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ANALYSIS OF LENGTH OF STAY DECREASE OF SC PATIENTS WITH ERACS PROTOCOL

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ABSTRACT

A clinical pathway (CP) is a concept of integrated service planning, based on medical service standards, care standards, and evidence with measurable results, medical care that is sick at home. Summarize each step given to the patient based on other service standards for the worker. Specified period CP is a standard of care that begins with evaluation, diagnosis, information support, rehabilitation, and clinical audit. Enhanced Post-Surgery Recovery (ERACS) is a multimodal designed to provide immediate recovery for post-surgery patients by preserving preoperative organ function and reducing stress responses during surgery. Perioperative treatment protocol. The most important keys to this protocol are preoperative counseling, nutritional optimization, standard anesthetic and analgesic use, and early mobilization. Enhanced recovery after surgery (ERAS) is a philosophy of perioperative care that has been applied in other settings since the 1990s, but in obstetrics in the form of enhanced recovery (ERACS) after cesarean section surgery. The application of was recently discovered. The ERACS Protocol aims to increase patient satisfaction, shorten patient stay and reduce costs. The ERACS protocol includes pre-hospital, preoperative, intraoperative to postoperative perioperative preparation and involves an interdisciplinary team of anesthesiologists, surgeons, nurses and nutritionists.

Keywords: clinical pathway, ERACS, protocol, multimodal analgesia, LOS

INTRODUCTION

Based on law no. 44 of 2009 concerning Hospitals, what is meant by hospitals are health service institutions that provide complete individual health services that provide inpatient, outpatient, and emergency services. In its service, various types of disciplines work together and complement each other (PERSI, 2015).

Enhanced Recovery After C-Section Surgery (ERACS) is a multimodal-based perioperative management protocol to obtain immediate recovery of the patient's condition after surgery by maintaining preoperative organ function and reducing stress response during surgery. The main keys in this protocol include preoperative counseling, optimization of nutrition, use of standard anesthetic and analgesia drugs, and early mobilization. (Kurniawaty et al, 2018). Enhanced recovery after surgery (ERAS) is a philosophy of perioperative care that has been used in other fields since the 1990s, but has only recently been applied to obstetric care in the form of Enhanced Recovery After C Section Surgery (ERACS). The ERACS protocol is expected to increase patient satisfaction, reduce patient length of stay, and reduce costs. The ERACS protocol covers perioperative preparation, starting from pre-admission, preoperative, intraoperative to postoperative which involves a multidisciplinary team consisting of anesthesiologists, surgeons, nurses and nutritionists. Recent studies have proven that ERACS contributes to increasing optimal patient outcomes, reducing postoperative complications, accelerating postoperative recovery, and supporting faster discharge of patients from the ward, which will directly result in lower costs. (J.

Kurniawaty, 2018).

METHOD

This type of research is a multivariate descriptive analysis research using a quantitative approach. A quantitative approach was taken to collect data related to cesarean section services using the ERACS protocol given to patients, from the patient registering to the hospital for hospitalization until the patient was declared eligible to return from the hospital by looking at the suitability of the ERACS protocol given to the patient. In this study, 36 patients were evaluated using the ERACS protocol. Inclusion criteria were all elective SC patients who performed ANC at Hermina Galaxy Hospital, SC patients who first performed ANC at least 2x at Hermina Galaxy Hospital. Exclusion criteria were all SC Cito patients and patients who did not perform ANC at least 2 times at Hermina Galaxy Hospital.

RESULT AND DISCUSSION

Throughout January 2022, the total number of births at Hermina Galaxy Hospital was 156 births, with details of births via SC surgery as many as 140 patients and spontaneous vaginal births as many as 16 patients. Of the total number of births, 131 patients required elective CS surgery, while 9 other patients required cito cesarean surgery. Patients who received cesarean section were then evaluated from preoperative, intraoperative, and postoperative according to the ERACS protocol.

Tabel 1. ERACS Protocol (Liu, 2020)

Preoperative	Protocol
- Antenatal Care	- Education and counseling (anaesthesia procedures, pain management, nutrition, early mobilization, criteria for discharge of patients) - Intake of solid food 6 to 8 hours
- In patient	- Intake of high-calorie drinks at 2 hours before surgery - Ranitidine or omeprazole caps 2 hours before the procedure. - Single dose of broad spectrum prophylactic antibiotics 30-60 minutes before the procedure.
Intra Operative	**Protocol**
- Prevent Hypotension due to anesthetic drugs	- Phenylephrine as the vasopressor of choice to prevent maternal hypotension
- Spinal anesthesia	- Low dose spinal 0.5% bupivacaine, Fentanyl and morphine
- Multimodal non-opioid analgesia	- Paracetamol IV dan NSAID - Low dose oxytocin infusion 15-18 IU/hour
- Optimal uterotonic with low dose	- Delayed Cord Clamping dan IMD
- Improved mother-baby bonding	
Post Operation	**Protocol**
- Early oral intake	- Drink water 0-30 minutes post-op
- Early mobilization	- Food intake 4 hours post-op - Mobilization Level 1: sitting back in bed for 15 to 30 minutes

	- Mobilization Level 2: sit on the side of the bed with legs dangling for 5 to 15 minutes - Mobilization Level 3: Standing Mobilization Level 4: Walking around patient room - Early urinary catheter removal no later than 6 hours after the procedure to minimize the risk of urinary tract infection..

