



STUDI OF SIDE EFFECTS OF ERACS THERAPY ON PARTICULAR WOMEN POST CAESAREAN SECTIO

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Abstract

Cesarean section is preferred by pregnant women over vaginal delivery as it is perceived to be difficult and dangerous. The increased interest in cesarean operations has led to a rise in perioperative services. Enhanced Recovery After Cesarean Surgery (ERACS) is an effective method to enhance the clinical benefits of cesarean operations, speed up rehabilitation, and promote patient discharge. The aim of this study is to describe the side effects of ERACS therapy on postpartum mothers after cesarean section at RSU Morowali. This is a descriptive study. The population and sample in this study consisted of 40 cesarean section mothers selected using total sampling technique. Data was taken by observing the mother after SC 2-6 hours using a checklist. The data analysis used was univariate analysis. This study found that the side effects of ERACS therapy on postpartum mothers after cesarean section at RSU Morowali, Morowali Regency. According to the data, 16 mothers (40.0%) experienced side effects after undergoing ERACS therapy, while 24 mothers (60.0%) did not experience any side effects. The conclusion of the study is that the most common side effects of ERACS therapy are nausea and vomiting, which typically occur once or twice, and one case of itching and redness that did not last long. Most mothers did not experience side effects, indicating that ERACS therapy is generally effective in reducing postoperative discomfort and accelerating recovery. The recommendation is for future researchers to conduct further studies with a larger and more diverse sample to obtain a more comprehensive picture of the side effects of ERACS therapy on postpartum mothers after cesarean section.

Keywords : ERACS Side Effects, Post-Caesarean Sectio, Postpartum Mothers

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INTRODUCTION

Labor is the process of movement of the fetus and placenta out of the uterus through the birth canal. This process begins with the opening and dilatation of the cervix caused by uterine contractions with

regular frequency, duration, and strength. Labor is considered normal if the process occurs at full term (after 37 weeks) without complication. (Yuriati and Khoiriyah, 2021).

During labor, there are several labor complications. Some common labor complications include shoulder dystocia, where the baby's shoulders get stuck after the head comes out, fetal distress, which is characterized by signs of stress in the baby such as an abnormal heartbeat, as well as breech or transverse positioning of the baby. In addition, conditions such as preeclampsia, which is characterized by high blood pressure and organ damage, can also be a complication. When these complications occur, the need to perform Sectio cesarean (SC) becomes more urgent to avoid the risk of serious complications, including damage to the baby or mother, and to ensure a safe birth. The decision to perform SC is usually based on careful medical assessment to provide the best outcome for both mother and baby (Wiguna *et al.*, 2020).

Sectio Cesarean, or SC is a surgical procedure used to deliver a baby through an incision in the mother's abdomen and uterus. This procedure is usually performed when normal vaginal delivery is risky for the mother or baby. Some medical indications for SC include abnormal baby position, fetal distress, placenta previa, or mothers with certain health conditions. While SC can save lives in emergency situations, it also comes with risks such as infection, bleeding, and a longer recovery compared to normal delivery. Therefore, the decision to perform SC is usually based on careful medical evaluation to ensure the safety of both mother and baby (Putra *et al.*, 2021).

Pain is one of the main problems of sectio cesarean which has an impact on reducing patient comfort, disrupting mobilization and inhibiting bonding attachment. The intensity of pain on the first day after cesarean section varies for each mother. Complaints of pain experienced by mothers, in addition to those caused by postoperative incisions, often also complain of back pain and fatigue. Untreated pain causes discomfort or pain to the mother which can hinder the recovery process. (Rahmawati, 2024).

Cesarean section tends to be preferred by pregnant women over vaginal delivery methods. The increase in public interest in cesarean surgery has led to an increase in perioperative services. To improve the clinical benefit of cesarean surgery, enhanced recovery after cesarean surgery (ERACS) is an effective way to do so. It can lead to the promotion of rehabilitation and early discharge of patients. ERACS was first introduced by Kehlet in 1997 and used to shorten the length of hospital stay in sigmoid resection patients. This method is a multidisciplinary approach to optimize perioperative management and surgical outcomes. It aims to reduce surgical stress response, improve functional recovery, and accelerate recovery. (Tika *et al.*, 2022).

