

versus 48.8% in EPIC-2). Omega-3 free fatty acids were, however, well tolerated.

These findings refute previous claims of a beneficial effect of omega-3 free fatty acids for maintenance of remission of Crohn disease. The researchers caution against the use of alternative treatments of unproven efficacy.

**Original article** Feagan BG *et al.* (2008) Omega-3 free fatty acids for the maintenance of remission in Crohn disease: the EPIC randomized controlled trials. *JAMA* **299**: 1690–1697

## Antioxidants protect against the hepatotoxic effects of ciclosporin in rats

Generation of reactive oxygen species and lipid peroxidation have been proposed as the mechanisms that underlie ciclosporin hepatotoxicity. Mostafavi-Pour *et al.* investigated whether the antioxidants vitamin E and quercetin could protect against ciclosporin-induced liver damage in rats.

Male Sprague–Dawley rats were given ciclosporin alone, or ciclosporin plus either quercetin, vitamin E, or both. Olive oil or ethanol plus olive oil were used as a vehicle. Compared with controls, ciclosporin-fed animals had increased serum levels of alanine and aspartate aminotransferases and alkaline phosphatase, and decreased albumin and total protein levels. Administration of either vitamin E or quercetin reduced the toxic effects of ciclosporin, and in combination these agents maintained liver-function markers at control values. Ciclosporin increased the levels of liver thiobarbituric-acid-reactive substances (end-products of lipid peroxidation) and decreased levels of catalase and glutathione peroxidase, both of which defend against oxidative stress. Again, administration of either antioxidant reduced these toxic effects, and administration of both vitamin E and quercetin completely abrogated these effects of ciclosporin. Inflammation and extensive necrosis was seen in liver sections from rats fed ciclosporin; this damage was not seen in control rats or in those treated with ciclosporin plus vitamin E or quercetin, or both.

The authors conclude that vitamin E and quercetin protect against the oxidative liver

damage caused by ciclosporin; potentially, these antioxidants could have a clinical benefit in transplant recipients.

**Original article** Mostafavi-Pour Z *et al.* (2008) Protective effects of a combination of quercetin and vitamin E against cyclosporine A-induced oxidative stress and hepatotoxicity in rats. *Hepatol Res* **38**: 385–392

## Acid suppression is as cost-effective as ‘test and treat’ for initial dyspepsia treatment

In a multicenter, randomized, controlled trial from the UK, Delaney and colleagues have assessed the relative cost-effectiveness of *Helicobacter pylori* ‘test and treat’ or empiric acid suppression for the initial management of patients with dyspepsia. UK guidelines recommend that either approach is appropriate initially, but the relative cost-effectiveness of these strategies and the validity of test and treat as a first-line strategy required clarification.

Participants were 699 primary-care patients with dyspepsia (heartburn and/or epigastric pain, without alarm symptoms for malignancy). Patients were randomly allocated to receive omeprazole (20 mg daily for 4 weeks;  $n=356$ ) or undergo a test and treat strategy ( $n=343$ )—*H. pylori*<sup>13</sup>C-urea breath test, followed by 20 mg daily omeprazole for 4 weeks if the test was negative, or 1 week of eradication treatment then 3 weeks of 20 mg daily omeprazole if the test was positive. Patients were followed up for 1 year. Of the 343 patients in the test-and-treat group, 100 tested positive for *H. pylori* (eradication was successful in 78%). No significant difference was found between the two groups in terms of symptoms of dyspepsia at 12 months, cost-effectiveness (quality-adjusted life-years), or costs.

The authors conclude that acid suppression is an appropriate initial approach, but that no point is too early to consider *H. pylori* testing, since the initial increased costs of this strategy were recouped by savings during the first year.

**Original article** Delaney BC *et al.* (2008) *Helicobacter pylori* test and treat versus proton pump inhibitor in initial management of dyspepsia in primary care: multicentre randomised controlled trial (MRC-CUBE trial). *BMJ* **336**: 651–654