Patterns in current perioperative practice: survey of colorectal surgeons in five northern European countries

Kristoffer Lassen, Pascal Hannemann, Olle Ljungqvist, Ken Fearon, Cornelis H C Dejong, Maarten F von Meyenfeldt, Jonatan Hausel, Jonas Nygren, Jens Andersen, Arthur Revhaug, on behalf of the Enhanced Recovery After Surgery (ERAS) Group

Editorial by Urbach and Baxter

Department of Gastrointestinal Surgery, University Hospital of Northern Norway, 9038 Tromsø, Norway
Kristoffer Lassen *consultant surgeon*
Arthur Revhaug *professor of surgery*
Department of Surgery, University Hospital Maastricht, Maastricht 6202 AZ, Netherlands
Maarten F von Meyenfeldt *professor of surgery*
Cornelis H C Dejong *consultant surgeon*
Pascal Hannemann *surgical registrar*
Centre for Surgical Sciences, Division of Surgery, Karolinska University Hospital, Stockholm, Sweden
Olle Ljungqvist *professor of surgery*
Jonas Nygren *associate professor of surgery*
Jonatan Hausel *doctoral student*
Clinical and Surgical Sciences (Surgery), School of Clinical Sciences and Community Health, University of Edinburgh, Edinburgh EH16 4SA
Ken Fearon *professor of surgery*
Department of Surgical Gastroenterology, 435 Hvidovre University Hospital, Hvidovre 2650, Denmark
Jens Andersen *consultant surgeon*
Correspondence to: K Lassen lassen@unn.no

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Evidence for optimal perioperative care in colorectal surgery is abundant. By avoiding fasting, intravenous fluid overload, and activation of the neuroendocrine stress response, postoperative catabolism is reduced and recovery enhanced. The specific measures that can be used routinely include no bowel preparation, epidural anaesthesia/analgesia continued for one to two days postoperatively, no nasogastric decompression tube postoperatively, intravenous fluid/saline restriction, and free oral intake from postoperative day one.[1–5] This survey aimed to characterise perioperative practice in colorectal cancer surgery in five northern European countries: Scotland, the Netherlands, Denmark, Sweden, and Norway.

Participants, methods, and results

We mailed a questionnaire to the head surgeons of all digestive surgical centres in the five countries of the departments belonging to the Enhanced Recovery After Surgery (ERAS) Group in late spring 2003. We presented a hypothetical case of elective laparotomy with colonic resection for cancer in an otherwise healthy 70 year old man. We asked the respondents to answer according to the practice most widely used in their department at that time.

The table shows the results (fuller version on bmj.com). Response rate was 76% (200 centres). Oral bowel preparation was still the rule in all countries. The nasogastric decompression tube was widely used postoperatively only in the Netherlands. "Nil by mouth" was hardly used in Scandinavia but was common in the Netherlands and Scotland. By postoperative day one, patients ate at will in 85% of Danish units and in almost half of units in Norway, the Netherlands, and Sweden. In Scotland, only a quarter of units allowed free eating on day one. The use of epidural analgesia in general

A fuller version of the table is on bmj.com

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Responses (percentages) to questionnaire on perioperative care in colonic resections in five northern European countries

Responses	Scotland	Netherlands	Sweden	Norway	Denmark
Response rate	72.4 (n=55)	83.7 (n=36)	68.3 (n=43)	92.7 (n=38)	70.0 (n=28)
For an elective left sided* hemicolectomy for cancer, would bowel preparation be administered?					
No	4	18	3	5	19
Yes, oral purgative	85	52	95	89	62
Yes, enema	4	12	0	3	15
Yes, both	8	18	3	3	4
Is nasogastric decompression tube routinely left in place for more than four hours after surgery?					
No	75	22	83	82	85
Until next morning	12	36	17	18	11
Two days or more	12	17	0	0	0
Until bowel movement	2	25	0	0	4
Is epidural analgesia used routinely postoperatively after transfer to general ward? (Not high dependency ward/intensive care unit)					
Yes	11	83	93	89	96
No	89	17	7	11	4
Are there any restrictions on routine intravenous clear fluid administration in the first 72 hours after surgery?					
Yes	24†	14	5	8	4
No	76	86	95	92	96
Are there any restrictions on routine intravenous sodium administration in the first 72 hours after surgery?					
Yes	26†	14	0	8	7
No	74	86	100	92	93
How long would a patient be "nil by mouth" (less than 450 ml clear fluid) postoperatively?					
0 days	38	58	71	82	96
1-2 days	46	39	26	18	4
3-4 days	17	3	2	0	0
When would patients be allowed to resume oral intake at will for solids (eat freely)?					
Operating day	10	3	12	8	41
Postoperative day one	17	43	32	45	44
At bowel sounds	13	11	23	5	0
At passage of gas	44	17	27	32	15
Bowel movement	17	26	7	11	0

