# Differences In Conventional Method Of Mobilization Of Section Caesarea And ERACS Method Of Section Caesarea At Sunan Kudus Islamic Hospital In 2023

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**Abstract.** Sectio Caesarea (SC) is a way to deliver a fetus by making an incision in the uterine wall through the front wall of the abdomen. Currently, there are several methods for performing SC surgery, namely conventional and ERACS, each of which has advantages and disadvantages. recovery time after SC surgery with ERACS has good results, namely a reduction in the overall length of post-operative care and an increase in recovery time for patients to mobilize or carry out activities. Reduced hospitalization, fewer complications, and faster functional recovery are some of the advantages of the ERACS technique compared to conventional cesarean section. This research aims to determine the difference between the mobilization of Sectio Caesarea using the traditional method and Sectio Caesarea using the Eracs method at Sunan Kudus Islamic in 2023. Method: The method used in this research is quasi-experimental. with a non-equivalent control group design. The respondents studied were 37 people divided into two groups using conventional methods and ERACS. Data analysis used the independent t-test. Results: All SC patients were mobilized using the Eracs method (19 people/100%) and were able to mobilize quickly. Mobilization of SC patients using conventional methods can mostly mobilize in the moderate category as many as 11 (61.1%).In the results of different tests using the t-test, a p-value of 0.000 <0.05 was obtained. Conclusion: There is a significant difference in mobilization time for mothers post-conventional CS and ERACS in the intervention group and control group at Sunan Kudus Islamic Hospital.

**Key words:** Mobilization, SC conventional methods, ERACS

## INTRODUCTION

The success of maternal health efforts, could be seen from the Maternal Mortality Rate (MMR) indicator. MMR is the number of maternal deaths during pregnancy, childbirth, and postpartum that are caused by pregnancy, childbirth, and postpartum or its management but not due to other causes such as accidents, falls, etc. in every 100,000 live births (Ministry of Health, 2016). Vaginal delivery is the expulsion of the products of conception through the birth canal which can be done without the help of medical equipment (spontaneous delivery) or with the help of medical equipment (operative obstetrics). Cesarean section delivery is a surgical process to deliver a fetus through an incision in the abdominal wall and uterine wall. The choice of the cesarean section method is based on medical indications, such as placenta previa, abnormal presentation or location of the fetus, as well as other things that could harm the mother and fetus (Ambia *et al*., 2018).

Sectio Caesarea (SC) is a way to deliver a fetus by making an incision in the uterine wall through the front wall of the abdomen (Nurarif, 2016). The Sectio Caesarea procedure is carried out to prevent the death of the fetus or mother due to dangers or complications that would occur if the mother gave birth vaginally. Indications for Sectio Caesarea are broadly divided into two: maternal factors and fetal factors. Maternal factors include a history of poor pregnancy and childbirth, narrowing of the pelvis, placenta previa, especially in primigravida, grade I-II placental abruption, pregnancy complications, pregnancy with heart disease, diabetes mellitus, disruption of the course of labor (ovarian cysts, uterine myoma, and so on), Cepalo Pelvic Disproportion (CPD), Severe Pre-Eclampsia, Premature Rupture of Membranes (PRM), previous Sectio Caesarea, and factors obstructing the birth canal. The causes of fetal factors include fetal distress, malpresentation, malposition of the fetus, umbilical cord prolapse with a small opening, and failure of vacuum delivery or extraction forceps (Wiguna *et al*., 2020).

However, currently, the act of expelling the products of conception using the cesarean section method is often used without any medical indication and is also often an alternative delivery method that is often chosen. Therefore, it is hoped that there will be innovations that can help the recovery process of post-cesarean section patients so they can recover more quickly. Currently, many of the general public do not know the correct method regarding the recovery process for post-caesarean section surgery patients.

*Enhanced recovery after cesarean section* (ERACS) is one of the surgical techniques developed for cesarean section deliveries that have been introduced since 2016, which consists of a series of optimized preoperative, intraoperative, and post-operative care. The ERACS concept is a development of the concept (enhanced recovery after surgery / ERAS) in the field of digestive surgery which was first introduced in 1997.

According to several studies that have been carried out, it was found that the recovery time after SC surgery with ERACS has good results, namely a reduction in the overall length of post-operative care and an increase in recovery time for patients to mobilize or carry out activities. Reduced hospitalization, fewer complications, and faster functional recovery are some of the advantages of the ERACS technique compared to standard cesarean section (Liu, 2020).

