

## Mortality after colectomy (elective or emergency) or no colectomy for patients with IBD

Total or partial colectomy is often necessary at some stage for patients with IBD. Small, short-term studies have reported that mortality after elective colectomy is low, but large, longer-term studies are lacking. Roberts *et al.*, therefore, conducted a large study to compare 3-year mortality after elective colectomy, emergency colectomy or no colectomy in patients hospitalized for IBD.

The study analyzed record-linked inpatient and mortality data for 23,464 patients from the Oxford region (1968–1999) and England (1998–2003) who had been hospitalized for >3 days for IBD. In total, 5,480 patients underwent colectomy. Three-year mortality was increased after no colectomy or emergency colectomy compared with that after elective colectomy; this finding was nonsignificant for the Oxford data, but significant even after adjustment for inpatient comorbidity for the larger England data. Elective colectomy carried an increased risk of mortality relative to the general population, but only for the first few months. Of concern, 3 year risk of mortality was almost as high for patients who did not undergo colectomy as for those who underwent emergency colectomy.

It remains to be seen whether new immunosuppressive drugs reduce the colectomy rate and mortality in patients presenting acutely with severe colitis. For those with chronic disease the findings indicate that in appropriate cases it is preferable to undertake elective colectomy earlier rather than risk emergency colectomy, which carries a much poorer prognosis. The authors suggest that it may be beneficial to lower the threshold for elective colectomy for patients with IBD.

**Original article** Roberts SE *et al.* (2007) Mortality in patients with and without colectomy admitted to hospital for ulcerative colitis and Crohn's disease: record linkage studies. *BMJ* 335: 1033

## Cetuximab improves survival in patients with colorectal cancer

Cetuximab is a monoclonal antibody with activity against colorectal cancers that over-express epidermal growth factor receptor. This agent blocks epidermal growth factor receptor signaling and inhibits tumor growth.

Jonker *et al.* conducted a randomized trial from December 2003 to August 2005 to investigate the effects of cetuximab in patients with advanced colorectal cancer. Patients enrolled in the trial ( $n=572$ ) were unresponsive or had contraindications to irinotecan, oxaliplatin and fluoropyrimidine therapy. All received best supportive care; 287 were also treated with cetuximab.

The median duration of cetuximab treatment was 8.1 weeks and of follow-up was 14.6 months. Cetuximab therapy was associated with a significant improvement in overall survival and in progression-free survival, compared with best supportive care alone. The median overall survival was 6.1 months in the cetuximab group and 4.6 months in the group receiving only supportive care. Rash was seen in 255 of the patients treated with cetuximab. Increasing grade of rash severity was associated with improved median overall survival: 2.6 months with no rash, 4.8 months with grade 1 rash, and 8.4 months with grade 2 or higher rash.

The authors conclude that cetuximab can help patients with advanced colorectal cancer for whom other treatments have been unsuccessful. The authors suggest that the occurrence of rash could be used as a predictive biomarker to identify patients most likely to benefit from this treatment, but validation of this role is needed.

**Original article** Jonker DJ *et al.* (2007) Cetuximab for the treatment of colorectal cancer. *N Engl J Med* 357: 2040–2048

## Malignant and benign IPMNs can be differentiated accurately by the $^{18}\text{F}$ -FDG PET technique

Intraductal papillary mucinous neoplasms (IPMNs) of the pancreas frequently occur in people aged >70 years. Differentiation of benign and malignant IPMNs is important when making surgical and treatment decisions concerning such elderly patients, but CT and MRI do not provide reliable information.

Sperti *et al.* previously reported that PET with fluorine-18-labeled fluorodeoxyglucose ( $^{18}\text{F}$ -FDG PET), a technique that visualizes the rate of glucose uptake by tumor cells, could discriminate accurately between malignant and benign cystic tumors of the pancreas.

They have now investigated whether this technique might be used to detect malignant IPMNs in 64 patients suspected of having these neoplasms.

