

Evaluation of enhanced recovery after surgery protocols in day case total laparoscopic hysterectomy: a pilot study.

Rhys Harris^{1,2}, Courtney Clarke¹, Maleeha Mushfiq¹, Paula Baldan¹, Graeme Walker¹

1 - Gold Coast University Hospital, Department of Obstetrics and Gynaecology

2 - Griffith University, School of Medicine and Dentistry

Introduction and Aims

Enhanced recovery after surgery (ERAS) refers to evidence-based protocols surrounding preoperative, perioperative, and postoperative factors aiming to optimise patient outcomes [1].

In 2019, Gold Coast University Hospital (GCUH) begun performing total laparoscopic hysterectomy (TLH) with same-day discharge.

To facilitate safe and effective same-day discharge, updated and evidenced based ERAS protocols are vital.

This retrospective pilot study aimed to describe current practice and outcomes from the day-case TLH cohort, and to identify areas where evidence-based improvement in current ERAS protocols could be implemented to improve care.

Methods

The medical records of patients in whom day-case TLH was performed (n=24) between December 2019 and July 2020 were retrospectively reviewed. Data pertaining to preoperative, perioperative, and postoperative care was collected and analysed with simple descriptive statistics. The study took place with ethics approval.

Inclusion criteria included for the day-case TLH cohort included: age < 65 years old, the ability to have a responsible adult stay with them overnight post-operatively, and having residence within 50 km of the hospital. Exclusion criteria included significant cardiac or respiratory medical comorbidities and stage 4 endometriosis.

References:

1. Bryant-Smith A, As-Sanie S, Lloyd J, Wong M. Life in the laparoscopic fast lane: evidence-based perioperative management and enhanced recovery in benign gynaecological laparoscopy. *The Obstetrician & Gynaecologist*. 2021 Apr;23(2):113-23.

Results

- Study participant demographics:
 - Mean age 44.54 years
 - Mean BMI 27.6 kg/m²
 - Mean parity 2.2
- 100% of patients discharged same day
- Mean time from end of surgery to discharge was 6.6 hours
- 0% patients readmitted
- 0% with peri-operative complications
- 8.3% (n=2) patients with complications requiring ED presentation
- 100% of patients received:
 - Appropriate IV antibiotics
 - Mechanical VTE prophylaxis
 - Post-operative nausea and vomiting prophylaxis
 - Advice about post-operative analgesia and aperients
- 12.5% (n=3) had pre-operative chlorhexidine shower
- 0% had pre-operative carbohydrate drink
- 0% had vaginal swab pre-operatively
- 66.67% (n=16) had FBC pre-operatively, 0% had iron studies

Discussion

This study suggests TLH with same-day discharge is effective with minimal complications reported. While many aspects of current practice are in keeping with evidence-based ERAS recommendations, there are several areas for improvement [1]. This includes investigation of iron deficiency and correction of anaemia, pre-operative bacterial vaginosis testing and treatment, pre-operative carbohydrate loading and chlorhexidine shower, and optimisation of intraoperative and discharge analgesia. Based on these findings, a protocol has been implemented (see right). Future studies could focus on evaluating the implementation of changes to ERAS protocols, and further exploring outcomes of day case TLH including patient satisfaction and health economic analysis.

Enhanced Recovery After Surgery Day Case Total Laparoscopic Hysterectomy (TLH) Protocol

| Pre-operative | |
|---|--|
| Initial gynaecology clinic appointment Meet with TLH CNC the same day if possible | <ul style="list-style-type: none"> ◆ Shared decision for day case TLH ◆ Written consent obtained ◆ RANZCOG patient information sheet provided ◆ Request form for FBC, Chem20 & Iron Studies (if not completed by GP) ◆ High vaginal swab (investigate for bacterial vaginosis). |
| 2 weeks pre-op CNC face to face appointment | Patient provided with: <ul style="list-style-type: none"> ◆ Pre-operative carbohydrate drink ◆ Chlorhexidine sponge ◆ Copy of signed consent form ◆ Patient information sheet (link) ◆ Request form for up-to-date pelvic ultrasound (Queensland X-Ray) |
| 24 hours pre-op SMS sent | <ul style="list-style-type: none"> ◆ Video link sent to patient (https://youtu.be/orlPSX4I3hY) |
| Peri-operative | |
| Intra-operative | <ul style="list-style-type: none"> ◆ Chlorhexidine abdominal, vulval and vaginal skin preparation ◆ In and out catheter ◆ Multimodal analgesia including lignocaine infusion ◆ Antibiotic and VTE prophylaxis ◆ One litre fluid bolus towards end of operation ◆ Simplified surgical technique |
| Post-operative | <ul style="list-style-type: none"> ◆ Post-operative nausea and vomiting prophylaxis ◆ Oral fluids, diet, trial of void, mobilisation, shower ◆ Hourly review by surgical team and CNC (in addition to ASU nursing staff) |
| Discharge planning | Criteria for discharge: <ul style="list-style-type: none"> ◆ Tolerating diet and fluids ◆ Mobilising without assistance ◆ Pain controlled with oral analgesia ◆ Adequate home supervision ◆ Lives within 50Km ◆ Passed TOV Discharge summary – sent to GP |
| | Discharge Medications: <ul style="list-style-type: none"> ◆ Paracetamol 1000mg Q6H ◆ Ibuprofen 400mg Q8H (from day 1) ◆ Tramadol 50mg Q6H PRN (20 tabs) ◆ Movicol 2 sachets daily for 7 days ◆ Ondansetron 4mg PRN (4 tabs) ◆ TED stockings until mobile ◆ Written discharge instructions |
| Post-operative follow-up | |
| Days 1, 3 & 6 post-op Teleconference with CNC | <ul style="list-style-type: none"> ◆ To assess patient progress and review symptoms ◆ Provide patient opportunity to ask questions |
| 2 weeks post-op Phone call from registrar | <ul style="list-style-type: none"> ◆ To discuss histology results ◆ Updated discharge summary with histology results added sent to GP |
| 3 weeks post-op Review with GP | <ul style="list-style-type: none"> ◆ Allows general check-up and wound review ◆ Allows opportunity for driving and return to work clearance ◆ Ensures GP remains updated about progress post-operatively |
| 5 weeks post-op SMS sent | <ul style="list-style-type: none"> ◆ Online patient satisfaction survey sent via SMS. |
| 6 weeks post-op CNC face to face appointment | <ul style="list-style-type: none"> ◆ Review progress, wounds and symptoms. ◆ Opportunity for patient to ask questions ◆ To repeat FBC and iron studies if levels were previously low. ◆ Opportunity to complete patient satisfaction survey if not yet complete. |