

Gastrointestinal surgery

GASTROINTESTINAL SURGERY continues to be informed by advances in basic science, technology and by the changing expectations of consumers.

Prevention. The high rate of adhesions found after abdominal surgery supports the need to tackle this problem.¹ Options currently being canvassed include simple technical modifications (eg, using powderless gloves), agents that minimise adherence of mesothelial surfaces, and a range of physical barriers that can separate these surfaces.

The emergence of Level 1 evidence that mortality can be reduced by screening for colorectal cancer has led to increasing calls for screening programs;² mooted pilot programs within Australia may herald their future widespread introduction.

Prophylactic colectomy is well established for rare inherited colorectal cancer syndromes. Advances in molecular biology are extending this concept to patients with other inherited predispositions to cancer, with potential for broader application within the gastrointestinal tract (eg, gastric cancer).³

Diagnosis. Technological advances have allowed laparoscopy to spearhead advances in diagnosis and treatment.

Leaps in imaging techniques (such as video capsules which can be swallowed by the patient, virtual endoscopy, enteroscopy) are enhancing the array of diagnostic tools.

The intraoperative use of ultrasound has allowed more accurate staging of cancers and has facilitated hepatic resections. The use of transrectal imaging (ultrasonography, helical computed tomography and magnetic resonance imaging) has similarly assisted decision making and treatment for patients with complex anorectal diseases such as fistulas, abscesses and cancer.

Molecular analyses of body fluids (including faeces) may have an increasing role to play in screening and surveillance.

Intervention. Laparoscopic surgical management of disorders of the entire gastrointestinal and hepato-pancreatico-biliary tracts is thought to represent a significant advance by many. These and other technology-based advances are tempered by the aphorism that “technology moves faster than knowledge, which, in turn, moves faster than wisdom”.⁴

The removal of rectal cancers by transanal endoscopic microsurgery (TEM) is becoming increasingly common outside Europe, where the procedure was initiated. Further evidence on cancer recurrence and survival when TEM is employed is awaited. A growing evidence base has bolstered adjuvant chemotherapy and radiotherapy treatments,² and the preoperative use of adjuvant therapy for patients with rectal cancer will allow for down-staging of tumours, giving patients a more favourable prognosis. This may increase further the number of patients amenable to TEM.

A similar acronym (TME) represents total mesorectal excision (excision of the perirectal tissue contained within the endopelvic visceral fascia and extending the length of the rectum) when resecting a rectal cancer. Proposed by some

with messianic zeal (as reflected by the term “holy plane”, which is a guide to the resection), it has been increasingly adopted, despite still-debated benefits in terms of survival and the prevention of local recurrence.

Robotic surgery (Figure) understandably receives much publicity. Surgery from a remote location is unlikely to be adopted widely in the next five years. However, telemonitoring (observation of performance), the use of computers for measuring and guiding dexterity enhancement and for simulating virtual environments are already occurring in multiple skills laboratory training centres.⁵

A less glamorous (but more painful) surgical topic is the management of patients with an anal fissure. Novel non-surgical interventions (such as the use of glyceryl trinitrate and botulinum toxin) have been described to avoid lateral sphincterotomy, which may cause postoperative incontinence.

Quality and communication. Underpinning these advances is the need for surgeons to maintain their competence and to practise according to best evidence, as facilitated by the establishment of the Australian Safety and Efficacy Register for New Interventional Procedures – Surgical <<http://www.medeserv.com.au/racs/open/asernip-s/publications.htm>>.

Doctors must now assiduously inform patients and relatives of benefits and risks of operations. This implies a detailed knowledge of outcomes, as gleaned from clinical-audit and peer-review processes using personal and comparative data. An example of how to collate these data can be found at <http://www.pamuk.co.uk>.

Finally, advances should not be seen in terms of technology alone; knowing what to do and how to do it must be complemented by knowing how to explain what should be done and when and in whom to do it. The two websites cited above are important to facilitate this process.



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