No increase in glucose uptake was detected by  $^{18}\text{F}$ -FDG PET in 13 patients with a diagnosis of adenoma, or in 7 of 8 patients diagnosed as having borderline IPMN. A significant increase in glucose uptake was observed, however, in four of five patients with carcinoma *in situ* and in 20 of 21 patients with invasive cancers. Conventional imaging produced several false-positive results. Positive  $^{18}\text{F}$ -FDG PET results in 10 patients influenced the decision to operate. Of 33 patients with negative  $^{18}\text{F}$ -FDG PET results, 15 underwent limited resection and 18 patients avoided surgery, instead being monitored for future signs of malignancy.

The authors conclude that  $^{18}\text{F}$ -FDG PET can distinguish benign IPMNs from malignant IPMNs and is more useful than conventional imaging for aiding treatment decisions concerning elderly, asymptomatic patients.

**Original article** Sperti C *et al.* (2007) 18-Fluorodeoxyglucose positron emission tomography enhances computed tomography diagnosis of malignant intraductal papillary mucinous neoplasms of the pancreas. *Ann Surg* 246: 932–939

## Sleep deprivation increases perceived pain in patients with GERD

Approximately 47–57% of patients with GERD, compared with about 25% of the general population, report night-time awakening caused by heartburn episodes, resulting in sleep deprivation or fragmentation. Furthermore, studies of the relationship between sleep and pain tolerance have suggested that sleep deprivation can decrease pain thresholds. Schey and colleagues examined whether the sleep disturbances caused by GERD symptoms might, in turn, worsen the perceived pain experienced during acid reflux events.

This prospective, randomized, controlled crossover study included 10 patients with grade B–D erosive esophagitis and 10 healthy controls. Participants underwent two sleep schedules, separated by a 1-week washout period, in a randomly allocated order: adequate sleep ( $\geq 7$  hours' sleep for at least 3 consecutive days before evaluation) or sleep deprivation ( $\leq 3$  hours' sleep on the night before evaluation).

Actigraphy was used to verify compliance with the sleep schedules, and a modified acid perfusion test was used to evaluate the lag time to the onset of heartburn sensation, the sensory intensity of the event (scale 0–20), and the acid perfusion sensitivity score.

In the patients with GERD, sleep deprivation was associated with significantly decreased lag times to symptom report ( $P=0.02$ ) and significantly increased intensity scores ( $P=0.02$ ) and acid perfusion sensitivity scores ( $P=0.02$ ). Unexpectedly, none of the parameters differed significantly between adequate and deprived sleep schedules in the control group.

The authors conclude that sleep deprivation has hyperalgesic effects in patients who experience GERD symptoms, thus demonstrating the bidirectional relationship between GERD symptoms and disturbed sleep.

**Original article** Schey R *et al.* (2007) Sleep deprivation is hyperalgesic in patients with gastroesophageal reflux disease. *Gastroenterology* 133: 1787–1795

## Mouth-to-anus patency capsule for the diagnosis of small intestinal strictures

Video capsule endoscopy (VCE) is a noninvasive imaging technique for visualization of the small intestine. The presence of an undiagnosed intestinal stricture, however, poses the risk of capsule impaction, which requires surgical removal. Banerjee and colleagues tested the safety and efficacy of a painless, noninvasive and radiation-free patency capsule for diagnosing intestinal strictures.

The patency capsule (Given Imaging, Yoqnam, Israel) consists of a  $26 \times 11$  mm casing containing a radiofrequency identification (RFID) tag to allow tracking of the device through the gastrointestinal tract. The coating of the capsule is designed to disintegrate after 80–100 h; the RFID tag and casing fragments are then excreted in the stools, denoting the presence of a stricture. Intestinal patency is indicated by intact capsule excretion, and confirmed by VCE.

Twenty-six patients (tuberculosis [ $n=16$ ], Crohn's disease [ $n=8$ ], postoperative stricture [ $n=1$ ], malignant stricture [ $n=1$ ]) with a confirmed or suspected small intestinal stricture swallowed a patency capsule after an overnight fast. Eight patients excreted intact