Carbohydrate intake and risk of gallstone disease

A new analysis from the Health Professionals Follow-up Study in the US has linked diets high in carbohydrate to an increased risk of symptomatic gallstone disease in men.

The study population included 44,525 US male health professionals: dentists, veterinarians, pharmacists, optometrists, osteopathic physicians, and podiatrists, who returned a mailed questionnaire providing data on their diet, medications and medical history between 1986 and 1998. During this period, there were 1,810 incident cases of symptomatic gallstone disease, of which 1,025 resulted in cholecystectomy. In a multivariate analysis that accounted for factors such as age, BMI, and medications, men in the highest quintile of carbohydrate intake were at a significantly higher risk of gallstone disease than those in the lowest quintile (relative risk 1.59, 95% CI 1.25–2.02). The corresponding relative risks for dietary glycemic load and dietary glycemic index were 1.50 (95% CI 1.20–1.88) and 1.18 (95%CI 1.01–1.39).

The authors discuss these findings with respect to previous studies in the field and warn that it might be inappropriate to recommend low-fat, high-carbohydrate diets.

Original article Tsai C-J *et al.* (2005) Dietary carbohydrates and glycaemic load and the incidence of symptomatic gall stone disease in men. *Gut* **54:** 823–828

Interleukin-1β gene polymorphisms in advanced gastric cancer

A recent study by Graziano and colleagues has investigated the prognostic role of interleukin-1β (*IL-1B*) and interleukin-1 receptor antagonist (*IL-1RN*) genotypes in patients undergoing palliative treatment for advanced gastric cancer. The findings indicate that functional polymorphisms in these genes might affect prognosis, and that recombinant IL-1RN merits further study as a new therapy.

This prospective study included 123 patients with relapsed or metastatic gastric cancer, all of whom provided peripheral blood samples before starting cisplatin–fluorouracil-based palliative chemotherapy. Following DNA extraction, the investigators looked for *IL-1B* and *IL-1RN* polymorphisms known to be associated with gastric cancer risk, namely *IL-1B-511C/T* and *IL-1B-31T/C* (single nucleotide polymorphisms) and *IL-1RN2* (variable number of tandem repeats in the second intron of *IL-1RN*). Patients were then grouped according to their *IL-1B*/*IL-1RN* genotypes and survival data were collected during a median follow-up of 14 months.

Wild-type genotypes were found in 34% of patients (group A), whereas the remainder were *IL-1RN2* carriers with or without *IL-1B* polymorphisms (36%; group B) or had at least one *IL-1B* polymorphism and wild-type *IL-1RN* (30%; group C). Although chemotherapy response rates were similar in the three groups, progression-free survival and overall survival were significantly better in groups A and B than in group C. This suggests that the combination of *IL-1B* polymorphisms and wild-type *IL-1RN* has an adverse effect on prognosis in this setting.

The authors also discuss the potential role of recombinant human IL-1RN in the treatment of metastatic cancer, and recommend that patients should be stratified according to *IL-1B*/*IL-1RN* genotype.

Original article Graziano F *et al.* (2005) Prognostic role of interleukin-1β gene and interleukin-1 receptor antagonist gene polymorphisms in patients with advanced gastric cancer. *J Clin Oncol* **23:** 2339–2345

Proton-pump inhibitors in non-cardiac chest pain

The management of non-cardiac chest pain (NCCP) is particularly challenging because of the difficulty in distinguishing between pain caused by abnormal esophageal acid exposure or dysmotility, musculoskeletal disorders, and even psychiatric problems. Potent acid suppression using proton-pump inhibitors (PPIs) has been proposed as a means of diagnosing and treating patients with acid-related NCCP; Cremonini and colleagues have investigated the efficacy of this approach in their recent meta-analysis.

Two parallel-group studies and five crossover studies were included in the analysis of the efficacy of PPI treatment in NCCP. Covering a total of 232 patients, the pooled results of these trials revealed a reduced risk of continued chest pain in patients who received PPIs compared with those who did not (risk ratio 0.54, 95%CI