



Enhanced Recovery following Coronary Artery Bypass Grafts

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Background

Same day admission was well established for cardiac surgery in our unit so Enhanced Recovery After Surgery (ERAS) seemed a natural development of the cardiac service. The benefits of ERAS are well proven for other surgeries but at the commencement of this pilot there were no other centres reporting to have implemented it for cardiac surgery

Aims

A pilot study was commenced to see if ERAS would have.

- A positive impact upon length of stay
- A positive impact upon patient experience
- Reduce postoperative pain
- Reduce post operative nausea.

Patient selection

Patients were commenced on the pathway if;

- Having first time CABG surgery
- Have good home support following discharge
- Can speak English

Methods

Patient who met selection criteria underwent surgery through ERAS pathway. Extubation time, postoperative length of stay and pain and nausea scores were recorded and analysed. Patients completed a survey following the surgery. Results were compared with identical group of patients who underwent surgery through the existing pathway.

Results

- 155 patients successfully followed the ERAS pathway post CABG surgery, including 130 elective patients.
- There was a significant reduction in length of stay in this initial group of patients.
- Post operative nausea and pain scores were acceptable.
- This group of patients also had a significantly less post operative atrial fibrillation.
- Patient satisfaction was very high in ERAS group.

Conclusion

The pilot showed the positive impact on the outcomes and patient experience. We are now rolling out ERAS programme to all first time CABG patients 5 days a week. We are developing pathways for minimal access Cardiac and Thoracic surgeries as well. We are planning to analyse the financial benefits in the future.

References

Nicholson A, Lowe MC, Parker J, Lewis SR, Alderson P, Smith AF. A systematic review and meta-analysis of enhanced recovery programmes in surgical patients. *British Journal of Surgery*. 2014; 101: 172-188.

Table 1: Compliance of ERAS pathway

Parameter	ERAS Elective (N = 130)	ERAS Urgent (N = 25)
Post operative extubation within 2 hours	23%	12%
Post operative extubation within 3 hours post op	45.3%	36%
Out of bed within 6 hours post operatively	63%	44%
Seen by Physiotherapists twice a day	96.5%	96.5%

Table 2: Impact of ERAS pathway

	ERAS Elective (N = 130)	ERAS Urgent (N = 25)	Non ERAS (N = 589)
Postoperative stay Mode	3.5 days	4 days	6.2 days
Mean	4.9 days	5.5 days	6.2 days
Median	4 days	5 days	
Mean Pain score (Out of 10)	3.4	3.8	NA
Mean Nausea Score (Out of 10)	0.6	0.75	NA
Percentage felt involved in the care	100%	100%	89%

Table 3: Postoperative complications

Complications	ERAS Elective (N = 130)	ERAS Urgent (N = 25)	Non ERAS (N = 589)
Postop AF	16%	20%	20.9%
Chest Infections	6.9%	4%	NA
CVA	0.7%	0	0.7%
Re-sternotomy	1.5%	8%	4.05%

I felt that I was at the centre of my care

I felt a sense of accomplishment at reaching targets

Patient focus group

I will gladly speak to future patients about ERAS.

I would have liked pre op aims similar to the post op targets