

Benefits of Multimodal Enhanced Recovery Pathway in Patients Undergoing Open Ventral Hernia Repair

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University Hospitals Case Medical Center, Department of Surgery, Case Comprehensive Hernia Center

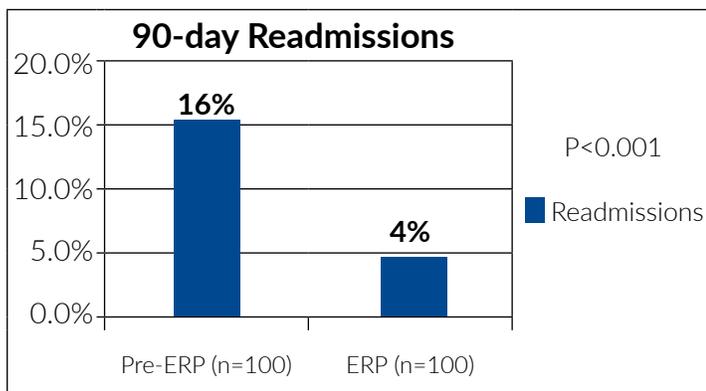
Objectives:

Investigate use of a multimodal ERP (Enhanced Recovery Protocol) in patients undergoing open major ventral hernia repair (VHR) to see if functional recovery is accelerated and hospitalization shortened.

Methods:

A prospective comparison of consecutive VHR patients receiving ERP (n=100) with a pre-ERP historical cohort (n=100). All had retromuscular hernia repair and posterior component separation via transversus abdominis muscle release (TAR), along with placement of synthetic mesh. ERP pathways included perioperative pain management, oral opioid-receptor blockade and preoperative use of an immunonutrition drink containing supplementary arginine, n-3 fatty acids and nucleotides (IMPACT Advanced Recovery® Drink- 3 cartons per day for 5 days), as well as scheduled diet advancement post-surgery. A clear liquid nutritional supplement, BOOST Breeze® was provided on post-op Day 1 and transitioned to BOOST® Plus once tolerating food. Functional recovery measures included time to: diet advancement, return of bowel function, oral narcotics and foley catheter removal. Hospitalization was measured by length of stay (LOS) and 90-day readmissions.

Results:



- **Average LOS** was 2.1 days lower in the ERP group (p<0.001)
- **Diet advancement** to liquids and solids was shorter for the ERP group 1.6 and 1.8 days, respectively; p<0.001). No difference was found in the rate of emesis after diet advancement.
- **Time to flatus and bowel movement** was shorter for the ERP group by 0.8 and 1.6 days, respectively; p<0.001)
- **Time to oral narcotics** was 1.4 days shorter for the ERP group; p<0.001)

- **A 75% reduction in the rate of 90-day readmission was associated with use of ERP protocols (p<0.001)**

Conclusions:

Multimodal ERP strategies for major open VHR were implemented safely and demonstrated accelerated return of intestinal function, reduced LOS and also resulted in fewer readmissions. Improving patient outcomes and cost efficiency are critical when reimbursements are based on quality metrics.

Summary prepared by Nestlé Health Science. The complete study can be accessed on line at:

<https://www.ncbi.nlm.nih.gov/pubmed/27049780>