Digest

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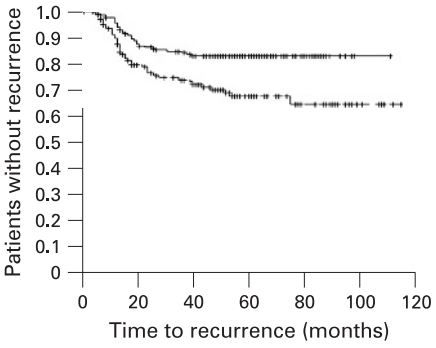
Safety and efficacy of endoscopic treatment for preneoplastic and neoplastic lesions in Barrett's oesophagus

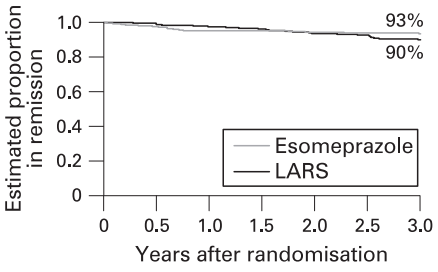
The increasing use of surveillance for preneoplastic and neoplastic lesions in Barrett's oesophagus means that managing early lesions has become an important problem. Radical oesophagectomy has a high morbidity and mortality so endoscopic treatment is being increasingly advocated. The study by Pech and colleagues describing 349 patients who underwent endoscopic treatment for high-grade intraepithelial neoplasia and mucosal adenocarcinoma from 2002–6 is, therefore, of great interest. Endoscopic resection was performed in 279 patients with localised neoplasia, whilst 55 patients had photodynamic therapy. In the second half of the study period, the remaining non-neoplastic part of the Barrett's epithelium was also ablated using argon plasma coagulation or photodynamic therapy. The overall complication rate was 17.2%, a quarter of which were oesophageal stenosis. A complete response was achieved in 96%; 3.7% of patients underwent surgery after failure of endoscopic therapy. Of the patients, 58 have died but none from Barrett's neoplasia. As the figure shows, ablating the remaining non-neoplastic Barrett's oesophagus significantly reduced the risk of recurrence to 16.5% compared with 29.9% in those not receiving ablation. ***See p 1200***



Kaplan–Meier plot for recurrence after complete local remission in patients who underwent ablative therapy for the remaining non-neoplastic Barrett's oesophagus (upper line) in comparison with those without ablative therapy (lower line) (p = 0.0003; odds ratio, 0.26–0.66).

Laparoscopic antireflux surgery and esomeprazole are equally effective in providing effective control of gastro-oesophageal reflux disease

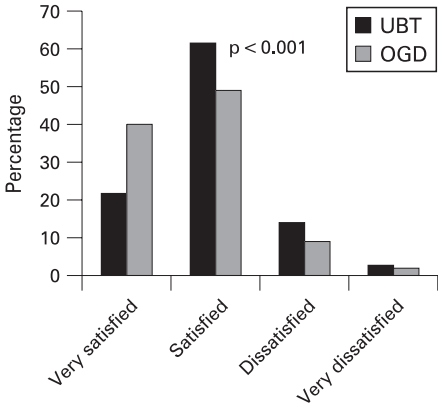
In this interim analysis, Lundell and co-authors present 3-year data from an open, parallel-group, multicentre, randomised controlled trial comparing laparoscopic antireflux surgery with long-term medical treatment (esomeprazole 20 mg once daily, with a possibility to increase the dose) for gastro-oesophageal reflux disease. The study was performed in 11 European countries and the surgical procedure was completed by experienced surgeons according to a standardised protocol, comprising a total fundoplication and a crural repair. The proportion of patients who remained in remission after 3 years was similar in the two treatment groups (90% vs 93%; p = 0.25) (see fig). The level of reflux symptom control was somewhat better in the surgical arm than on long-term medical treatment but this was counterbalanced by slightly more abdominal pain, flatulence, dysphagia and other functional symptoms in the patients who underwent surgery. In general, both treatment options were well tolerated and no major, unexpected complications were observed. Therefore, both laparoscopic antireflux surgery and continuous esomeprazole treatment can be considered to be highly effective and safe in patients with gastro-oesophageal reflux disease . ***See p 1207***



Proportion of patients with gastro-oesophageal reflux disease in remission after laparoscopic antireflux surgery (LARS) or on medical treatment (esomeprazole).

A *Helicobacter pylori* "test and treat" strategy is cost-effective in young Asian patients with dyspepsia

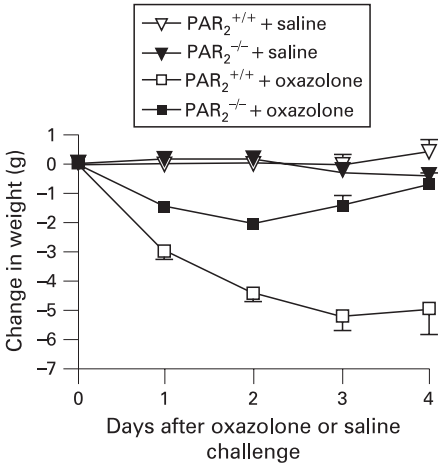
In the USA and Europe an empirical *Helicobacter pylori* "test and treat" strategy is recommended for the initial management of patients with uncomplicated dyspepsia but clinical evidence on the efficacy of endoscopy- versus non-endoscopy-based approaches in Asian patients with dyspepsia is lacking. In a randomised prospective study, Mahadeva and co-workers compare a *H pylori* test and treat strategy with prompt endoscopy in uninvestigated patients with dyspepsia aged <45 years in Malaysia. At 1 year, no differences in the symptom change could be seen but the cost of the prompt endoscopy approach was clearly higher than a test and treat strategy, even if the cost for the initial diagnostic tests was excluded. The patients in the prompt endoscopy arm were more satisfied with the management than the patients in the test and treat strategy arm (see fig). However, based on the cost-effectiveness data the authors conclude that a *H pylori* test and treat strategy is the preferred initial management strategy for young Asians with dyspepsia without alarm symptoms. ***See p 1214***



Satisfaction levels between the "test and treat" and prompt endoscopy groups. OGD, oesophagogastroduodenoscopy (prompt endoscopy group); UBI, urea breath test (test and treat strategy group).

