Journal scan

Under-diagnosis of myocardial infarction in women

Major inequalities exist between men and women in the treatment and outcome of acute coronary syndromes with women being less likely to have a diagnosis of myocardial infarction (MI).

The universal definition of MI advocates the use of troponin assays. However, concentrations of cardiac troponin, released by damaged heart cells, correlate with left ventricular mass which is lower in women than in men. The researchers compared contemporary tests with high sensitivity troponin tests and found that use of the contemporary measures resulted in significant under-diagnosis of women.

Women, when contemporary measures are used, are less likely than men to be referred to a cardiologist and to receive angiography or revascularisation and are more likely to die. The authors conclude that changes in the way troponin is measured could double the diagnosis of MI in women and identify those at high risk of reinfarction or death.


Importance of micronutrients in slowing progression of dementia

There is mounting evidence that Alzheimer’s disease (AD) is a continuous spectrum between asymptomatic lesions in cognitively normal older adults and dementia in individuals with a higher level of damage.

There are several mechanisms by which micronutrients might affect cognitive function, including synthesis of neurotransmitters, health of neuron membranes, reduction in oxidative damage and production of energy. Trials show that vitamins B, E, C and D and the omega-3 fatty acid docosahexaenoic acid, found in fish oil, help neurons cope with ageing and support cognitive performance.

Neurons are specialised cells that do not regenerate and so have limited capacity to cope with environmental stress and accumulating age-related damage. The antioxidant machinery, which limits this damage, is less active in the brain compared with other organs, making micronutrients particularly important for brain health.

Oxidative damage appears to decay mitochondrial function leading to a loss of energy to the neuron, which may start the pathogenic cascade leading to loss of brain cells in AD.

A major obstacle in designing therapies for AD is the difficulty in slowing neuronal loss in the diseased brain once the pathological events leading to cell death have started. A promising alternative strategy is to maintain a healthy population of neurons in the brain for as long as possible.


Effect of weight change on fracture incidence post-menopause

Low body weight is considered a risk for osteoporotic fracture but there is increasing recognition that obesity in post-menopausal women is also a risk for low-trauma fractures. This study aimed to see if changes in body weight were associated with an increase in incidence of fractures.

Researchers analysed data from 120,566 post-menopausal women, aged between 50 and 79, over a three-year period. They compared three groups: those who had gained more than 5% body weight; those who had lost more than 5%; and those whose weight had remained stable. Those who had lost weight had a higher incidence of fracture in hip, upper limb and central body, while those who had gained weight had a higher incidence of limb fracture when compared with women whose weight had been steady.

Researchers also found that unintentional weight loss was associated with an increase in hip and spine fractures, while intentional weight loss was associated with a decreased incidence of hip fracture but increased incidence of lower limb fracture.

These findings challenge the idea that weight gain is protective against fractures.


Journal scan is compiled by Ruth Sander, independent consultant, care of the older person.