Abstracts

Fall in breast cancer incidence after reduction in use of HRT in Australia

After publication of the Women's Health Initiative study in 2002 that suggested a significant increase in the incidence of breast cancer among women taking hormone replacement therapy (HRT), there was a rapid fall in the use of HRT among Australian women. In Australia, prescribing of HRT increased from 1996 to 2001, but dropped by 40% from 2001 to 2003. Age-standardised breast cancer incidence rates in women aged more than 50 also increased to 2001, but then declined. The incidence rates in this age group were lower by 6.7% in 2003 compared with 2001, equivalent to 600 fewer breast cancers out of about 9 000 incidences of breast cancer annually for women of this age. There was no significant change in breast cancer incidence for women aged less than 50.

They concluded that, while other factors may also have contributed to the decline in breast cancer incidence, the available evidence suggests that much of this decrease is due to the fall in HRT use.

Canfell K, *et al. MJA* 2008; 188: 641-644.

The Mediterranean diet provides a significant reduction in risk of developing type 2 diabetes

Diet has long been believed to be a risk factor for the development of type 2 diabetes and many studies have shown that adherence to a Mediterranean diet reduces the risk of cardiovascular disease. The similarity of some risk factors and some empirical and mechanistic evidence suggests that the Mediterranean diet can also protect against diabetes. The major protective characteristics include a high intake of fibre, a high intake of vegetable fat, a low intake of trans fatty acids, and a moderate intake of alcohol. Moreover, a particular feature of the diet is the abundant use of virgin olive oil for cooking, frying, spreading on bread, or dressing salads. This leads to a high ratio of mono-unsaturated fatty acids to saturated fatty acids. This ratio can be used to score adherence to a Mediterranean diet as the traditional diet. Despite having a relatively high total fat content, this food pattern is rich in mono-unsaturated fatty acids (from olive oil) and poor in saturated fatty acids. Diets rich in mono-unsaturated fatty acids improve lipid profiles and glycaemic control in people with diabetes, suggesting that a high intake improves insulin sensitivity. Together these associations suggest the hypothesis that following an overall pattern of Mediterranean diet can protect against diabetes. In addition to having a long tradition of use without evidence of harm, a Mediterranean diet is highly palatable, and people are likely to comply with it.

In this study, 13 380 Spanish students without diabetes were followed up for 4.4 years. Dietary habits were assessed at baseline and new cases of diabetes were confirmed by medical examination. The study showed that participants who adhered closely to a Mediterranean diet had a lower risk of diabetes.

Martínez-González MÁ, *et al. BMJ* 2008; doi:10.1136/bmj.39561.501007.BE (published online 29 May 2008).

Infection could be implicated in sudden unexpected infant death

The causes of sudden unexpected death in infancy (SUDI) are largely unkown, despite specialist autopsy examination. This paper in *The Lancet* reviewed autopsy results to look at the role of infection in SUDI.

The authors carried out a systematic retrospective case review of autopsies that were done at one specialist centre between 1996 and 2005. During this time, 546 infants aged from 7 to 365 days had died suddenly and unexpectedly. Cases of SUDI were categorised as unexplained, explained with histological evidence of bacterial infection, or explained by non-infective causes. Microbial isolates gathered at autopsy were classified as non-pathogens, group 1 pathogens (organisms usually associated with an identifiable focus of infection), or group 2 pathogens (organisms known to cause septicaemia without an obvious focus of infection).

Of 546 SUDI cases, 39 autopsies were excluded because of viral or pneumocystis infection or secondary bacterial infection after initial collapse and resuscitation. Bacteriological sampling was done in 470 (93%) of the remaining 507 autopsies. A total of 2 079 bacteriological samples were taken, of which 571 (27%) were sterile. Positive cultures yielded 2 871 separate isolates, 484 (32%) of which showed pure growth and 1 024 (68%) mixed growth. Significantly more isolates from infants whose deaths were explained by bacterial infection (78/322, 24%) and from those whose death was unexplained (440/2 306, 19%) contained group 2 pathogens than did those from infants whose death was explained by a non-infective cause (27/243, 11%). Significantly more cultures from infants whose deaths were unexplained contained *Staphylococcus aureus* (262/1 628, 16%) or *Escherichia coli* (93/1 628, 6%) than did those from infants whose deaths were of non-infective cause (*S. aureus*: 19/211, *E. coli*: 3/211).

Although many postmortem bacteriological cultures in SUDI yield organisms, most seem to be unrelated to the cause of death. The high rate of detection of group 2 pathogens, particularly *S. aureus* and *E. coli*, in otherwise unexplained cases of SUDI suggests that these bacteria could be associated with this condition.

Weber MA, *et al. Lancet* 2008; 371: 1848-1853.

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