Protease-activated receptor-2 plays a key role in recruiting leukocytes to the inflamed gut

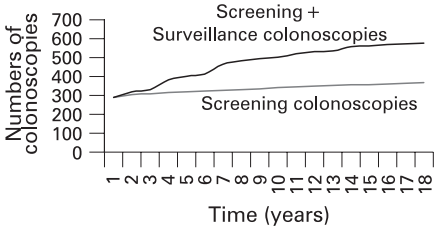
Protease-activated receptor-2 (PAR_2) is a novel G-protein coupled receptor activated by proteases that cleave the extra cellular part of the receptor. PAR_2 is activated by mast cell tryptase and trypsin, which are elevated in chronic inflammation. PAR_2 agonists are known to induce inflammation but can also exert a protective effect so their role in inflammatory bowel disease is unclear. The study by Hyun and colleagues shows a predominantly pro-inflammatory action in colitis. Three chemicals—dextran sodium sulphate, trinitrobenzene sulfonic acid and oxazolone—were used to induce colitis in wild-type animals and those lacking the gene for PAR_2. Mice deficient in PAR_2 showed less inflammation and less weight loss in all three models (figure shows data for oxazolone model). They also showed less histological damage and granulocyte infiltration. Intravital microscopy was used to show a reduced number of leukocytes adhering to intestinal venules and in the trinitrobenzene sulfonic acid model expression of the vascular adhesion molecule 1 was markedly reduced. PAR_2 activation appears to mediate leukocyte recruitment and could be a potential therapeutic target in inflammatory bowel disease. ***See p 1222***



Effect of oxazolone-induced colitis on weight loss in wild-type ($PAR_2^{+/+}$) and PAR_2 deficient mice ($PAR_2^{-/-}$).

Predicting the rise in colonoscopy volume and cost of the English bowel cancer screening programme

As the colorectal cancer screening programme becomes established in the UK, clinicians are naturally worried about the impact this will have on the requirements for colonoscopy. This paper models the likely effect of the programme over a 16-year period. The model uses data from the pilot study in the West Midlands and predicts colonoscopy in a population of 500 000 patients, of whom 13.4% (66 956) will lie in the target 60–74-year-old age group. Uptake is greatest in female Caucasians with low rates of deprivation. The model assumes a middle quintile for deprivation and an average number of non-Caucasians. The model assumes an uptake of 53%, yielding 734 positive faecal occult blood results; 83% are predicted to accept the offered colonoscopy (600) and 34 cancers will be detected in the first 2-year cycle. Over the next 16 years the number of colonoscopies annually will rise, largely due to the increased number of surveillance colonoscopies required for patients in whom a high or intermediate risk polyp is detected who will require 1 or 3 yearly surveillance colonoscopies, respectively. The year-on-year increase would initially be 23 per year but this will plateau out and colonoscopies are predicted to stabilise after about 16 years (see fig). As the authors point out, cost and volume will depend very much on the uptake, which could be substantially altered depending on the amount of publicity. An increase in uptake by 20% would give a 10% increase in the volume and cost of colonoscopy. How accurate this model proves to be remains to be determined. ***See p 1238***



Sixteen-year pattern of increase in volume of colonoscopies for a hypothetical population of 500 000.

Transient elastography reliably identifies advanced fibrosis in chronic hepatitis C

During recent years, measurement of liver stiffness with transient elastography (TE) has been proposed to be a reliable predictor of the degree of liver fibrosis. However, available studies are hampered by methodological problems, suboptimal sample characteristics and inclusion of patients with chronic liver diseases of different aetiology. In this study by Arena and co-authors, 150 consecutive and well characterised patients with chronic hepatitis C from one centre underwent liver biopsy, TE, ultrasound examination and clinical evaluation on the same day. The diagnostic accuracy of TE was determined (see table) and it was found to be especially useful to predict the presence of advanced fibrosis and cirrhosis (liver fibrosis stage ⩾F3). Due to important overlap among patients with lower degrees of fibrosis (F0, F1, F2), it was not so helpful in less severely affected patients. Moreover, inflammation but not steatosis seemed to influence the TE measurements. Therefore, TE can be regarded as a useful complement to liver biopsy to follow the fibrotic progression in patients with chronic hepatitis C. ***See p 1288***

The diagnostic accuracy of transient elastography (TE) in predicting the stage of liver fibrosis (F). Performance of the selected best TE cut-off values (in kPa) to predict significant fibrosis (⩾F2), advanced fibrosis (⩾F3) and cirrhosis (F4) are indicated.

Stage	Cut-off	Sens	Spec	PPV	NPV
⩾F2	7.8	83	82	83	79
⩾F3	10.8	91	94	89	95
F4	14.8	94	92	73	98

Sens, sensitivity; Spec, specificity; PPV, positive predictive value; NPV, negative predictive value.