

Original Research Articles

EFFECTIVENESS ENHANCED RECOVERY AFTER CAESAREAN SURGERY (ERACS) ON CONSCIOUS RECOVERY TIME IN SECTIO CAESAREA PATIENTS IN THE RECOVERY ROOM OF RSAD TK. II UDAYANA

Yustina Ni Putu Yusniawati^{1*}, Emanuel Ileatan Lewar¹, I Gade Agus Shuarsedana Putra¹, I Gusti Ayu Nandita Arta Putri¹

¹Institute of Technology and Health Bali, Indonesia

*Correspondence:

Yustina Ni Putu Yusniawati
Institute of Technology and Health Bali
Jalan Tukad Balian No 180, Renon-Denpasar, Bali, Indonesia. 80226
Email: yustina.itekes@gmail.com

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Abstract

Background: Enhanced recovery after Caesarean surgery (ERACS) is a method of perioperative care in the form of a multimodal approach. ERACS is a good method of pain management by reducing opioid use by 30-50 percent and using intravenous fluid therapy and a good combination of anti-nausea drugs. The ERACS technique was carried out starting from pre-intra and post-surgery. In its implementation, ERACS has various benefits, namely reducing postoperative complications, accelerating conscious recovery, saving costs and reducing morbidity. Urgency of this research is to find out effective surgical methods to speed up early postpartum mobilization without pain.

Objective: To determine the effectiveness of the ERACS technique for conscious recovery in sectio caesarea patients with spinal anesthesia in the recovery room.

Method: This study used a quasi-experimental with a cross-sectional approach using 2 groups, namely the control group and the treatment group. This research was carried out in June-August 2022 at TK II Udayana Hospital with 60 respondents for the control group and 60 for the treatment group. The research instrument uses a standard bromage score observation sheet. The research process was carried out by giving informed consent to the 2 groups and then post-surgery an assessment of conscious recovery was carried out in both groups.

Results: The results of the study in the treatment group showed that the ERACS method had a faster recovery time of 15-30 minutes. The control group, namely the conventional method, has a longer conscious recovery time of 30-60 minutes. The statistical test Mann-Whitney test is sig <0.05 that can be concluded that ERACS is effective in decreasing the time to recover consciousness in the recovery room in patients with elective sectio caesarea surgery at RSAD Tk.II Udayana.

Conclusion: The ERACS method is effective in accelerating the time to recover from consciousness in the recovery room and accelerating recovery in patients with elective sectio caesarea surgery at RSAD Tk.II Udayana. Therefore, the application of ERACS can be an effective choice to accelerate postoperative recovery with caesarean section.

Keywords: *Sectio Caesarea, ERACS, Conventional, Recovery Conscious*

INTRODUCTION

Enhanced recovery after Caesarean surgery (ERACS) is a perioperative treatment in the form of a multimodal approach that has various benefits, namely reducing postoperative complications, accelerating recovery time, saving costs and reducing morbidity.(Pardade 2020).

Sectio Caesarea is a method used in the health sector to assist childbirth when unexpected problems occur during the birth process, such as a narrow mother's pelvis, a transversely located fetus, insufficient space for the fetus to pass through the vagina, and abnormalities in the fetus such as fetal weight exceeding 4000 grams (Raff, Hoffmann, and Udelson 2017). According to Basic Health Research (Riskesdas) data for 2018 in Indonesia, deliveries at the age of 10-54 years reached 78.73% with a birth rate using the sectio caesarea method of 17.6%. Data obtained from the RASD Kindergarten annual report. II Udayana during January to October 2021 there were 333 sectio caesarea operations. However, sectio caesarea surgery with spinal anesthesia can cause various complications such as hypotension, nausea, vomiting, shivering, increased mobilization time and conscious recovery in the recovery room. (Wallentin et al. 2014)(Ripolles-Melchor et al. 2019).

The average time needed to be in the recovery room for patients with spinal anesthesia is around ± 2 hours (Razak, Lorna Lolo, and Aminuddin 2020). Patients with minimal spinal anesthesia procedures must be able to achieve a bromage score of 2 so they can be transferred from the recovery room to the treatment room (Razak et al. 2020). This of course can make the patient feel uncomfortable, stressed(Macones et al. 2019). Based on research conducted by *Macones et al.*,(2019)showed that patients in sectio

caesarea surgery with spinal anesthesia who used the ERACS technique achieved a faster early mobilization time of around ± 60 minutes so that patients could be moved from the recovery room in a short time, experienced reduced complications, accelerated urinary catheter removal, and saved on treatment costs. (Fitria, Fatonah, and Purwati 2019)(Maghfiroh, Priyanti, and Mubarrok 2019).

