Early Discharge after Laparoscopic Hysterectomy: a Prospective Study

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Abstract

Objective: To evaluate the feasibility of same-day discharge after laparoscopic hysterectomy without excluding patients with complex surgical pathology and medical comorbidities. These factors are often considered potential barriers to early discharge, and the literature is lacking prospective trials addressing the feasibility of same-day discharge after laparoscopic hysterectomy in this patient population.

Methods: All women undergoing laparoscopic hysterectomy by a member of the minimally invasive gynaecology team at The Ottawa Hospital, a tertiary academic referral centre, from May 2013 to February 2015 were eligible to participate regardless of patient comorbidities or surgical complexity. Strict perioperative protocols are presented. Factors associated with decreased success of same-day discharge and baseline and postoperative quality of life surveys were analyzed.

Results: Fifty-three patients were included. Overall success of same day discharge was 83.0%. Average age and BMI were 44.4 years and 29.8 kg/m^2, respectively. Thirty-four patients (63.0%) had at least one prior abdominal surgery. Those who had their surgery as first case of the day had a 91.7% same-day discharge rate versus 64.7% if they did not (relative risk = 1.4 [range 1.0–2.0]; P = 0.02). Ninety-eight percent of participants would recommend same-day discharge. Clinically significant improvement in quality of life from baseline was observed in 5 of 8 of the Short Form 36 domains at 6 months.

Conclusion: Same-day discharge from hospital is reasonable and well accepted for patients undergoing laparoscopic hysterectomy, even with complex surgical pathology. The implementation of a successful same-day discharge program would mean greater efficiency, economic benefits, and improved access to surgical care for women.

Key Words: Hysterectomy, minimally invasive surgical procedures, patient discharge, quality of life

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Résumé

Objectif : Évaluer la faisabilité du congé le jour même après une hystérectomie laparoscopique sans exclure les patientes ayant des pathologies chirurgicales complexes et des comorbidités. Ces facteurs sont souvent considérés comme étant des obstacles potentiels au congé précoce, et il existe très peu d'essais prospectifs abordant la faisabilité du congé le jour même dans ce contexte.

Méthodologie : Étaient admissibles toutes les femmes ayant subi une hystérectomie laparoscopique pratiquée par un membre de l'équipe de gynécologie à effraction minimale à l'Hôpital d'Ottawa, un centre régional universitaire de soins tertiaires, entre mai 2013 et février 2015, quelles que soient leurs comorbidités ou la complexité de l'opération. Des protocoles périopératoires stricts ont été présentés. Les facteurs associés à la diminution de la réussite du congé le jour même et les sondages sur la qualité de vie remplis avant et après la chirurgie ont été analysés.

Résultats : Cinquante-trois patientes ont été retenues. Le taux de réussite global du congé le jour même était de 83,0 %. L'âge et l'IMC moyens étaient de 44,4 ans et de 29,8 kg/m^2, respectivement. Trente-quatre patientes (63,0 %) avaient déjà eu au moins une chirurgie abdominale. Celles dont l'opération était la première de la journée avaient un taux de congé le jour même de 91,7 %, contre 64,7 % pour les autres (risque relatif = 1,4 [étendue : 1,0–2,0]; P = 0,02). Parmi les participantes, 98 % recommanderaient le congé le jour même. Une amélioration cliniquement significative de la qualité de vie à partir de l'état initial a été constatée dans cinq des huit domaines du questionnaire Short Form 36 après six mois.

Conclusion : Le congé de l'hôpital le jour même est raisonnable et bien accepté par les patientes qui subissent une hystérectomie laparoscopique, même dans les cas de pathologies chirurgicales complexes. La mise en œuvre d'un programme efficace de congé le jour même générerait des gains d'efficience, entraînerait des économies et améliorerait l'accès des femmes aux soins chirurgicaux.

