

*Boeckxstaens GE, Annese V, des Varannes SB, Chaussade S, Costantini M, Cuttitta A, Elizalde JI, Fumagalli U, Gaudric M, Rohof WO, Smout AJ, Tack J, Zwiderman AH, Zaninotto G, Busch OR; European Achalasia Trial Investigators. (Academic Medical Center, Amsterdam). **Pneumatic dilation versus laparoscopic Heller's myotomy for idiopathic achalasia.** N Engl J Med 2011; 364: 1807-16.*

Treatment of achalasia using laparoscopic Heller's myotomy has traditionally been seen as a superior option over pneumatic dilation. This study compared the use of the two techniques measuring two outcomes, symptom resolution and improvement in radiological/pressure studies. Approximately 200 patients were assessed in the study and allocated randomly into the two procedure groups. Patients were then followed up for at least two years. Symptoms were assessed using the Eckardt score for symptom severity and relevant radiological/pressure studies carried out. There was no significant difference in symptom control between the two groups. Therefore both options appear comparable. Safety profiles were also compared with similar rates of oesophageal rupture/mucosal tears.

*Eom CS, Park SM, Myung SK, Yun JM, Ahn JS. (Seoul National University Hospital, Seoul National University College of Medicine, Republic of Korea). **Use of acid-suppressive drugs and risk of fracture: a meta-analysis of observational studies.** Ann Fam Med 2011; 9: 257-67.*

There have been numerous studies of varying quality and significance which have highlighted increased rates of fractures in patients on long term antacid therapy. This meta-analysis aimed to clarify the issue by looking at eleven of these projects. Both PPI treatment and H2 receptor antagonist were included. The study concluded

that there was a significantly increased risk of fracture for the PPI treated groups. There was no increased fracture rate in the histamine blocker group.

The lack of a robust randomised control trial limits interpretation of these results. Of particular concern is the possible use of confounded control groups. Therefore although it is likely PPIs put patients at greater risk of fractures, further study is required. Reduced absorption of calcium and vitamin B12 are some of the theories suggested for the increase in fractures. It may therefore be sensible to consider the risk: benefit ratio for patients starting PPI therapy and possible advantage of H2 blockers.

*Sonoda H, Kohnoe S, Yamazato T, Satoh Y, Morizono G, Shikata K, Morita M, Watanabe A, Morita M, Kakeji Y, Inoue F, Maehara Y. (Kyushu University, Fukuoka, Japan). **Colorectal cancer screening by canine scent detection.** Gut 2011; 60: 814-19.*

This novel study looked at the use of dogs to detect colorectal cancer in patients. In this study one Labrador received specialist training using stool and breath samples from colorectal cancer patients.

Using a new group, patients were divided into a control group and patients with colorectal cancer (identified using colonoscopy). The dog then smelt these samples, which were double blinded and a positive gesture recorded as a positive screening test.

The results were surprisingly significant in this seemingly well designed study. The overall sensitivity was 0.91 and specificity 0.99 compared with colonoscopy diagnosis. The concurrent use of FOB tests showed no correlation. Therefore the dog was unlikely to be responding to haemoglobin within stools.

The substance(s) to which the dog was reacting has not been identified. Obviously, the direct use of dogs in screening is unlikely to be practical and

has some ethical implications. However, if the substances leading to a positive result are identified this could lead to an effective screening option. Possible techniques include the 'electric nose'. This study is likely to lead to further investigation and identification of substances to screen for early detection of colorectal cancer.

*Buti L, Spooner E, Van der Veen AG, Rappuoli R, Covacci A, Ploegh HL. (Whitehead Institute for Biomedical Research, Cambridge USA). Helicobacter pylori cytotoxin-associated gene A (CagA) subverts the apoptosis-stimulating protein of p53 (ASPP2) tumor suppressor pathway of the host. Proc Natl Acad Sci U S A 2011; 108: 9238-43.*

The reasons for increased rates of gastric cancer related to *H.pylori* infection are poorly understood. However this study points to alteration in tumour suppressor gene p53 regulation in gastric/intestinal cells. Type 1 *H.pylori* contains an area of the genome encoding for effector protein 'cytotoxin associated gene A' (cagA) which has previously been linked to higher rates of cancer in humans.

When this gene is translocated in mice host cells it is associated with increased rates of lymphoma and gastrointestinal carcinomas. Further investigation reveals that the protein produced from p53 gene, ASPP2 is inhibited by expression of the cagA gene.

Therefore this study suggests that expression of cagA gene in type 1 *H.pylori* may lead to

reduction in p53 gene/ASPP2 protein activity in host cells through DNA translocation and therefore increases the risk of cancer due to reduced rates of cell apoptosis.

This process is similar to that used by viruses when inducing cancer and contributes to theory that suggests bacteria can predispose to the development cancer

*Salahi R, Dehghani SM, Salahi H, Bahador A, Abbasy HR, Salahi F. (Trauma Research Center, Shiraz, Iran). Liver abscess in children: a 10-year single centre experience. Saudi J Gastroenterol 2011; 17: 199-202.*

This Iranian study investigated all liver abscesses in children that presented to one centre over ten years. All patients less than 18 years with a diagnosis of liver abscess were included in the study. The main aim was to compare abscess type and disease management against more developed countries.

18 patients were included, 88% of which presented with pyogenic abscess. There was one amoebic and one candida related abscess.

The study confirmed that abscess survival rates are similar to western studies, as was abscess type. It highlighted that many patients were otherwise healthy patients, in contrast to similar studies from Europe. With such few patients included these results are likely to be subject to bias and larger studies are required to get an accurate comparison to European centres.

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### **News editor**