In previous studies, there were no studies that specifically discussed the average time needed for patients to be transferred from the recovery room to the treatment room. This is related to a preliminary study conducted by researchers using interview techniques with anesthesiologists who work at RSAD TK.II Udayana and found that before the ERACS technique was applied, the patient's recovery time in the recovery room reached 2-3 hours. However, after the ERACS technique was applied at Udayana Tk.II Hospital in early 2021, the time it took for patients to recover to consciousness in the recovery room was around ± 60 minutes and the patient had reached a bromage score of 2 and was able to carry out early mobilization in the recovery room. In accordance with the description above, the researcher is interested in conducting related research by comparing sectio caesarea surgery with the ERACS method and conventional methods with recovery time in the recovery room in postoperative sectio caesarea patients with spinal anesthesia using the ERAS technique. This research will be conducted at RSAD TK II Udayana. The aims of this research to determine the effectiveness of the ERACS technique for conscious recovery in sectio caesarea patients with spinal anesthesia in the recovery room

METHOD

The design in this study used a quasi-experimental with a cross-sectional approach using 2 groups, namely the control group and the treatment group. This research was carried out for 3 months starting from June to August 2022. The research was carried out at the Tk. II Udayana Denpasar Bali.

Sample in this study were all mothers who had SC at Tk Hospital. II Udayana used spinal anesthesia with the ERAS method for 60 patients and mothers who had SC at Tk Hospital. II Udayana who used spinal anesthesia with conventional methods as many as 60 respondents. Inclusion criteria: pregnant women attending a designated hospital for elective CS surgery, primigravida or multiparous women, age between 18 and 35 years, feasible intrauterine single pregnancy and gestational age between 38w+0d and 42w+0d, patients undergoing spinal anesthesia, and willing to be research respondents. Exclusion criteria: mothers with medical diseases such as (diabetes mellitus, hypertension, heart disease, thyroid disease, eclampsia), and mothers who have pregnancy complications, multiple pregnancies, evidence of active maternal or fetal infection.

The instrument used in this research is an observation sheet. The measurement scale used to determine the ability of post-spinal anesthesia patients to move their lower extremities is called the bromage score. Bromage score is an indicator of motor response after anesthesia, if the bromage score is 2 then the patient can be transferred from the recovery room (Fitria et al. 2019).

Activities carried out in the treatment group using the ERACS method were carried out postoperative observations in the recovery room to see the time of conscious choice with the bromage score of postoperative patients. In the control group with conventional surgery methods, postoperative observations were carried out in the recovery room to see the postoperative patient's bromage score. Then the patient's recovery time was compared between the treatment group with

the ERACS method and the control group with the conventional method.

Data analysis was carried out by means of: univariate analysis and bivariate analysis. Univariate analysis, namely identifying each research variable, namely conducting a frequency distribution age, address, education, ASA. Bivariate analysis aims to find out how the Eras and conventional methods compare with conscious recovery time in SC patients with spinal anesthesia using the paired T-test.

This research has obtained a research ethics permit from the Bali ITEKES ethics commission with number: and a research permit from the head of Udayana Tk II Hospital. After obtaining permission from Karumkit Tk II Hospital. Udayana, the researcher will forward the permit to the Head of the Anesthesia Installation and Recovery Room at Tk. Hospital. II Udayana.

RESULTS

Table 1. Demographic Data

Characteristics of Respondents	Frequency (N)	Percentage (%)
Respondent Age		
15-20 years	20	16,7
21-25 years	33	27,5
26-30 years	42	35
31-40 years	25	20,8
Last education		
Junior High School	12	10
Senior High School	79	65,8
College	29	24,2
ASA		
ASA 1	120	100

The data on the characteristics of the respondents obtained that the majority of respondents were 26-30 years old with 42 (35%), with the last education being SMA as many as 79 (65.8%) and had ASA 1 status as many as 120 (100%)

Table 2. Research Result Data

Rating items	ERACS method		Method conventional	
	n	%	n	%
Number of respondents	60	50	60	50
Achieve bromage score 2				
15 minutes	33	27.5%		
30 minutes	27	32.4%		
>30 minutes			60	50%
Time to recover (minutes)				
15-30 minutes	60	50%	0	0
30-60 minutes	0	0	60	50%

From the table above, it was found that the number of respondents in the conventional method group was 60 (50%) and the ERACS method group was 60 (50%). In the conventional method group, the majority achieved a bromage score of 2 > 30 minutes, while in the group using the ERACS method, the majority achieved a bromage score of 2 in 15 minutes by 33 (27%). The patient's recovery time in the recovery room in the conventional method group was 30-60 minutes while in the ERACS method group it was 15-30 minutes.

Table 1.3 Average Time to Recover Consciousness

	Application of ERAS	N	Mean Ranking	Sum of Ranks
Time to recover	Yes	15	8.00	12.00
	No	15	23.00	345.00

In the table above it is found that the mean rank for recovering to consciousness in the group of patients using ERACS was 8.00 while in the conventional group the time to recovering to consciousness was 23.00.

