

Enhanced recovery in the real world – still working 5 years on?

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The success of enhanced recovery in colorectal surgery¹ has led to intense interest in developing this model of care for other patient groups. In 2011 we published the results of an RCT conducted at our centre demonstrating the benefits of an enhanced recovery pathway (ERP) for liver resection surgery². 5 years on, this audit aims to evaluate the current compliance rates with the ERP and determine whether adherence continues to confer the benefits demonstrated in the original study.

Methods

Compliance with ERP elements and postoperative length of stay (LoS) was established from a retrospective review of case-notes for 21 consecutive patients undergoing open liver resection in early 2016. Results were compared with data from the original 2011 RCT.

Conclusion

This audit revealed there has been a decrease in overall compliance with the ERP, in particular with the pre and postoperative elements. This coincides with a trend toward increasing LoS, although this was not significant and LoS is still better than with no ERP, highlighting the importance of compliance for maintaining clinical outcomes. This project illustrates the essential role audit plays in maintaining clinical standards and demonstrates why it forms a key part of a successful ERP.

ERP Element	% Compliance		
	RCT Standard Care n=45	RCT ERP n=46	2016 Audit n=21
Preop. Information & education	-	100	52
Preop. fasting + carbohydrate drink	-	100	63
Avoid anaesthetic premedication	100	100	100
Prophylaxis against thromboembolism	100	100	100
Antimicrobial prophylaxis	100	100	100
PONV – multimodal approach	100	100	100
Avoid nasogastric tube	-	100	100
Prevent intraoperative hypothermia	100	100	100
Periop. fluid management- GDFT	-	100	83
Avoid routine surgical drainage	-	100	95
Urinary drainage: 1-2 days only	-	65	62
Postop. analgesia- thoracic epidural (avoid i.v. opiates)	98	100	81
Periop. nutritional care	-	100	71
Early mobilization- physiotherapy twice daily	-	100	52
OVERALL COMPLIANCE with ERP (%)	n/a	98	83

	Median (IQR) LoS in days		p value
RCT Standard Care vs ERP	7 (6-8)	4 (3-5)	p<0.001
RCT ERP vs 2016 Audit		4 (3-5) 5 (4-5)	p=0.055
RCT Standard Care vs 2016 Audit	7 (6-8)	5 (4-5)	p<0.001

References

1. Gustafsson UO, Hausel J, Thorell A, Ljungqvist O, Soop M, Nygren J *et al.* Adherence to the enhanced recovery after surgery protocol and outcomes after colorectal cancer surgery. *Arch Surg* 2011; **146**: 571 – 577.
2. Jones C, Kelliher L, Dickinson M, Riga A, Worthington T, Scott MJ, Vandrevalla T, Fry CH, Karanjia N, Quiney N *et al.* Randomized clinical trial on enhanced recovery versus standard care following open liver resection *British Journal of Surgery* 2013; **100**: 1015-1024