

News In Brief

OBSTRUCTIVE SLEEP APNEA MAY BE A TRIGGER FOR NOCTURNAL MYOCARDIAL INFARCTION

A study from the Mayo Clinic of patients with a known time of onset of myocardial infarction (MI) showed that obstructive sleep apnea (OSA) was associated with a 5 time greater frequency of MI between midnight and 6 am, compared to MI patients who did not have OSA. All patients (except for 2) who had nocturnal MI also had OSA. This study may strengthen the need for patients who have nocturnal MI to be evaluated for OSA.

The authors states that patients with a history of MI have a 2 to 3 times greater prevalence of OSA; but the influence of OSA on MI timing was unclear. MI (and sudden cardiac death or SCD) have a well-recognised diurnal periodicity that peaks between 6 am and 12 pm. Patho-physiological responses (like hypoxaemia, increased blood pressure) could alter the typical diurnal pattern.

The authors studied 92 MI patients who were able to recall the time of onset of symptoms. Diagnosis of MI was made by a physician clinically, and confirmed by elevated cardiac enzyme. These patients underwent polysomnography, at a median of 17 days after MI. The patients were diagnosed as having OSA if the apnea-hypopnea index was 5 or more events per hour. Using this criterion, 70% of the MI patients had OSA. When a more conservative index of 10 or more events per hour was used, 52% of the patients were diagnosed with OSA.

Of the MI patients diagnosed with OSA (using index of 5 or more events per hour), 32% had nocturnal MIs (between midnight and 6 am, compared to 7% of MI patients without OSA ($P = 0.01$) when the 10 or more events per hour index was used. The frequency of nocturnal MI remained significantly greater in patients with OSA than those without (33% and 14%, respectively, $P = 0.03$). Of patients with MI between 12 am and 6 am ($N = 22$), 20 (91%) had OSA. In contrast, nearly half of the patients who did not have OSA had MI onset between 6 am and noon, compared to patients with OSA (47% and 17%, respectively, $P = 0.003$). The frequency of MI during the other two 6-hour time intervals did not differ between groups.

An analysis using three 8-hour time intervals were used. There was a similar difference in nocturnal MI timing. Patients with OSA had a higher MI rate between 10 pm and 5:59 am ($P =$

0.006). Those without OSA were more likely to have MI onset between 6 am and 1:59 pm ($P = 0.03$).

The conclusion of the authors was that patients whose MI onset was during usual sleep hours should be evaluated for OSA.

The study had several limitations. Not every patient with MI was studied. Also, the study population comprised only MI survivors.

Source: Sert Kuniyoshi FH et al. Day-night variation of acute myocardial infarction in obstructive sleep apnea. J Am Coll Cardiol 2008; 52: 343-346.

BREAST SELF-EXAMINATION: SYSTEMIC REVIEW INDICATES IT DOES NOT REDUCE BREAST CANCER MORTALITY

A systematic review from the Nordic Cochrane Center of date on almost 400,000 women indicates that breast self-examination (BSE) does not reduce breast cancer mortality and may cause harm by prompting unnecessary biopsies.

Women who performed BSE had identical breast cancer mortality rates as women who did not perform it. Women who performed BSE had nearly twice as many negative breast biopsies as women who did not perform it. The results updated and confirmed those from a 2003 review.

The authors state that "screening by breast self-examination or physical examination (by trained healthcare personnel) cannot be recommended". It is also noted that The American Cancer Society revised its BSE recommendations more than 5 years ago in response because of evidence of a lack of benefit, merely saying that monthly BSE remained optional.

The Cochrane review analysed data on 388,535 women involved in 2 population-based studies in Russia and Shanghai, which included a comparison of BSE and no examination. There was no significant difference in breast cancer mortality between the two groups (RR 1.05, 95% CI 0.90 to 1.24). Women in the Russian study who performed BSE identified more cancers (RR 1.24, 95% CI 1.09 to 1.41), but the Shanghai study showed no difference in detection rates (RR 0.97, 95% CI 0.88 to 1.06). BSE led to 3,406 negative breast biopsies, versus 1,856 in the control group (RR 1.88, 95% CI 1.77 to 1.99). ■

Source: Kosters JP, Gotzsche P. Regular self-examination or clinical examination for early detection of breast cancer (Review). Cochrane Database Syst Rev 2008; 3:DOI: 10.1002/14651858.CD003373.