In addition, there was a significant difference in the 3 inpatient costs of patients undergoing the ERACS protocol due to increased recovery time and decreased incidence of postoperative complaints. According to several studies that have been conducted, it was found that the length of stay for SC delivery patients using the ERACS method was ≤ 2 days post-delivery, compared to the length of stay for patients delivering SC deliveries using the non-ERACS method, namely 3-5 days post-delivery (Teigen *et al.*, 2020).

The aim of the ERACS concept is, among other things, to handle post-operative complaints, where ERACS can reduce the incidence of complaints faced by patients after SC delivery. Apart from that, the ERACS technique allows for faster functional recovery where the patient can undergo early mobilization less than 24 hours after surgery, which can increase the patient's sense of comfort, and satisfaction and make it possible to shorten the length of stay for SC delivery patients using the ERACS method (Teigen *et al.*, 2020).

The impact of not carrying out early mobilization is that the micro impact can be in the form of dizzy eyes and poor blood circulation, resulting in decubitus, respiratory tract infections in surgical wounds, muscle weakness and loss of joint movement, stiffness and pain in the joints, and constipation. Meanwhile, the macro impact can be in the form of sub-involution, a higher risk of abnormal bleeding a slower wound healing process, and a longer postpartum period (Ester, 2016).

One of the causes of the low level of early mobilization of mothers giving birth is the lack of public knowledge. Other factors that cause low levels of early mobilization are the type of delivery, especially in post-cesarean section mothers, fear of the stitches coming loose if they move, each patient's perception of pain is different, lack of motivation to carry out early mobilization, emotions and support from husband, family, culture that prohibits mothers from moving. which requires the legs to remain straight (Auliya, 2017). The lack of early mobilization behavior post-cesarean section can be done by a health worker, namely by providing counseling and information about the benefits of early mobilization as well as providing assistance with early mobilization actions for post-cesarean section mothers (Aisyah, 2014).

However, not all pregnant women who are about to give birth can use the ERACS method because several things need to be taken into account, such as the patient must not be weak, must not vomit, and must not fast. However, this can be overcome by administering medication and other preparations. (Ituk, 2018).

According to the World Health Organization (WHO), the average standard for Sectio Caesarea (SC) surgery is around 5-15%. Data from the WHO Global Survey on Maternal and Perinatal Health 2019 shows that 46.1% of all births were via CS.

According to basic health research Indonesia in 2020, there were approximately 6.8 million births, 29 percent of which were assisted by cesarean section in Indonesia. Meanwhile, in Central Java, the number of births using the SC method for women aged 10-54 years reached 31.07% of the total number of births. There are several problems/complications in childbirth in women aged 10-54 years reaching 28.74% with details of transverse/breech fetal position at 3.77%, bleeding at 3.05%, seizures at 0.03%, premature rupture of membranes at 7.03%, prolonged labor at 4.94%, umbilical cord entanglement at 4.67%, placenta previa at 1.90%, retained placenta at 0.61%, hypertension at 3.69%, and others at 6.08%.

In 2023 at Sunan Kudus Islamic Hospital from April to June, there were 370 cesarean section deliveries, with 147 conventional cesarean sections and 223 cesarean section deliveries. Conventional SCs are usually not allowed to move the body for 12 hours, gradually new patients are allowed to tilt and move the body, it takes 24 hours after surgery before the patient is allowed to sit in order not to

affect the stitch marks, while SC with the ERACS method is faster mobilization, 1-2 hours and the patient is 6-8 hours in bed. remove the catheter (allowed to walk). From the results of a preliminary study in the postpartum room at RSI Sunan Kudus, there was 1 post-cesarean section patient with the ERACS method and 1 patient with the conventional method who underwent early mobilization training 4 hours after surgery, including sitting back, sitting on the side of the bed, standing and walking, which is used to reduce pain after surgery. At Sunan Kudus Islamic Hospital, with cesarean section delivery using the Eracs technique, 4 hours after surgery you must be mobilized and conventional cesarean section requires mobilization 24 hours after surgery.

## METHODS

This research conducted by quasi-experimental design, used to compare the two groups. Respondents in this study will be divided into 2 groups, namely those who will see and compare the mobilization of patients after cesarean section using the conventional method and the Eracs method. The population in this study were all post-SC surgery patients in the delivery room at RSI Sunan Kudus with cases of SC procedures in 2023 from April - June, there were 370 SC procedures using ERACS and conventional methods with an average per month of 123 cesarean section procedures. Sample of this study are 37 respondent. The groups were divided into 2, namely group 1 and group 2, respectively 19 (SC group ERACS method) and 18 (SC group conventional method). The study was implemented one month. The research instruments that have been used as data collection instruments is observation sheets to obtain patient data and post-SC patient mobilization. Analysis in this study used an independent T-test which aims to see the difference in mobilization of postpartum mothers using the conventional method and the ERACS method. The decision-making criteria are the results of the independent t-test with a probabilistic approach, namely if the p-value is <0.05 meaning there is a significant difference in the average mobilization of mothers post-conventional SC and ERACS in the intervention group and control group at RSI Sunan Kudus.

