ENHANCED RECOVERY AFTER SURGERY “ERAS”

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SBMU, PGRC webinar
21/05/1400
WHAT IS ERAS

- Initiated by Professor Henrik Kehlet in the 1990s,
- Enhanced recovery after surgery (ERAS) programs or enhanced recovery programs (ERPs) or “fast-track” programs
- periop protocols of EVB interventions
- Grouped together
  - Multidisciplinary/ multimodal interventions
    - aimed at minimizing the physiologic changes associated with surgery.
COMPONENTS ERAS PROTOCOLS

- important focus of periop management
  - to modify the physiology/psychological responses to major surgery
- vary
  - among subspecialties: colorectal, vascular, thoracic, gynecology,…
  - surgical routes,
  - institutions
ERAS FOCUSES ON:

- **preop counselling:** education/ periop expectations
- **preop nutrition,** decreasing fasting period,
- **euvolemia/ normothermia,**
- **multimodal pain relief,**
- **standardized anesthetic/analgesic regimens**
  - (epidural and non-opioid analgesia)
- **multimodal nausea & vomiting prophylaxis,**
- **decreasing unnecessary or prolonged use of catheters & drains**
- **early mobilization**
AIMS

- To decrease periop physiologic stress
- To reduce periop morbidity and mortality,
- To decrease cost of care
- To enable patients to recover more quickly
- To reduction in postoperative opioid use
- To have decreased hospital length of stay
- To resume routine activity more quickly than with standard surgical care

- The patient is fundamental component of ERAS protocols
  - Involved in every step from the decision for surgery to discharge.
  - Elements of ERAS pathways will continue to evolve as new evidence emerges
ERAS Society

- Founded in 2010,
- develops international consensus guidelines and resources
- ERAS programs combine
  - EVB elements of care during the pre-, intra-, postop experience
ERAS in gynecology surgery

- published by the ERAS Society
- Modified guidelines proposed for gyn-oncology
- ERAS pathways are formalized
  - for the sake of standardization and ease of ordering
- careful attention:
  - to ensure that each component is ultimately safe and applicable to the individual patient
ERAS in gynecology surgery

CANDIDATES

- Patients undergoing gyn-surgery with an overnight stay pathway should always be individualized.

As examples,

- older adult patients or patients with renal or hepatic dysfunction may require dose adjustment (or elimination) of certain medications (eg, NSAIDs, acetaminophen).
PREOP ASSESSMENT

- Patient education
  - Written information –
  - Preop optimization of medical comorbidities; CVD, respiratory, renal disease
  - correction of anemia and improved glucose control
  - screening for tobacco, alcohol, other substance use or abuse.
- Phone call
- Preop: Solid food, clear liquids, Cleanse the body with, incentive spirometer
- Postop: Stay in the hospital, diet, ambulation, pain, bowel function, discharge
Patient preparation

- Preoperative fasting –
- Bowel preparation –
- Prevention of surgical site infections
- Preoperative thromboprophylaxis –
- Preoperative analgesia
INTRAOP: POTENTIAL ERAS INTERVENTIONS

- Multimodal analgesia and anesthesia:
  - intervention both surgeons and anesthesiologists prior to the surgery.
  - Short-acting anesthetic agents,
  - lung protective ventilation strategies,
  - maintenance of normothermia,
  - standardized prophylaxis for postop nausea and vomiting,
  - perioperative euvoolemia
INTRAOP: POTENTIAL ERAS INTERVENTIONS

- Interventions specific to the surgical team —
  - Route of surgery – the least invasive surgery
  - Bladder catheterization – shortest duration necessary.
  - Nasogastric tubes – Routine use of should be avoided
  - Intraperitoneal drainage tubes – Routine use should be avoided
  - To reduce postoperative nausea/vomiting
POSTOPERATIVE

- Typically focus on:
  - pain management,
  - bowel function,
  - diet,
  - pain management,
  - patient mobilization
  - early discharge
OUTCOMES

- **ERAS Benefits:** (vs traditional postop care)
  - Decreased,
    - Pain
    - opioid use,
    - length of stay,
    - use of nursing time,
    - cost,
    - Kalogera: women in the ERAS protocol had reduced total 30-day costs of >$7600 USD per patient vs routine care gp
OUTCOMES

- ERAS Benefits: (vs traditional postop care)
  - Improved
    - functional outcomes,
    - patient satisfaction,
    - quality of life
  - Benefits reported after gyn procedures for cytoreduction, surgical staging, POP, MIS
CONCERNS

- Initial concerns have generally not been validated
- Decreased patient access to information and education
- Increase postop complications or readmissions
- The main challenges to ERAS implementation:
  - Time and cost to establish ERAS programs
IMPLEMENTATION

- Successful implementation of an ERAS program requires
  - a multidisciplinary team effort
  - active participation by the patient
  - time, cost
- To fully assess the impact of implementation of an ERAS protocol:
  - Compare the results following of ERAS implementation with an historic cohort of similar patients, same institution
STAKEHOLDERS

- Patients
- Surgeon's office, including surgical scheduler, nurse team
- Gyn-surgeon/ surgical team: practice providers and trainees
- Anesthesiologist and anesthesia team
- Pre, intra, postop nursing teams
- Inpatient pharmacists
- Information technology (IT) department
METRICS

- ERAS Society: an audit tool to facilitate the study of implementation/clinical outcomes.
- Ex:
  - Proportion of enhanced recovery-eligible patients who were placed on an enhanced recovery pathway
  - Proportion of enhanced recovery pathway participants who received specific elements of the enhanced recovery pathway
The following are examples of clinical metrics:

- Length of hospital stay
- Cost of hospital stay
- Perioperative opioid use
- Perioperative fluid balance
- Perioperative pain scores
- Postoperative day of first ambulation
- Performance of ambulation three times per day
- Postoperative day of tolerance of regular diet
- Time to resumption of voiding function
- Postoperative day of resumption of bowel function
- Patient satisfaction
- Unanticipated emergency department visit and/or readmission