Discussion


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Length of stay is an important proxy for successful outcome following colorectal surgery. The Combined Gastroenterology Unit at Scarborough, UK was among the groups which pioneered the concept of Enhanced Recovery After Surgery (ERAS) protocols, to reduce length of stay. These protocols typically comprise various elements designed to reduce pain and ileus, though the precise elements often differ between institutions. It is difficult to determine whether the success of these protocols rests upon the sum of the whole protocol, or just some individual components. Cost-effectiveness may be improved if the protocols can be limited to key interventions. The Scarborough group set out to identify which factors within the Scarborough protocol had the most impact. They undertook a retrospective analysis of patients who underwent open colorectal surgery and were managed according to their local protocol.1

Epidural analgesia (EA) and avoidance of oral opiates independently correlated with length of stay. All patients in whom EA was successful/feasible (93%) received it. Intra-venous morphine was prescribed for the remaining patients. Shorter EA duration also predicted reduced stay but the withdrawal criteria were unclear. The meta-analysis quoted by the authors only showed a length of stay benefit with EA when used in combination with an ERAS programme, and specifically no difference when compared to opioid analgesia.2 Other evidence has questioned even this benefit.3 The Scarborough analysis suggests that avoidance of oral opiates is important, but one cannot tease out the relationship between opiate use and failure of epidural placement within their cohort. Presumably, patients whose epidural failed required more opiates. These data should not be used to withhold adequate analgesia from patients whose epiduals fail or are contraindicated.

The ASA grade distribution suggests that the Scarborough cohort is fitter than the typical colorectal population, which may limit generalised application of the study findings (80% of patients were ASA 1 or 2). UK NBOCAP figures for 2006–2008 for patients undergoing oncological colorectal resection show only 46.7% of patients were ASA 2 or higher, although ASA was not recorded in 30%.4 Patients with existing co-morbidities are more carefully selected and routinely optimised before elective surgery, and longer durations of stay are anticipated in this cohort. ERAS protocols may be more beneficial in those with higher ASA grades, and it may be useful to emphasise this to patients pre-operatively to optimise recovery.

There is some equipoise in the literature regarding the importance of incision type. A Cochrane review suggested a benefit with transverse incision,5 although a recent RCT has not supported this.6 The study found a significant effect for transverse incision on univariate analysis, and the lack of significance in the multivariate model may well be a type 1 error. However the criteria for incision choice are unclear. Transverse incisions were used “whenever possible” and yet only 50% of the patients had them. This makes it difficult to draw a definite conclusion, as does the fact that laparoscopic surgery is now regarded as the standard of care for colorectal resection when available. In the era of minimally invasive surgery, incision direction may be less relevant.

The authors rightly point out that fitness-for-discharge may be a more accurate method of assessing postoperative recovery. It is less influenced by social and other external factors than length of stay. However it is not standardised, lacks objectivity and
ultimately is a less relevant outcome than actual length of stay. Patients in this study were classified as short or long lengths of stay if they stayed for less or more than the cohort median of 6 days, meaning that a difference of even one day was enough to classify patients into different groups. Given the multitude of factors that can affect this figure this may be a slightly artificial way of analysing the data and may weaken the analysis.

In summary this is a topical and relevant paper that strengthens the case for the inclusion of certain modalities in an ERAS but has not clearly demonstrated an independent benefit of these factors. As these factors work in tandem, demonstrating individual benefits may be difficult, and given the acceptance of ERAS protocols, may be irrelevant. For now, the whole of ERAS remains greater than the sum of the parts.

Ethical approval
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Conflicts of interest
None.

References