CLINICAL AND COSTS BENEFITS OF ENHANCED RECOVERY PROGRAMME AFTER PANCREATICODUODENECTOMY

B Jaber, A Shamali, S Barbaro, M Abu Awwad, T Armstrong, A Takhar, Z Hamady and Mohammed Abu Hilal.
Southampton University Hospital NHS Foundation Trust

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INTRODUCTION

Enhanced Recovery Program (ERP) is an evidence-based, structured, multi-modal program for optimal perioperative care.

ERP aims to reduce surgical stress, maintain physiological functional capacity, reduce complications thus optimizing post-op recovery (POR).

The implementation of ERP for high-risk surgical procedures such as pancreatic resections required a longer period of reflection compared to other specialties.

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LITERATURE

Few pilot studies have shown significant clinical advantages of the ERP in pancreatic surgery

However small sample size and the inclusion of a variety of pancreatic resections were seen as significant weaknesses of those studies

In addition, there only few studies, assessing the economical benefit of ERP

- Enhanced Recovery Partnership Programme. Delivering enhanced recovery e helping patients to get better sooner after surgery. UK National Health Service (NHS); 31 March 2010.

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The aim of this study was to assess safety, clinical outcomes and costs economics of ERP for pancreaticoduodenectomy (PD) on a large cohort from a tertiary UK referral center.
PATIENTS AND METHODS

This is an observational study comparing 250 consecutive patients before and after implementation of ER after pancreaticoduodenectomy.

Inclusion criteria were: resection of benign or malignant (curative intent) pancreatic and periampullary lesions.

Exclusion criteria were emergency PD and palliative procedures.
PATIENTS AND METHODS

New standards introduced with ERP included:

- change in preoperative nutrition,
- pain control,
- reduction of intra-abdominal drains,
- intra-venous fluids management,
- early mobilization,
- elimination of enteral feeding and consequently disuse of the naso-jejunal tube,
- early naso-gastric tube removal,
- early start of oral feeding,
- early discharge planning

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RESULTS

- NG removal median
- Start liquids median
- Unlimited intake median
- Passing flatus median
- Opened bowel median
- Length of stay median
- Critical care stay median

P < 0.001
RESULTS

- Overall complications % (P=0.128)
  - ERP PD: 42
  - Traditional pathway: 53

- Pancreatic fistula % (P=0.738)
  - ERP PD: 16
  - Traditional pathway: 18

- Delayed gastric emptying % (P=0.305)
  - ERP PD: 14
  - Traditional pathway: 19

- Chest infection % (P=0.006)
  - ERP PD: 6
  - Traditional pathway: 18

- Readmission rate % (P=0.008)
  - ERP PD: 6
  - Traditional pathway: 17

- Perioperative mortality % (P=1.0)
  - ERP PD: 1.6
  - Traditional pathway: 2.4

- Reoperation % (P=0.367)
  - ERP PD: 3
  - Traditional pathway: 6

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A significant lower total median cost per patient was noted in the ER group compared to the traditional group (\textbf{£17680 Vs £19585}), this was a result of savings in the postoperative period, mainly in the bedtime by lower length of overall hospital and critical care unit stay and readmissions rate.
COST ANALYSIS

- Intraoperative cost:
  - ERP PD: £14,030
  - Traditional pathway: £13,171

- Postoperative Cost:
  - ERP PD: £3,650
  - Traditional pathway: £5,664

- Total Cost:
  - ERP PD: £17,680
  - Traditional pathway: £19,585
CONCLUSION

ERP after PD is:

- Safe and feasible.

- Associated with early recovery of GUT function and shorter hospital stay.

- Not associated with an increase of perioperative morbidity, mortality or readmission rate!

- Cost effective and results in bed saving.
**** Thank you ***