and 35% reported symptoms of night sweats. The overall mean age at baseline was 53 years but the mean baseline age was greater in the WHILA cohort than in the EPOS cohort. Women in the EPOS cohort were more

likely to have a medium level of completed education and to be current smokers. All other variables were similar for both cohorts. During follow-up, 303 women experienced an incident

CHD event, of which 14 were fatal, noted Dr. Gast, a researcher at the University Medical Center Utrecht in the Netherlands, and her coinvestigators.

The presence of flushing was not associated with risk of CHD (hazard ratio, 1.11). This did not change after multivariable adjustment. However, in the age-adjusted and multivariable-adjusted analyses, the occurrence of night sweats was associated with a significantly increased risk of CHD, with hazard ratios of 1.39 and 1.33, respectively.

Importantly, adjustment for BMI, blood pressure, and total cholesterol level attenuated the association, but symptoms of

night sweats were still associated with a slightly, borderline significantly, increased risk of CHD (HR, 1.25).

To minimize the possibility that the use of exogenous hormones modified the risk of CHD, the researchers conducted a separate analysis for the subgroup of 7,100 women who had never used oral contraceptives or hormone therapy. Symptoms of flushing were not associated with risk of CHD in this group.

However, night sweats were still positively and even more strongly associated with a significantly increased CHD risk in the age-adjusted model (HR, 1.46) and multivariable-adjusted model (HR, 1.44) – as well as in the analyses, in which the researchers adjusted for BMI,



blood pressure, and total cholesterol (HR, 1.35).

"We do not have a clear pathophysiological explanation for our finding," the researchers wrote.

They speculated that "a possible mechanism linking night sweats to CHD is the sympathetic nervous system activity, which is thought to be higher in the symptomatic women. An increase in sympathetic nervous system activity is also involved in various vascular abnormalities. Conceivably, this may explain the higher CHD risk in women with night sweats."

## Benefits of Short-Interval Mammography Questioned

#### BY DOUG BRUNK

FROM THE ANNUAL MEETING OF THE AMERICAN SOCIETY FOR RADIATION ONCOLOGY

SAN DIEGO – Short-interval mammography following breast-conserving therapy is not more effective than annual screening mammography in detecting new ipsilateral invasive breast cancer, results from a large health care system study demonstrated.

The National Comprehensive Cancer Network recommends a mammogram 6-12 months following radiation, whereas the American Society of Clinical Oncology recommends the first posttreatment mammogram 1 year after diagnosis, but no earlier than 6 months after completion of radiotherapy, Dr. William T. Sause said at the meeting.

For the past 10 years Dr. Sause and his associates at Intermountain Healthcare, an organization of 24 hospitals in Utah, have conducted posttreatment mammograms at 6-month intervals for the first 2 years after patients have completed radiotherapy, followed by annual screening. The researchers use mammography tracking software that has been implemented and standardized at all facilities.

To evaluate the effectiveness of this approach, Dr. Sause and his associates reviewed the records of 1,454 patients who had a lumpectomy and radiation between 2003 and 2007. Of those, 1,386 underwent short-interval mammography.

All recurrences were reviewed by a dedicated breast radiologist to verify the recurrence, type, and diagnosis.

Dr. Sause reported that 25 patients (1.8%) experienced a recurrence during the study period. Most recurrences (84%) manifested within 24 months, "which is not surprising, because our study closed in 2007, so the follow-up isn't much longer than that," he said.

Nearly half of the recurrences (44%) were ductal in situ carcinoma, and 52% occurred in the ipsilateral breast. Of the ipsilateral breast recurrences, 62% were ductal in situ carcinoma.

No ipsilateral or invasive recurrences were identified within 12 months. Five (20%) ipsilateral and invasive recur-

rences were identified at 12-24 months, for a relative risk of 0.4%. The researchers found that the screening efficacy for patients undergoing short-term mammography is significantly lower compared with that of the general screening population (a yield of 2.9 vs. 4.4 cancers per 1,000 patients, respectively).

"Short-term mammography following modern breast conservation has very low yield for new ipsilateral invasive breast cancer," Dr. Sause concluded. "Eliminating short-term mammography would result in a minimum direct cost savings of approximately \$1,160,000 for this patient cohort over the study period."

He said that the analysis "represents a worthwhile demonstration of comparative effectiveness research and has potential to be expanded to other treatment areas."

Electronic data resources, clinical leadership, data

- **Major Finding:** Short-interval mammograms yielded 2.9 new ipsilateral invasive breast cancers per 1,000 patients, which was significantly lower than the 4.4 cancers per 1,000 patients from annual screening mammograms over the same time frame and study population.
- **Data Source:** An analysis of 1,386 patients who had a lumpectomy and underwent short-interval mammography at Intermountain Healthcare in Utah in 2003-2007.

Disclosures: Dr. Sause said that he had no relevant financial disclosures.

and statistical support, and cultural reorganization of priorities are needed for effective comparative effectiveness research, he continued. "All of these are challenging," he acknowledged. "There are misaligned incentives between health care providers and payers. It's very easy for me to challenge the utilization of mammography. It's not so easy to challenge the utilization of IMRT [intensity-modulated radiation therapy].