Eradicating *Helicobacter pylori* in cirrhosis patients significantly reduces migraine symptoms

Helicobacter pylori infection might be associated with vascular disturbances in patients with primary Raynaud's syndrome and cardiovascular disease: *H. pylori* antigens are thought to cause intermittent spasms in arterioles. Patients with HBV-related cirrhosis of the liver often complain of migraine, a functional vascular condition. Hong *et al.* investigated whether clearing *H. pylori* infection in cirrhosis patients reduces the intensity, duration and frequency of migraine attacks.

Fifty patients with HBV-related cirrhosis who were secondarily affected by migraine and who were infected with *H. pylori* were treated with the triple combination therapy of amoxicillin 1,000 mg, clarithromycin 500 mg and omeprazole 20 mg twice daily for 1 week. Treatment efficacy was assessed using the ^{14}C-urea breath test 2 months later. All patients were asked to record the daily intensity, duration and frequency of migraine attacks for 12 months after completing the antibiotic treatment.

H. pylori eradication was successful in 41 of the 50 patients, 10 of whom reported that their migraine attacks completely disappeared. Migraine attacks in the remaining 31 patients were significantly reduced in terms of intensity, duration and frequency. Migraine symptoms remained unchanged in the nine patients whose *H. pylori* infection persisted after treatment.

The authors conclude that *H. pylori* eradication successfully ameliorates migraine symptoms in HBV-related cirrhosis patients. They suggest that further research is now warranted to investigate the link between migraine and *H. pylori* infection and to elucidate the mechanisms underlying this association.

Original article Hong L *et al.* (2007) Reversal of migraine symptoms by *Helicobacter pylori* eradication therapy in patients with hepatitis-B-related liver cirrhosis. *Helicobacter* **12:** 306–308

A caspase inhibitor lowers aminotransferase levels in patients with hepatitis C

Apoptosis is a feature of many human liver diseases. IDN-6556 is an inhibitor of caspases, enzymes that promote apoptosis. Pockros *et al.* investigated the safety and efficacy of oral IDN-6556 in 105 patients with hepatitis B, hepatitis C, primary biliary cirrhosis, nonalcoholic steatohepatitis or primary sclerosing cholangitis. Hepatitis C patients were given 5–200 mg doses 1–3 times/day (maximum dose 400 mg/day) for 2 weeks; patients with other diseases received 100 mg/day; 79 patients received active drug and 26 received placebo.

For patients with hepatitis C, all IDN-6556 doses >5 mg/day significantly lowered serum alanine aminotransferase and aspartate aminotransferase levels compared with placebo; enzyme levels were reduced by up to 56%. Split dosing seemed to be more effective than single doses; almost 50% of patients who received twice or three times daily doses normalized their aminotransferase levels, compared with 20% of those on once-daily dosing. No other dose–response relationship was noted. Although statistical analysis was not performed on data from the other disease groups, aminotransferase levels were also lowered in hepatitis B and steatohepatitis patients; results in patients with cholestatic disease, however, were unclear.

No increase in viral load was observed in patients with hepatitis B or C infection, and no treatment-related adverse effects were reported. The authors conclude that IDN-6556 significantly lowers serum aminotransferases in hepatitis C patients, and is well tolerated. Longer-term studies are needed to further evaluate efficacy and safety, in particular the possible cancer risk from this powerful antiapoptosis agent.

Original article Pockros PJ *et al.* (2007) Oral IDN-6556, an antiapoptotic caspase inhibitor, may lower aminotransferase activity in patients with chronic hepatitis C. *Hepatology* **46:** 324–329

Infliximab dose intensification in patients with Crohn's disease

Patients with Crohn's disease who lose some or all of their initial therapeutic response to infliximab can benefit from dose intensification. Regueiro *et al.* retrospectively analyzed 293 patients with Crohn's disease to determine what proportion of these individuals required dose intensification and what factors predicted such a need.

A total of 108 (36.9%) patients who received infliximab for at least 1 year (≥8 infusions) were