## RESULTS AND DISCUSSION

**Table 1.** Respondent Characteristics (n=37)

| Respondent Caracteristics | Eracs | Conventional |
|---|---|---|
| **Age** | | |
| ≤ 20 | 3 (8.1) | 4 (10.8) |
| 21-35 | 13 (35.2) | 11 (29.7) |
| >35 | 3 (8.1) | 3 (8.1) |
| **Education** | | |
| Low | 17(45.9) | 17(45.9) |
| High | 2 (5.4) | 1 (2.7) |
| **Employment** | | |
| Employed | 10 (27) | 11(29.7) |
| Unemployed | 9 (24.3) | 7 (18.9) |
| **Parity** | | |
| Primi | 10 (27) | 10 (27) |
| Multi | 9 (24.3) | 8 (21.7) |

**Table 2.** Mobilization Levels (n=37)

| Number of respondent | Type of SC operation | Level of mobilization | n | (%) |
|---|---|---|---|---|
| 19 | ERACS | Slow | 0 | 0 |
| | | Currently | 0 | 0 |
| | | Fast | 19 | 100 |
| 18 | Conventional | Slow | 1 | 5,6 |
| | | Currently | 11 | 61.1 |
| | | Fast | 6 | 33.3 |

**Table 3.** Differences In Mobilization Levels

| No | Mobilization category | Eracs | | Conventional | | P value |
|---|---|---|---|---|---|---|
| | | *f* | % | *f* | % | |
| **1** | Slow | 0 | 0 | 1 | 5,6 | 0,000 |
| **2** | Currently | 0 | 0 | 11 | 61.1 | |
| **3** | Fast | 19 | 100 | 6 | 33.3 | |

The highest percentage of respondents aged 21-35 years was 24 (64.9%) patients, 13 (35.2%) patients underwent eras and 11 (29.7%) patients underwent conventional cesarean section. Education was found that the majority of respondents had low education. Respondent mostly was employed.

The difference in mobilization in the group of patients with Eracs and conventional shows a significant difference where all of the respondents with the Eracs method were able to mobilize quickly, whereas, in the group with the conventional method, there were only 6 respondents, the remaining respondents in the moderate category were only able to stand, 11 patients. In the results of the different tests using the t-test, it was found that the p-value was 0.000, less than 0.05, meaning there is a significant difference in the average mobilization rate for mothers post-conventional SC and ERACS in the intervention group and control group at RSI Sunan Kudus.

The results of data processing on the Eracs method variables show that there are 19 variables respondents mobilize quickly after being observed by researchers. These results are in accordance with previous research which found that patients operated on using the ERACS method were able to return to movement and undergo early mobilization more quickly (Habib & Ituk, 2019). In the ERACS method, patients are also given education to carry out early mobilization from pre-operative to post-operative stages, so that patients can carry out early mobilization from the treatment room. Apart from that, the existence of a protocol to reduce preoperative fasting, minimize the use of opioids, and provide enteral feeding after surgery, is also the reason why ERACS patients can undergo early mobilization more quickly (Sofjan & McCutchan, 2023).

In the Eracs method, preoperative preparation includes antenatal care in the form of education, setting fasting times, administering antibiotics, and optimizing hemoglobin. Intraoperative care includes fluid and pressure management, temperature management, administration of anesthesia, analgesics, and uterotonics, delayed cord clamping, delayed cord clamping, and early initiation of breastfeeding. Postoperative care includes early oral intake, administration of analgesics, early mobilization, and early urinary catheter removal (Tiara *et al*., 2022). Mobilization will be very beneficial for all body systems, especially bowel, bladder, circulation, and lung function. It also helps prevent the formation of blood clots (thrombosis) in the leg veins and helps the mother progress from being dependent on the sick role to a healthy, independent role.

In the conventional method, it is known that as many as 11 (61.1%) respondents carry out mobilization in the moderate category after being observed by the researcher. Supported by research from Warmiyati and Ratnasari (2022) regarding the effect of the Eracs SC method on accelerating mobilization for mothers giving birth at Hermina Daan Mogot Hospital, they found that the average mobilization for mothers giving birth using the conventional SC method was 20.41 hours after surgery with the implementation of mobilization. the fastest is 15 hours after surgery and the longest mobilization is 27 hours after surgery. Meanwhile, mobilization for mothers giving birth using the SC ERACS method is 10 hours after surgery, with the fastest mobilization being 8 hours after surgery and the longest mobilization being 13 hours after surgery.

