Preoperative ERAS Implementation in Open Urological Surgical Procedures: A Comprehensive ERAS Protocol.

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PROBLEM STATEMENT

- Multimodal perioperative approach is needed to reduce postoperative pain, hospital length of stay and improve overall patients' surgical outcomes.
- The urology service at a local hospital requested implementation of a comprehensive ERAS protocol for open urologic surgery due to a pre-implementation pain score levels of 5.875 on a 10-point numeric pain rating scale (NPRS) and hospital length of stay of 3.5 days.

PROJECT PURPOSE

- Establish the preoperative ERAS protocol to improve the surgical outcomes and perioperative experience of veterans undergoing open urological surgery by reducing postoperative hospital length of stay and pain severity.
- Will implementation of a preoperative ERAS protocol for Veterans undergoing open urological surgeries result in decreased pain score levels and hospital length of stay when compared to current therapy over a four-month period?

MODEL/ NURSING THEORY

- The Health Belief Model is a framework in nursing studies focused on patient compliance.

IMPLICATION FOR ADVANCE PRACTICE NURSING

Multidisciplinary nursing care for improved patients' outcomes.

METHODS

Subjects (Participants)

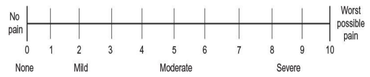
- All veterans, males and females who underwent open urological surgical procedures.

Setting

- Large local veterans' hospital.

Instruments/Tools

- A Numeric Pain Rating Scale (NPRS)



Hospital length of stay (LOS) was obtained from the Data-as-a-Service (DAAS) computer program

Data Collection

- Data was reviewed and collected weekly in a password and facility ID protected drive.
- The date of surgery, type of surgery, and average pain scores were recorded while the patient was in PACU.
- Hospital LOS were reviewed, collected and entered in the spreadsheet weekly.
- No personally identifiable information was collected.

Intervention

Preoperative Counseling and Education	**Identify and discuss patient's pain and surgical expectations. Early mobilization education. Pamphlet for smoking cessation and reduction of alcohol intake.**
Preoperative carbohydrate loading	**Day of surgery patients loaded with carbohydrates.**
Preoperative fasting	**Clear liquids up to two hours before surgery.**
Preoperative pain control	**Preoperative use of acetaminophen and gabapentin Preoperative epidural placement**

GRAPHS

Figure 1
Hospital Length of Stay (N = 21)

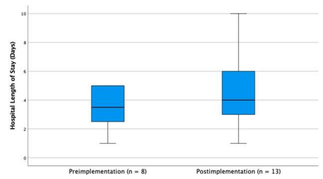


Figure 2
Hospital Length of Stay After Omitting Outliers (N = 18)

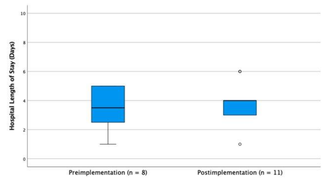


Figure 3
Numeric Rating Scale (NRS) for Pain Score on PACU Admission (N = 21)

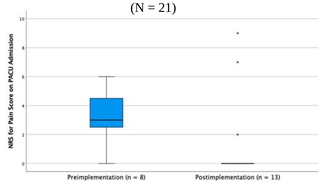
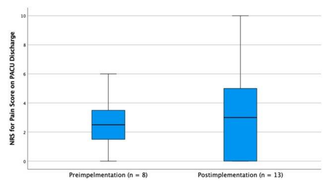


Figure 4
Numeric Rating Scale (NRS) for Pain Score on PACU Discharge (N = 21)



RESULTS

- Median HLOS was 3.5 days and 4 days before and after implementation, respectively (Figure 1; p = .438).
- After omitting outliers, median HLOS was 3.5 before and 4 days after implementation (Figure 2; p = .832).
- After implementation, median NPRS scores on PACU admission decreased from 3 to 2.5 (Figure 3, p = .021), while median NPRS score on PACU discharge increased from 2.5 to 3 (Figure 4, p = .660).

DISCUSSION

The implementation of the preoperative ERAS protocol was presented with many challenges including:

- Limited number of patients undergoing open urologic procedures. 8 preoperative and 13 postoperative patients were analyzed. This may not represent meaningful results.
- As this type of surgery is not performed on a weekly basis, stakeholders need to be constantly reminded of the protocol and its components, making it very difficult to create adherence and acceptance.
- None of the participants received epidurals, but all received either a transversus abdominus plane (TAP) or quadratus lumborum (QL) blocks, which significantly helped in the reduction of postoperative pain.
- Two outliers were excluded after significant increase in hospital length of stay due to health complications unrelated to the urological surgery.

REFERENCES

The preoperative Enhanced Recovery After Surgery (ERAS) protocol did not improve the surgical outcomes or perioperative experience of veterans undergoing open urological surgery by reducing postoperative pain severity nor hospital length of stay.

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