ERACS was initially used in digestive surgery. The concept was proven to reduce the length of hospital stay, reduce postoperative complications, and improve patient satisfaction. Therefore, it was later developed for surgery in other fields, including obstetrics. (Tika *et al.*, 2022).

According to the World Health Organization (WHO), Sectio Caesarea surgery is around 5-15%. WHO data in the Global Survey on Maternal and Perinatal Health in 2021 shows that 46.1% of all

births were performed through Sectio Cesarean (World Health Organization, 2019). Based on RISKESDAS data in 2021, the number of deliveries using the Sectio Cesarean method in Indonesia was 17.6%. This indication is caused by several complications with a percentage of 23.2% with transverse / breech fetal position (3.1%), bleeding (2.4%), eclampsia (0.2%), premature rupture of membranes (5.6%), prolonged partus (4.3%), umbilical cord entanglement (2.9%), placenta previa (0.7%), retained placenta (0.8%), hypertension (2.7%), and others (4.6%) (Indonesian Ministry of Health, 2021). According to data from the Indonesian Demographic and Health Survey (SKDI) in 2021, the rate of delivery in Indonesia was 17% of the total number of births in health facilities. This shows that there is an increase in the number of deliveries through the Sectio Cesarean method. (Komarijah *et al.*, 2023).

The rate of cesarean section in Indonesia is increasing. Data from the Indonesian Demographic and Health Survey (IDHS) shows an increase in Indonesia from 1991 to 2017 by 1.2- 6.8 percent. RISKESDAS in 2018 showed that the post sectio cesarean birth rate in Indonesia was 17.6%. The highest prevalence is in DKI Jakarta, reaching 31.1% and the lowest in Papua, which is 6.7%. (Tika *et al.*, 2022).

Data for 2022 post sectio cesarean patients were 670 people with the number of patients using ERACS therapy 47.77%, then data for 2023 sectio cesarean patients were 737 people with a total of patients using ERACS 55.35%, there was an increase in 2024 during January to April a total of 380 sectio cesarean patients and using ERACS therapy 60.51%. From these data, the annual increase from 2022 to 2023 was 7.58% and from 2023 to 2024 in April was 5.16%.

Based on an initial survey conducted on 10 mothers who underwent ERACS (Enhanced Recovery After Cesarean Surgery) therapy after Sectio Cesarea (SC), several side effects were found that need to be considered. Of the 10 respondents, 6 mothers reported experiencing nausea and vomiting as a side effect of the use of anesthesia during surgery. In addition, 7 mothers experienced postoperative pain that required further analgesic management. Three women reported difficulty in early mobilization, which is one of the key components of the ERACS protocol.

The purpose of the study was to find out the description of the side effects of ERACS Therapy for Post Sectio Cesarean Delivery Mothers at Morowali General Hospital.

MATERIALS AND METHODS

This research is a descriptive study that aims to evaluate the side effects of ERACS (Enhanced Recovery After Cesarean Surgery) therapy on women giving birth after CS. The research was conducted on 13 June 2024 – 06 July 2024. The population was all post-SC birth mothers who used ERACS therapy, sampling using a total sampling technique of 40 people. Data was taken by observing the mother after SC 2-6 hours using a checklist. The data analysis used is univariate data analysis.

Ethical Approvals

This research has an Ethical Eligibility Letter (SLE) by the Poltekkes Kemenkes Palu institution with No: 002151/KEPK POLTEKKES KEMENKES PALU/2024.