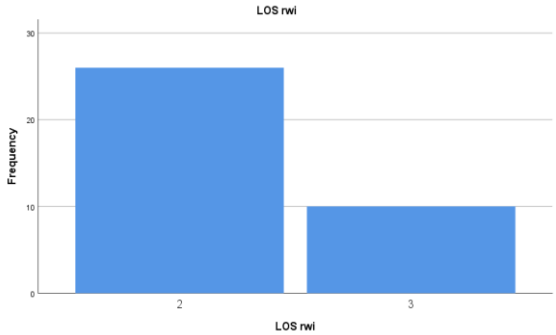
Education, advice, and decision input are generally necessary for the success of the ERACS program. The education and counseling provided contains information about the procedure and what to expect while the patient is in the operating room, surgical plans, pain management plans, goals for nutrition and early mobilization. Other information provided to the patient is nutritional information for pregnant women, nursing mothers, criteria for discharge after the patient has been treated at the Hermina Galaxy hospital. This education was provided by three health workers, namely Obstetrics and Gynecology specialists, anesthesiologists, and Personal Surgery Office (PSO) nurses. Materials for education include providing educational materials that can be accessed via the web or taken home to help patients become familiar with the ERACS concept. Patient education should include information about the procedure during surgery and what to expect, pain management plans, and goals for early feeding and mobilization. Education should provide information about breastfeeding, including available breastfeeding support services, length of stay, and discharge criteria. (Habib, 2018)

In connection with the Covid-19 pandemic, patients who undergo an elective SC surgery plan will be subjected to a PCR examination first, but patients who undergo a CT surgery plan will be subjected to an antigen examination. Both types of examinations are carried out after the patient has obtained other supporting results which are used as a standard for surgical feasibility by the anesthetist. The recommended fasting duration before anesthesia is 6 to 8 hours for solid foods, and 2 hours for high-calorie fluids. Intake of high-calorie drinks at 2 hours before surgery can reduce thirst, hunger, and anxiety before surgery. Give ranitidine or omeprazole capsules 2 hours before the procedure. Give prophylactic antibiotics according to DPJP 30-60 minutes before the procedure using a single dose of broad-spectrum antibiotics.

Table 1. Distribution of Respondents

		Frequency	Percent
Usia	20-25	5	13.9
	26-30	13	36.1
	31-35	10	27.8
	36-40	5	13.9
	41-45	3	8.3
	Total	36	100.0

Table 2. Length of Inpatient Stay with ERACS Protocol



From the results of the study, it was found that the respondent's data had the highest delivery age range at the age of 25-30 years with a percentage of 36% followed by the age group of 31-35 years with a percentage of 27.8%. It can be assumed that the highest age group is 25-30 years old who have sufficient knowledge to be able to make a decision to agree to the ERACS method of delivery.

LOS hospitalization on average is 2-3 days and the most in los 2 days. Compared with inpatient LOS before the application of the ERACS method, there was a decrease in the length of stay when using this method.

From the results of patient interviews, it was found that there were similarities that underlie the decrease in LOS inpatients. The underlying thing is a very significant pain reduction with multimodal analgesia so that post-SC patients can mobilize 2 hours after the procedure, namely by sitting on the edge of the patient's bed. Mobilization was continued for 6 hours after the procedure, the patient could walk slowly from the patient's bed to the restroom because the catheter was removed no later than 6 hours after the procedure to avoid the possibility of urinary tract infections in postoperative patients. After removing the catheter, the patient can breastfeed the baby in a comfortable sitting position so that the attachment to the baby is maximized. Furthermore, the patient was able to go home without pain 1 day postoperatively (the second day of hospitalization) with complaints of pain that could still be tolerated without the need for additional anti-pain medications such as anti-pain patches or anti-pain infusions. Based on respondent interviews, it was found that there was an increase in satisfaction in patients who had experienced labor with previous operations using the ERACS method. Meanwhile, for patients undergoing SC surgery for the first time, it was assessed that SC surgery was not as painful as imagined. This experience made respondents want to give birth with the same method for the next delivery.

ERACS is a caesarean section recovery program that is believed to provide other benefits such as faster functional recovery results, as well as minimal complications and a shorter hospitalization period. The implementation of the ERACS program is also expected to provide other benefits, including improving the quality of care and reducing exposure to and dependence on opioids. ERACS aims to provide a comfortable patient experience by accelerating the process of patient care and recovery by prioritizing patient safety. There are 3 things that play a role in the implementation of ERACS, namely preoperative preparation, intraoperative care, and postoperative care. (Tiara, 2022). There are several reasons why the clinical results of performing ERACS are so impressive. Preoperative education and detailed psychological counseling about the ERACS protocol can help reduce psychological stress and improve patient

adherence to the protocol. (Fajrani, 2016). Second, the ERACS protocol reduces hunger, increases carbohydrate intake, relieves stress from the fear of hunger and caesarean section, and reduces insulin resistance and food loss that occurs after surgery. (Kurniawati, 2018) Third, the ERACS protocol recommends removal and mobilization of urinary catheters that faster, thereby reducing the risk of postoperative urinary tract infections and venous thromboembolism. Fourth, standard nursing practice, standard use of prophylactic antibiotics, and early mobilization with the ERACS protocol have caused the development of postoperative infections such as postoperative wound infections, lung infections, and urinary tract infections to decrease. (Tamang, 2021). Fifth, excellent painkillers and intraoperative heating can be used to increase patient comfort during surgery.(Liu, 2020) Early postoperative oral nutrition is very important to speed up recovery by maintaining body homeostasis so that patients can return to their activities.

CONCLUSION

The ERACS method as a perioperative program for caesarean section patients has many benefits and advantages, including shortening the duration of hospitalization, reducing anxiety and the risk of depression, reducing the risk of postoperative infection, and accelerating the body's recovery. The obstacle faced is consistency in carrying out the stages of the ERACS protocol so that each related service unit such as polyclinic, operating rooms, treatment rooms, can carry out each stage comprehensively and optimally.

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