Results are percentages after exclusion of missing or ambiguous responses (overall 2.55% excluded). Percentage is of the total numbers of responses to that question.
*The only question in which colonic resection was further specified.
†Scottish centres declaring a fluid/sodium restricting routine allowed maximum values of 3000 ml water and 154 mmol sodium per 24 hours (median).

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What is already known on this topic

For colonic surgery, current evidence advocates no bowel preparation, epidural anaesthesia/analgesia for 1-2 days postoperatively, no nasogastric decompression tube postoperatively, avoidance of sodium/water overload, and free oral intake from postoperative day one

What this study adds

Perioperative routines in colonic cancer surgery differ widely in northern Europe and deviate considerably from the best available evidence

wards exceeded 90% in Scandinavia compared with 11% in Scotland. Intravenous fluids were used unrestrictedly.

Comment

Perioperative routines in colorectal cancer treatment in northern Europe differ substantially from evidence based practice. Patients are uniformly subjected to the unpleasant, unnecessary, and harmful practice of preoperative bowel preparation,[1] precluding oral nutrition and increasing dependency on intravenous fluids. For too many patients, the situation is aggravated as nasogastric tubes are left in place for too long, patients are kept nil by mouth too long, intravenous fluids are administered unrestrictedly, and adequate blocking of pain and afferent stress stimuli is not provided.

The Dutch have implemented postoperative epidural anaesthesia/analgesia in general wards, and their patients should thus be optimally prepared to tolerate a normal diet soon after surgery.[2 5] Nevertheless, in almost half the Dutch centres nasogastric tubes were left in place for two days or more. Of centres where nasogastric tubes were removed early, a third still prescribed nil by mouth for at least a day. Approximately 25% of Dutch centres did not allow patients to eat solid food at will until bowel movements occurred, and many did not even allow fluids. One could argue that the Dutch have introduced a novel modality but failed to exploit its major potential. In Scotland, a conservative view by anaesthetists prevented patients with epidural anaesthesia/analgesia being nursed outside of high dependency units. This may also have caused the Scottish centres to practise nil by mouth more widely than the others and to withhold both fluids and solids accordingly, although it contrasts with available evidence.[5]

A restricted fluid regimen aiming at unchanged body weight may reduce complications after elective colorectal surgery.[4] Scotland had the only substantial group claiming such practice. However, the volume of fluids allowed (table) indicates an inadequate reduction as it is twice as high as in the unrestricted (standard) group in the study by Brandstrup et al (median 1500 ml/24 hours).[4]

In spite of a large evidence base for perioperative care aiming to alleviate postoperative catabolism and organ dysfunction, surgical patients remain exposed to unnecessary starvation, suboptimal stress reduction, and fluid overload.

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Taking histories—theft by clinicians

Medical education now stresses the importance of partnership between health professionals and patients. The hierarchical model of the doctor-patient relationship is old fashioned and inappropriate.

So why do we still tell students to "take a history" from patients? Does this phrase undermine our efforts to teach about collaboration? Shouldn't we instead "listen to people's stories"? This would emphasise the importance of meeting the patient in his or her world and context and ensure that the start of the medical consultation does not perpetuate an outmoded and ineffective world view.

Susan M Wearne *GP educator, Centre for Remote Health, Alice Springs, Australia (susan.wearne@flinders.edu.au)*

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