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INTRODUCTION

Minimally invasive hysterectomy techniques allow for earlier discharge from hospital without additional patient morbidity.[1,2] Early discharge, within 24 hours, after laparoscopic hysterectomy has been shown to be safe and associated with high patient satisfaction.[3–12] Success rates of same-day discharge after laparoscopic hysterectomy are reported to be as high as 93%; however, patients are often excluded if undergoing any concomitant surgical procedures or if they have significant pathology or comorbidities.[13] Readmission rates and rates of 30-day morbidity after same-day discharge are reported to be similar to overnight stay.[5,6] Complex surgical pathology and medical comorbidities are often considered potential barriers to early discharge, and the literature is lacking prospective trials addressing the feasibility of same-day discharge after laparoscopic hysterectomy in this patient population.

The purpose of this study was to evaluate the feasibility of same-day discharge after laparoscopic hysterectomy in a tertiary referral academic setting without excluding patients based on comorbidities or predicted surgical complexity. Prior to this study, standard of care at our centre following minimally invasive hysterectomy was admission to an overnight stay unit and discharge home the following morning by 7:00 AM. As we have previously reported, approximately 20% of patients were discharged home the same day of their surgery at that time.[14] We hypothesized that most women may be safely discharged on the same day of their surgery, regardless of their medical complexity or gynaecologic pathology. By including all patients scheduled to undergo laparoscopic hysterectomy, we hoped to elucidate factors that may preclude same-day discharge. The primary outcomes were recruitment rate and success rate of same day discharge from hospital. Secondary outcomes include perioperative complications, surgical measures, patient satisfaction, and health-related quality of life.

MATERIALS AND METHODS

Study Population and Participants

Recruitment for this prospective cohort study began in May of 2013 and was completed in February of 2015. All females ≥18 years of age scheduled for laparoscopic hysterectomy for benign gynaecologic conditions with a member of our minimally invasive gynaecology team were eligible to participate. Two attending surgeons who have completed fellowship training in minimally invasive gynaecology recruited all patients. Once identified, patients were approached for their involvement in the study by a research coordinator in order to minimize the possibility of coercion. Participants provided informed consent, with or without the use of a translator. Potential participants were excluded only if they demonstrated a poor understanding of study.

Study Methods and Perioperative Protocols

All participants underwent a baseline evaluation prior to surgery. At the initial preoperative visit, participants completed two validated quality of life questionnaires, the Short Form 36 (SF-36)[14,15] and the Activity Assessment Scale (AAS),[16,17] as well as baseline health questionnaire specifically designed for this study including pertinent past medical and surgical information. Indications for surgery and preoperative workup were documented in a study intake file by the research coordinator. If any issues that could potentially delay discharge from hospital were identified during this visit, a social work consult was requested. We ensured patients understood same-day discharge and the need to have transportation and to be accompanied by a responsible adult at the time of discharge home from hospital.

Specific intraoperative anaesthesia and surgical protocols, as well as in-hospital postoperative recovery protocols were followed as outlined in Table 1. Patients are instructed that they can only consume clear fluids after midnight the night before their surgery, and then nothing by mouth as of 3 hours prior to their surgery. All patients received preoperative prophylactic antibiotics. Surgical parameters were recorded in a standardized surgical intake file. The perioperative protocol was adjusted based on medication allergies or contraindications to certain medications as required on an individual basis. Patients required a Post Anesthesia Discharge Scoring System score of ≥9/10 to be considered fit for discharge from hospital.[18]

Patients were provided with "The Ottawa Hospital Minimally Invasive Hysterectomy Information Booklet." This booklet outlines preoperative preparation, explains the procedure, answers common and frequently asked questions, and outlines the postoperative course. Patients were educated about postoperative signs and symptoms to watch for and were encouraged to call their surgeon's office or visit a physician should any concerns arise.

Surgical measures recorded in the surgical intake file included relevant times (total operative time, total anaesthesia time, time to discharge from hospital after leaving the OR), concomitant surgical procedures, intra- and postoperative complications, estimated blood loss, pathology result, and uterine weight. Perioperative complications (intraoperative through the sixth postoperative week), as well as long-term complications (beyond 6 weeks up to 6 months) were determined by patient interviews and by review of the hospital electronic medical records. All participants received a