Masala

Insulin resistance has been implicated in the pathogenesis of many disease states. It is believed to precede the development of type-2 diabetes. Dietary modifications can have a salutary influence on insulin sensitivity. Isocaloric substitution of carbohydrates (CHO) and monounsaturated fatty acids (Mediterranean diet) for saturated fatty acids was studied in 59 young adults. In comparison to the saturated fat diet, the CHO and Mediterranean diets decreased the LDL-cholesterol (p<0.001) and HDL-cholesterol levels (p<0.001). Steady-state plasma glucose decreased (p=0.023) and basal and insulin-stimulated 2-deoxiglucose uptake in peripheral monocytes increased in both diets (p=0.007) indicating an improvement in insulin sensitivity (Diabetologia 2001;44:2038–43). Lifestyle modifications will have to be taken up seriously to stem the steady rise in diseases associated with insulin resistance.

It seems neurons also need alcohol. The effects of alcohol consumption have been receiving favourable reviews. Yet another study finds that light-to-moderate alcohol consumption (not necessarily red wine!) is associated with a reduced risk of dementia. The prospective study involved 5395 subjects of the Rotterdam Study cohort (n=7983). After a mean follow up of 6 years, 197 individuals developed dementia (146 Alzheimer’s disease, 29 vascular dementia, 22 other dementia). Light-to-moderate drinking (1–3 drinks per day) was significantly associated with a lower risk of any dementia [hazard ratio 0.58 (CI: 0.38–0.90)] and vascular dementia [hazard ratio 0.29 (CI: 0.09–0.93)] (Lancet 2002;359:281–6).

The recent interest in the beneficial aspects of alcohol consumption should not make us ignore the proven medical and social adverse consequences. Hepatocellular carcinoma (HCC) is a relatively common malignancy. A recent case–control study explored the effect of alcohol consumption and hepatitis B and C virus infection on the occurrence of HCC. The study included 464 subjects with a first diagnosis of HCC as cases and 824 subjects...
unaffected by hepatic diseases as controls. There was a steady linear increase in the odds ratio of HCC with increasing alcohol intake (>60 g of ethanol per day). Former drinkers continued to experience an increased risk. The effect of alcohol drinking was evident in the absence of hepatitis B or hepatitis C virus infection. In addition, a synergism between alcohol drinking and either infection was found, with an approximately two-fold increase in the odds ratio for each hepatitis virus infection for drinkers of >60 g of ethanol per day (Am J Epidemiol 2002;155:323–31).

Acute renal failure after cardiac angiography is usually due to the contrast medium used. It increases morbidity and mortality, prolongs hospitalization and increases costs. Aggressive hydration may prevent it and, predictably, pre-existing chronic renal insufficiency increases the risk of its occurrence. A recent randomized controlled trial shows that N-acetylcysteine is of benefit in preventing acute renal failure. All 54 patients in the trial had stable chronic renal insufficiency. Thirteen of 29 patients who were given a placebo and only 2 of 25 patients who got the drug developed acute renal failure (Am J Cardiol 2002;89:356–8).

The February issue of Annals of Surgery carries an interesting study on cancer biology and the possible use of molecular biology techniques for assessment of disease burden in future (Ann Surg 2002;235:226–31). Systemic venous blood was collected from patients with colorectal cancer before and at intervals of up to 12 weeks after surgery. RNA from the mononuclear cell was subjected to RT-PCR using specific primers for carcinoembryonic antigen mRNA and cytokeratin-20 mRNA. Circulating tumour cells were present before treatment in most patients (81/116) with colorectal cancer regardless of tumour stage or metastases. Clearance of circulating tumour cells within 24 hours of excision of the colorectal cancer was highest in tumours with the best prognosis (Dukes’ A and B).

Non-steroidal anti-inflammatory drug (NSAID)-induced gastrointestinal toxicity, especially gastric ulcers, remains an important problem. A prospective, double-blind, multicentre, active- and placebo-controlled study compared 200 μg of misoprostol or 15 or 30 mg of lansoprazole in preventing recurrence of gastric ulcer. The study included 537 patients without Helicobacter pylori infection who were long term users of NSAIDs and who had a history of endoscopically documented gastric ulcer. By week 12, the percentages of gastric ulcer-free patients were placebo 51%, misoprostol 93% and lansoprazole (15–30) 80%–82%. When the poor compliance and potential adverse effects associated with misoprostol are considered, proton pump inhibitors and full-dose misoprostol were found to be clinically equivalent (Arch Intern Med 2002;162:1189–75).

The impact of routine thoracocentesis on diagnostic assessment and therapeutic measures in medical ICU patients was studied (Chest 2002;121:178–84). A prospective, 1-year, three-centre study recruited 1351 medical ICU patients. Routine thoracocentesis was performed in 82 of 113 patients. Thoracocentesis yielded improvements in the diagnosis and/or treatment in 46 patients (56%). The presumptive (pre-thoracocentesis) diagnosis was changed in 37 patients. The only complication was pneumothorax in 6 patients (7%), all with a favourable outcome after drainage.

Reduction in the incidence of type-2 diabetes with lifestyle intervention or metformin was explored in 3234 high risk individuals with elevated fasting and post-load plasma glucose concentrations. They were randomly assigned to receive a placebo, metformin or a lifestyle-modification programme with the goals of at least a 7% weight loss and at least 150 minutes of physical activity per week. The mean body mass index at baseline was 34. After an average follow up of 2.8 years, the lifestyle intervention reduced the incidence of diabetes by 58% (CI: 48%–66%) and metformin by 31% (CI: 17%–43%) as compared to a placebo (N Engl J Med 2002;346:393–403).

De-addiction therapy for substance abuse is difficult. Alternative medicine therapies for this problem are often publicized for their benefits. A randomized, controlled, single-blind clinical trial in the USA investigated the effectiveness of auricular acupuncture as a treatment for cocaine addiction. Six hundred and twenty cocaine-dependent adult patients were randomly assigned to receive auricular acupuncture, a needle-insertion control condition, or a relaxation control condition. The results did not support the use of acupuncture as a stand-alone treatment for cocaine addiction or in contexts in which patients receive only minimal concurrent psychosocial treatment (JAMA 2002;287:55–63).

COX-2 inhibitors are being used increasingly as analgesics. The relative therapeutic efficacy of rofecoxib, celecoxib and aceta-
mophine was studied in 382 adults with osteoarthritis of the knee. They were randomly assigned to receive rofecoxib 12.5 mg/day, rofecoxib 25 mg/day; celecoxib 200 mg/day or acetaminophen 4 g/day for 6 weeks. More patients treated with acetaminophen discontinued it early due to the lack of efficacy than patients treated with COX-2 inhibitors. Rofecoxib 25 mg/day provided efficacy advantages over the other study groups (JAMA 2002;287:64–71).

Smoking is probably the most hazardous lifestyle practice. BMJ published a cross-sectional survey of 4919 schoolchildren aged 9–15 years exploring the hypothesis that greater exposure to smoking in films is associated with trying smoking among adolescents (BMJ 2002;323:1394–7). The prevalence of ever trying smoking increased with higher categories of exposure: 4.9% among students who saw 0–50 occurrences of smoking, 13.7% for those exposed to >150 occurrences in films. The association remained significant after adjustment for age; sex; school performance; school; parents’ education; smoking by friend, sibling or parent; and receptivity to tobacco promotions. It would seem that the ban on smoking in public should be extended to ban on smoking on celluloid as well.

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