Table 4. Effectiveness Test Results

	LOS in Recovery Room
Mann-Whitney U	.0001

Z	-5,385
Asymp. Sig. (2-tailed)	.0001
Exact Sig. [2*(1-tailed Sig.)]	.000b

From table 1.4 obtained the results obtained in the statistical test Mann-Whitney test is sig <0.05 so that ha can be accepted. It can be concluded that ERACS is effective in decreasing the time to recover consciousness in the recovery room in patients with elective sectio caesarea surgery at RSAD Tk.II Udayana.

DISCUSSION

The results of the study found that the conventional method group was 60 (50%) and the ERACS method group was 60 (50%). In the conventional method group, the majority achieved a bromage score of 2 > 30 minutes, while in the group using the ERACS method, the majority achieved a bromage score of 2 in 15 minutes by 33 (27%). The patient's recovery time in the recovery room in the conventional method group was 30-60 minutes while in the ERACS method group it was 15-30 minutes. A paradigm shift towards patient care based on the ERACS protocol starting from preoperative, intraoperative and postoperative involving surgeons, anesthesiologists and care in the room provides benefits to patients and the health care system by shortening the patient's conscious recovery time in the recovery room and minimizing complications. (Lewar et al. 2022)(Adinda, et al., 2019).

Based on the results of the study it was found that ERACS was effective in accelerating the time to recover consciousness in sectio caesarea patients in the recovery room. The increase in conscious recovery time is because the Eras method is an effective method that can speed up the recovery time because patients with ERAS are provided with adequate postoperative analgesia to enhance the integral components of the ERAS protocol, and this becomes increasingly important in

women undergoing cesarean delivery. Suboptimal analgesia is associated with delayed functional recovery, delayed mobilization which may increase the risk of thromboembolic complications, poor maternal bonding with the newborn, difficulty breastfeeding, and increased risk of persistent pain and postpartum depression. There are several complex factors that contribute to postoperative pain, with significant interindividual variability in pain perception. The ERAS protocol recommends a multimodal analgesic regimen using a combination of drugs with different mechanisms of action with the goal of optimizing analgesia, minimizing side effects, and providing opioid sparing. This can be achieved through a combination of neuraxial opioid analgesia, oral analgesia, and peripheral nerve blockade. In addition, the bromage score is also a major factor in the conscious recovery of patients in the recovery room. Bromage Score is an indicator of motor response after anesthesia, if the bromage score is 2 then the patient can be transferred from the recovery room (Fitria et al. 2019). In this study, respondents who were given the application of ERACS achieved a bromage score of 2 faster than patients using conventional methods. In addition, patients also experience a faster recovery, this has a positive impact by reducing the patient's stay in the recovery room (Macones et al. 2019)(Jaata 2021).

Decreased residence time in patients undergoing CS surgery in the recovery room can also reduce the paradigm and anxiety of mothers who want to give birth through surgery (Ripolles-Melchor et al. 2019)(Jaata 2021). So the operation *cesarean section* using the ERACS technique will be the first choice for mothers who want to give birth with minimum pain and faster recovery. SC surgery with the ERACS method not only reduces the patient's stay time in the room *recovery* only, but also able to accelerate early mobilization and minimize complications that can occur after surgery such as infection and trauma from the surgical process (Macones et al.

2019)(Hosseinzadeh et al. 2013)(Raff et al. 2017). In this study the researchers also saw that postoperative complications such as PONV, pain, and shivering did not occur in respondents who were given the application of the ERACS technique.(Pardade 2020)(Hensley et al. 2012).This is in line with the results of a study conducted by Simpson et al., 2019 showing that ERAS can reduce hospital costs, recover consciously, prevent PONV, and speed up postoperative recovery. (Firdaus, Britta, and Setiani 2020)(Ripolles-Melchor et al. 2019).

CONCLUSION

There is a significant relationship between knowledge, attitude, motivation and awareness with the efficacy of IRC member students in conducting CPR AHA 2020 where awareness is the most influential variable on the efficacy of IRC members students in conducting CPR AHA 2020.

SUGGESTION

The ERACS method is an effective surgical method to be recommended to patients to reduce post-SC complications in the form of minimizing fasting time, reducing postoperative pain and accelerating the conscious recovery time of SC patients in the recovery room.

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DECLARATION OF CONFLICTING INTEREST

In this study, there was no conflict of interest from the parties involved in this panel.

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AUTHOR'S CONTRIBUTIONS

Yustina Ni Putu Yusniawati:

Compiling research ideas, as a leader in the research process, data retrieval and data processing as well as designing manuscripts

Emanuel Ileatan Lewar:

Assist in data processing

I Gade Agus Shuarsedana Putra:

Assist in the formation of research ideas

I Gusti Ayu Nandita Arta Putri:

Assist in the preparation of manuscripts

ORCID

Yustina Ni Putu Yusniawati: 0000-0002-1566-0242

Emanuel Ileatan Lewar:

none

I Gade Agus Shuarsedana Putra:

none

I Gusti Ayu Nandita Arta Putri:

none

REFERENCE

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