NEWS in Brief

HEALTHY OLDER HEAVY USERS OF NSAIDS MORE LIKELY TO DEVELOP DEMENTIA

A study from the University of Washington School of Medicine, Seattle, has found that among patients aged 65-years and older, heavy users of NSAIDs (non-steroidal anti-inflammatory drugs were 66% more likely to develop dementia, and 57% more likely to develop Alzheimer's disease.

In the prospective study, 2,736 members of an integrated healthcare delivery system in King County, Washington, were followed for up to 12 years, as part of the ACT (Adult Changes in Thought) study.

They were 65-years or older (median age 74.8), and did not have baseline dementia.

Based on pharmacy records going back up to 17 years, 12.8% of the study participants were classified as baseline heavy NSAID users (heavy use was defined as taking 500 or more standard daily doses over 2 years). During follow-up, another 3.9% were classified as heavy users up. Ibuprofen, naproxen, indomethacin, and sulindac accounted for 80% of the NSAIDs.

During the study period, 476 participants developed dementia (of these, 356 was Alzheimer's disease). The following factors were controlled for – age, gender, education, ApoE status, hypertension, diabetes, obesity, osteoarthritis, and physical activity.

The risk of developing dementia (all causes) was 66% higher among heavy users than those with little or no NSAID use (HR 1.66, 95% CI 1.24 to 2.24). The risk of developing Alzheimer's disease was 57% higher (HR 1.57, 95% CI 1.10 to 2.23).

The researchers stated that the strengths of the study were the community-based sample, biennial assessment of dementia, rigorous exposure classification, and large numbers of dementia cases. The limitations of the study were lack of generalisability to a younger patient population, lack of exact dosing information, and the possibility of bias from unmeasured confounders.

The study findings conflict with previous studies that found that NSAID use was associated with a reduced risk of dementia with the use of NSAIDs. (See: Vlad SC, et al. Protective effects of NSAIDs on the development of Alzheimer disease. Neurology 2008; 70: 1672-1677.)

The researchers said the discrepancy could be because participants in their study were older than those in other studies. (If NSAID exposure defers the onset of Alzheimer's disease, then a younger cohort of NSAID users would show a reduced frequency of disease, but older cohorts of NSAID users would be enriched).

The researchers felt the strengths of their study outweighed the limitations. However, they felt that further research is needed to explore the relationship between NSAIDs and pathogenesis of dementia.

Source: Breitner J, et al. Risk of dementia and AD with prior exposure to NSAIDS in an elderly community-based cohort. Neurology 2009; 72(17): DOI: 10.1212/WNL.0b013e3181a18691.

SILENT MYOCARDIAL INFARCTIONS COULD BE MORE COMMON THAN REALISED

In a study (reported online in PLoS Medicine) from Duke University in Durham, North Carolina, q-wave electrocardiography, when used for retrospective diagnosis of chronic cardiac damage from an unrecognised myocardial infarction (MI), missed three-quarters of cases, compared to the use delayed-enhancement cardiovascular magnetic resonance (DE-CMR).

Q-waves were present in 8% of patients presenting for angiography because of suspected heart disease. Using DE-CMR without q-wave enhancement, 27% had previously undetected myocardial damage.

The researchers were surprised by the magnitude of their findings, but not the presence of the difference. They noted that even during acute overt MI, q-waves do not appear on ECG for at least half of patients, and in others they may show up initially and then disappear.

The researchers noted that the significance of non-q-wave unrecognised MI was that it predicted a 11.4 times excess of all-cause mortality (95% CI 2.5 to 51.1) and 17.4 times higher cardiac-cause mortality (95% CI 2.2 to 137.4) (compared to no MI during two years of follow-up, after accounting for New York Heart Association class and left ventricular ejection fraction). However, the researchers cautioned that it is too early to suggest screening with DE-CMR, because optimal medical treatment for unrecognised MI and the prognostic effect of early diagnosis is unclear. (Two of the researchers reported that they owned a patent for delayed-enhancement cardiovascular MR technology, which is owned by Northwestern University.)

On the other hand, the researchers note that diagnosis of non-q-wave unrecognised MI is difficult because "these patients either do not present during the acute phase of infarction or, even if they do present, MI is not suspected and cardiac biomarkers… are not drawn". When the MI is chronic, later cardiac assessment shows normal troponin levels and non-diagnostic electrocardiograms. In this circumstance, the researchers suggested that non-invasive imaging using DE-CMR might be helpful.

The prospective study included 185 patients scheduled for invasive coronary angiography for suspected coronary artery disease (CAD) but who had no history of MI. (Thus, the researchers cautioned that their findings may not be applicable to the general population or to those who are asymptomatic.) Cardiac MRI was done as a research tool only, and was not used to guide clinical decision making or revascularisation procedures.

The overall prevalence of non-q-wave unrecognised MI was 3.3 times higher than q-wave unrecognised MI (27% versus 8%). Obstructive CAD on angiography was more common with non-q-wave unrecognised MI than with q-wave unrecognised MI, or no MI (96%, 73%, and 44%, respectively). Both types of unrecognised MI were associated with greater extent and severity of CAD (P=0.0001 for non-q wave unrecognised MI, P=0.001 for q-wave unrecognised MI), although the relationship to CAD was stronger with non-q-wave unrecognised MI. In a multi-variable analysis, risk of non-q-wave unrecognised MI increased 1.6 times with each decade of age (P=0.01), 2.4 times with diabetes (P=0.03), and 1.4 times for every 10% decrease in left ventricular ejection fraction (P=0.0003). SMA

Source: Kim HW, et al. Unrecognized non-Q-wave myocardial infarction: prevalence and prognostic significance in patients with suspected coronary disease. PLoS Med 2009.