

A triple-antigen *Helicobacter pylori* vaccine is safe and immunogenic

Studies in animal models have shown that vaccination with recombinant *Helicobacter pylori* vacuolating cytotoxin A (VacA), cytotoxin-associated antigen, and neutrophil-activating protein (NAP) confers protection against *H. pylori* infection. Malfertheiner *et al.* have now shown that a prophylactic vaccine comprising these three conserved antigens plus an aluminum hydroxide adjuvant is safe and exhibits strong immunogenicity in *H. pylori*-negative individuals.

In this phase I, single-blind study, healthy volunteers aged 18–40 years were randomly assigned to receive intramuscular vaccine or placebo in one of two monthly vaccination schedules (0, 1 and 2 months or 0, 1 and 4 months; $n=38$) or to receive vaccine in a weekly schedule (0, 1 and 2 weeks; $n=19$). The incidence of local and systemic adverse effects within 6 days of injection was similar in the monthly vaccine groups and the placebo group.

Following the three scheduled vaccinations, all vaccinated individuals responded at both the antibody and T-cell levels to a least one of the antigens (mainly VacA and NAP); 86% of vaccinated participants responded to all three antigens. All 36 individuals who received a fourth booster dose of vaccine 18–24 months after completion of primary vaccination showed a strong anamnestic antibody and cellular response to the vaccine.

The authors conclude that the recombinant three-antigen *H. pylori* vaccine has acceptable safety and immunogenicity, and stimulates antigen-specific T-cell memory, and thus warrants further clinical study.

Original article Malfertheiner P *et al.* (2008) Safety and immunogenicity of an intramuscular *Helicobacter pylori* vaccine in noninfected volunteers: a phase I study. *Gastroenterology* **135**: 787–795

Prevalence and underdiagnosis of celiac disease in the elderly

Celiac disease is common, affecting up to 1% of the general population, but little is known about the prevalence of this disorder in the elderly. In the population-based study by Vilppula and colleagues, the prevalence of

confirmed celiac disease in individuals aged 52 years or older was 2.13%. In addition, less than half of these cases were diagnosed on the basis of symptoms and the remaining patients were identified by antibody screening and biopsy, which indicates that celiac disease might be underdiagnosed in the elderly.

Vilppula *et al.* assessed 2,815 Finnish individuals aged 52–74 years, 25 (0.89%) of whom had previously been clinically diagnosed with celiac disease. Serum samples from all patients were screened for IgA tissue transglutaminase antibodies; participants who tested positive were offered upper gastrointestinal endoscopy, during which small intestine biopsy samples were taken.

Overall, 49 individuals tested positive for IgA tissue transglutaminase antibodies, 5 of whom had already been diagnosed with celiac disease. Of the remaining 44 patients, 35 were diagnosed with celiac disease on the basis of biopsy findings. The majority of patients previously diagnosed with celiac disease had classic symptoms (i.e. diarrhea, weight loss), whereas all but one of the patients diagnosed by screening and biopsy had subtle symptoms (i.e. abdominal pain, loose stools) or no symptoms at all.

The authors recommend that clinicians should be alert to celiac disease in the elderly and should implement active case finding by serologic screening.

Original article Vilppula A *et al.* (2008) Undetected coeliac disease in the elderly: a biopsy-proven population-based study. *Dig Liver Dis* **40**: 809–813

Resection of adenoma-like lesions in chronic ulcerative colitis with mucosal fibrosis

An adenoma-like dysplastic lesion (ALM) can be difficult to resect in patients with chronic ulcerative colitis complicated by mucosal and submucosal fibrosis, and colectomy is often indicated. Smith *et al.* prospectively tested the efficacy of a novel technique, endoscopic submucosal dissection (ESD) followed by endoscopic mucosal resection (EMR) in 67 patients who had chronic ulcerative colitis with complicating submucosal desmoplasia and a flat, pendunculated, or a lateral spreading colorectal lesion.

A total of 52 patients underwent *en bloc* resection, and R0 histopathological status was achieved in 49 of these individuals. The remaining