RESULTS AND DISCUSSION

Results

Respondent Characteristic

Table 1: Frequency Distribution of Characteristic a

Characteristic	Frequency (f)	Percentage (%)
Age of the pregnant woman		
< 20 tahun	1	2.5
20-35 tahun	28	70.0
> 35 tahun	11	27.5
Current gestasional age		
Aterm	40	100.0
Parity		
Low parity	26	65.0
High parity	14	35.0
Total	40	100.0

Source : Primary Data 2024

The majority of pregnant women in Morowali General Hospital are in the age range of 20-35 years, which is 70.0%. Pregnant women over 35 years old reached 27.5%, while pregnant women under 20 years old only amounted to 2.5%. All pregnant women (100.0%) were at term. Based on parity, most of the pregnant women had low parity as many as 26 people (65.0%), while 14 people (35.0%) had high parity. In addition, all pregnant women in this data had no history of using ERACS therapy.

Univariate Data on The Side Effects of ERACS therapy in Post Sectio Caesarean Delivery Mothers

Table 2: Distribution of side effects of ERACS therapy in post sectio cesarean delivery

Side effects of ERACS therapy in post sectio caesarean	Frequency (f)	Percentage (%)
Experiencing side effects	16	40.0
No side effects	24	60.0
Total	40	100.0

Source : Primary Data 2024

Table 2. shows the distribution of the side effects of ERACS therapy on post sectio cesarean delivery mothers at Morowali Hospital, Morowali Regency. Based on the data, 16 mothers (40.0%) experienced side effects after undergoing ERACS therapy, while 24 mothers (60.0%) did not experience side effects.

Discussion

Overview of Post Sectio Cesarean Delivery Mothers at Morowali General Hospital

The majority of pregnant women in Morowali General Hospital are in the age range of 20-35 years, which is 70%. This indicates that most pregnant women are in the optimal reproductive age, where reproductive health and pregnancy are generally in the best condition. Pregnant women over 35 years old accounted for 27.5%, reflecting that some mothers choose to become pregnant at an older age, perhaps due to career factors or financial readiness. Meanwhile, pregnant women under the age of 20 accounted for only 2.5%, indicating that teenage pregnancies are relatively rare, possibly due to increased awareness of health risks and the importance of education and family planning.

Based on parity, most of the pregnant women were low parity or in this case only at the parity of 1-2 children, as many as 65.0%. This indicates that many of the study participants were first-time mothers. Mothers with low parity may be more likely to follow recommended medical protocols and be more regular in conducting prenatal visits. While 35.0% of respondents had high parity, indicating that they already had previous childbirth experience. This may provide additional information for researchers on the differences in experience and needs between mothers with low and high parity. All pregnant women in this data did not have a history of using ERACS therapy, possibly due to the lack of knowledge or information they had about the therapy. There are several reasons that could explain this situation. Firstly, pregnant women may not have received adequate education from medical personnel regarding ERACS therapy, so they are unaware that this therapy is part of their care (Galuh *et al.*, 2024; Sumaini and Suara, 2024).

The documentation of ERACS therapy in the mother's medical record may be unclear, leaving the mother with no reference or knowledge that they received the therapy. Third, mothers may not understand the medical terms used, or medical personnel use more general terms so that mothers are unaware that they are receiving ERACS. Fourth, mothers may be more focused on other aspects of their care and recovery, such as the baby's health or the labor process, and thus pay less attention to specific details about ERACS therapy. Therefore, mothers' ignorance about the history of ERACS therapy use is understandable. To ensure mothers are more understanding and aware of the type of treatment they are receiving, it is important for medical personnel to provide comprehensive education and ensure clear documentation in the patient's medical record (Nuriyanti *et al.*, 2024; Prayanangga and Dewita Nilasari, 2022; Sumaini and Suara, 2024).

The researcher assumes that the ignorance of pregnant women about the history of ERACS therapy use is due to several factors. First, the lack of information or education provided by medical personnel makes mothers unaware that they are receiving or could receive ERACS as part of their care. Second, the documentation of ERACS therapy in the medical record may not be done properly, leaving mothers with no clear reference. Third, mothers may not understand the medical terms used or medical personnel use more general terms, so they do not recognize that they have received ERACS.

