

# Night Sweats in Menopause May Pose CHD Risk

BY KERRI WACHTER

FROM MENOPAUSE

Night 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 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 Osteoporosis 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 in 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



Greater sympathetic nervous activity may explain the night sweats/CHD link.

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.

Women who reported that they had no VMS were used as the reference category in Cox regression analyses based

on a mean follow-up of 10.3 years. In total, 48% of all women reported flushing and 35% reported night sweats. The overall mean age at baseline was 53 years but the WHILA cohort was older than the EPOS cohort. During follow-up, 303 women had an incident CHD event, of which 14 were fatal, noted Dr. Gast, a researcher at the University Medical Center Utrecht (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

VITALS

**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 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.

linked 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.” ■

## New Approach to Uterine Prep Requires 81% Fewer Injections

BY BRUCE JANCIN

FROM THE ANNUAL MEETING OF THE AMERICAN SOCIETY FOR REPRODUCTIVE MEDICINE

DENVER — A gonadotropin-releasing hormone antagonist appears to provide significant advantages over conventional GnRH agonist therapy for uterine preparation in recipients of frozen embryo transfer and egg donation cycles, according to Dr. Ilan Tur-Kaspa.

Clinical outcomes were similar with the two strategies in a randomized controlled trial, but patient satisfaction was greater with GnRH antagonist therapy because it entailed a mean of 81% fewer injections. It also enabled women to avoid troublesome estrogen deprivation symptoms – a major patient complaint with GnRH agonist therapy – and eliminated the waiting period between cycles, Dr. Tur-Kaspa reported.

The study involved 90 women undergoing 118 randomized embryo transfer cycles. They were assigned to downregulation with a daily subcutaneous injection of 0.25 mg of the GnRH antagonist cetrorelix (Cetrotide) or a midluteal daily injection of 0.25-0.5 mg of the GnRH ag-



The ‘EGAP’ protocol calls for Estrogen with GnRH Antagonist followed by Progesterone.

DR. TUR-KASPA

onist leuprolide (Lupron). Cetrorelix was started on day 9-11 of estrogen treatment and continued until the day progesterone was started. Leuprolide was started 7 days prior to the anticipated onset of menstruation and continued until the day progesterone was started, said Dr. Tur-Kaspa, president and medical director of the Institute for Hu-

man Reproduction, Chicago.

He calls his strategy the EGAP protocol, for Estrogen with GnRH Antagonist followed by Progesterone.

Embryo transfer, implantation, and clinical pregnancy rates were similar in the two study arms.

Key outcomes per embryo were also similar in the two groups. The multiple pregnancy rates were 26% and 24% in the patients receiving GnRH agonist and GnRH antagonist therapy, respectively; the delivery rates were 29% and 27%, respectively; and the miscarriage rates were 11.1% and 10.5%.

There were no significant adverse events in either study arm.

Patients randomized to the GnRH agonist received a mean of 26.0 injections, compared with 5.2 injections per patient assigned to the GnRH antagonist.

Dr. Tur-Kaspa said is a paid adviser and speaker for EMD Serono, which provided partial support for the study. ■

## Fewer Embryos Being Transferred per Cycle

Infertility treatments performed in 2009 resulted in more than 56,000 live births, according to the latest data from the Society for Assisted Reproductive Technology.

In 2009, 367 clinics from around the United States reported data to SART on 142,241 treatment cycles, resulting in 56,778 live births. In vitro fertilization (IVF) made up more than 99% of the treatments performed that year.

The latest figures indicate that infertility specialists are continuing to transfer fewer embryos in each cycle. For example, the average number of fresh embryos transferred from nondonor oocytes was 2.1 in women under age 35 years, 2.3 in women aged 35-37 years, and 2.7 in women aged 38-40 years. These are similar to figures reported in 2008.

More women also are opting for single embryo transfer (SET). In 2009, 7.2% of cycles in women under age 35 years involved elective SET. In women aged 35-37 years, SET made up about 4% of cycles. Comparatively, in 2003, the percentage of cycles with elective SET in women under age 35 years was 0.7%, and that figure was 0.4% in women aged 35-37 years.

The trend toward transferring fewer embryos is encouraging, fertility experts agreed.

“The trends are going the right way,” said Dr. Zev Rosenwaks, director of the Center for Reproductive Medicine and Infertility at Weill Cornell Medical College and New York Presbyterian Hospital, New York. But while SET is the safest approach, it does result in a lower pregnancy rate. That can make it a tough sell with women, especially if they have tried IVF unsuccessfully in the past and have been unsuccessful, he said.

Dr. Brad Van Voorhis, director of the IVF unit at the University of Iowa, Iowa City, said his clinic has made a point of encouraging patients to consider SET, and it has had success. A summary report for 2008 states that the percentage of cycles with elective SET at his clinic was 33.1% in women under age 35 years and 30% in women aged 35-37 years. Part of the solution is to educate women about the potential complications of multiple births. Generally, patients are more accepting if they understand the risks involved, he said.

—Mary Ellen Schneider