Respondents who were slow to mobilize complained of difficulty in moving due to pain in their stomach from surgery, their body ached and their legs felt tingling. Apart from that, he said that this gave birth to his first child. Impaired physical mobility is related to the respondent's reluctance to move. This is no different from research by Sidharth (2023) regarding the difference in patient comfort with SC surgery using Eracs and non-Eracs methods at RSIA. Puti youngest explained that the majority of respondents who underwent surgery using conventional methods were only able to carry out early mobilization at levels 2 and 3.

Apart from that, several studies also show that patients using conventional methods feel less comfortable. This is caused by several factors, such as pain, loss of self-confidence, and depression. The pain experienced by patients after cesarean section causes fear and anxiety, especially when the analgesics given run out, making the patient uncomfortable. Patients may also experience a loss of self-confidence due to changes in body image and loss of the experience of giving birth naturally.

The difference in mobilization in the group of patients using Eracs and conventional showed a significant difference where all of the respondents using the ERACS method were able to mobilize quickly, whereas in the group using the conventional method only the remaining 6 respondents were in the moderate category. Researchers assume that mobilization is important to reduce complications that occur in women giving birth after cesarean section because prolonged bed rest can increase the risk of complications of muscle weakness and infection, which can lead to long hospital stays. The Eracs

method in maternity patients can speed up the mobilization of the mother post-cesarean section. Mobilization will facilitate blood circulation so that several effects that arise such as increased body temperature, abnormal bleeding, thrombosis, poor involution, blocked blood flow and increased pain sensitivity can be overcome and the mother can immediately breastfeed her baby quickly, and the mother labor can go home sooner the start of the hospital.

Gupta *et al.* (2022) argue that early mobilization of cesarean patients can help reduce the patient's length of stay. Early mobilization is also carried out to reduce the patient's post-operative discomfort. Early urinary catheter removal helps patients practice walking to the toilet and speeds up mobilization. Providing early oral intake after delivery helps speed up the recovery of intestinal function without causing complications and side effects in the patient

Supported by research by Sardimon *et al*. (2022) regarding the implementation of accelerated recovery after cesarean section with the ERACS method at the Zainoel Abidin District Hospital in Banda Aceh, it shows that a mother who gives birth using the ERACS method can mobilize in less than 24 hours. The patient can lift his legs 2 hours after spinal anesthesia and can walk to the toilet without assistance within 6 hours after spinal anesthesia. Mobilization in the recovery room is carried out after oral intake. The patient's bed is raised 30 degrees and so on gradually, then the patient is trained to sit without leaning on the bed. Then the patient tries to dangle his legs under the bed. After that, the patient is helped to stand and walk.

Other research shows the same thing, namely from Warmiyati and Ratnasari (2022) regarding the effect of the SC Eracs method on accelerating mobilization for women giving birth at Hermina Daan Mogot Hospital. The univariate results showed that the average implementation of mobilization for a cesarean section using the conventional method was 20.41 hours. after surgery, whereas in cesarean section using the ERACS method, the patient can mobilize within 10 hours after surgery. Mobilization of ERACS patients is faster than with conventional methods.

## CONCLUSION

All SC patients were mobilized using the Eracs method (19 people/100%) and were able to mobilize quickly. All patients were able to walk after 24 hours of cesarean section. The majority of SC patients mobilized using conventional methods were able to mobilize in the moderate category, 11 (61.1%). so there is a significant difference in the mobilization of Eracs patients. The difference in mobilization in the group of patients using Eracs and conventional showed a significant difference where all of the respondents using the Eracs method were able to mobilize quickly, whereas, in the group using the conventional method, there were only 6 respondents, the remaining 11 patients in the moderate category were only able to stand. In the results of the different tests using the t-test, it was found that the p-value was 0.000, less than 0.05, meaning there is a significant difference in the average mobilization rate for mothers post-conventional CS and ERACS in the intervention group and control group at RSI Sunan Kudus.

## SUGGESTION

a. Institution-hospital
   Seeing the results of significant differences in mobilization on length of stay between conventional and ERACS, it is recommended that hospitals promote more cesarean operations using the ERACS method.
b. For patients
   Recommended for patients to use ERACS for delivery if there are no contraindications in the patient.
c. Researcher Other
   Study Next, it is recommended to carry out research by looking at the process mobilization on the patient in more detail.

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