Fourth, the focus of pregnant women may be more on other aspects of care and recovery, such as the health of the baby or the labor process, so they pay less attention to details about ERACS therapy.

Overview of Side Effects of ERACS Therapy on Post Sectio Cesarean Delivery Mothers at Morowali General Hospital

Based on the data, 40.0% of mothers experienced side effects after undergoing ERACS therapy, while 60.0% of mothers did not experience side effects. Of the mothers who experienced side effects, the most commonly reported types of side effects were nausea and vomiting, with a variation in frequency of occurrence from once to twice. In addition, one woman reported experiencing itching and redness all over her body that did not last long, only about 30 minutes.

Researchers assumed that the majority of the side effects, especially nausea and vomiting, could be due to the body's response to the anesthesia or drugs used in ERACS therapy. These side effects are considered mild and transient, which suggests that ERACS therapy is still relatively safe to use. The absence of reports of severe side effects such as infection, constipation, excessive incision pain, DVT (Deep Vein Thrombosis), bleeding, or serious drug allergic reactions indicates that the ERACS protocol has been implemented quite well and the risk of serious complications can be minimized.

The number of women who experienced no adverse events (60.0%) suggests that ERACS could have significant benefits in reducing postoperative discomfort, speeding up recovery, and improving the overall delivery experience. The high percentage of women who experienced no adverse events may also reflect successful pain management and faster recovery, which are the main goals of ERACS therapy (Tika *et al.*, 2022). Despite some mild side effects, the implementation of ERACS at Morowali General Hospital still provides many benefits for post sectio cesarean laboring mothers.

Based on available data, side effects of ERACS therapy in post sectio cesarean delivery mothers at Morowali General Hospital include nausea and vomiting as well as itching and redness throughout the body. A total of 10 mothers reported experiencing nausea and vomiting once, while 5 mothers reported experiencing nausea and vomiting twice. These side effects are usually caused by the use of anesthesia or certain drugs in the ERACS protocol. Anesthetics and analgesics often cause nausea and vomiting as common side effects, especially in the postoperative period. However, as most instances of nausea and vomiting only occur once or twice, these effects are well managed and controlled. In addition, one mother reported experiencing itching and redness all over the body that did not last long, only about 30 minutes, which may be a mild allergic reaction to drugs or materials used during surgery or recovery. A total of 60.0% of mothers experienced no adverse events at all, indicating that the majority of post sectio cesarean delivery mothers undergoing ERACS therapy did not experience any significant additional discomfort. This reflects the successful implementation of the ERACS protocol at RSU Morowali, with good pain management and early mobilization, as well as a coordinated multidisciplinary approach. Although there were some mild side effects, these results

show that ERACS therapy provides many benefits for post sectio cesarean laboring mothers, including reducing discomfort and accelerating recovery, with the risk of side effects that can be effectively managed (Galuh *et al.*, 2024; Sumaini and Suara, 2024).

Researchers assume that the ERACS protocol is generally effective in reducing postoperative discomfort and speeding up recovery. This is supported by data showing that 60% of mothers did not experience any side effects, suggesting that the protocol was successfully implemented. Side effects such as nausea and vomiting, although occurring, were well managed by medical personnel. The reported nausea and vomiting mostly occurred only once or twice, indicating effective side effect management. Nausea and vomiting experienced by some mothers may be due to the body's response to anesthesia or drugs used during and after surgery. This is a common side effect that can usually be controlled with anti-nausea medication. The researchers assumed that the single case of itching and redness all over the body was a mild allergic reaction to certain materials or drugs used during the procedure. The short duration of this side effect suggests that the reaction was not serious and could be resolved quickly.

CONCLUSION

The majority of pregnant women at Morowali General Hospital were 20-35 years old, in their third trimester, and had low parity. Some women experienced side effects of ERACS therapy, mainly nausea and vomiting, and one case of itching and redness. The majority of women did not experience any side effects, suggesting ERACS therapy is effective in reducing postoperative discomfort and accelerating recovery.

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Declaration of Interest Statement

In this research there is no conflict of interest.

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