

The Connection between Early Mobilization and Wound Healing Time After Sectio Caesarea at Morotai Island Hospital

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Abstract: Sectio caesarea (CS) is a common surgical procedure for high-risk deliveries, but one complication that may occur is slow wound healing. This can be influenced by several factors, one of which is early mobilization. Early mobilization improves blood circulation, reduces the risk of thrombosis, and accelerates wound healing. However, many post-CS mothers are hesitant to engage in early mobilization due to pain and discomfort. This study was conducted to investigate the relationship between early mobilization and the duration of wound healing in post-CS mothers at Morotai Island Hospital. An analytical cross-sectional design was used, involving 16 post-CS mothers who were selected using purposive sampling. Data collection was performed through observation, interviews, and a questionnaire, along with an examination of postoperative wound conditions. The Wilcoxon statistical test was used to assess the relationship between early mobilization and wound healing duration. The findings showed that mothers who engaged in early mobilization experienced faster wound healing compared to those who did not. The statistical test revealed a p-value of 0.000 ($p < 0.05$), indicating a significant relationship between early mobilization and wound healing duration. Early mobilization was shown to be an effective strategy for accelerating post-CS recovery, as mothers who mobilized early had quicker recovery times. Based on these results, it is recommended that early mobilization be integrated into postoperative care plans to improve recovery and prevent complications. Additionally, more intensive education on the benefits of early mobilization should be provided to post-CS mothers. Healthcare providers at Morotai Island Regional Hospital should offer support and motivation to encourage mothers to engage in early mobilization, ultimately aiding in faster recovery.

Keywords: Cesarean section; Early mobilization; Post-CS mothers; Wound healing

1. Introduction

Caesarean section (CS) delivery has increased in recent years, both due to medical indications and patient choice. Although this procedure is generally safe, postoperative recovery remains a challenge for mothers, especially in terms of surgical wound healing. Early mobilization, which is the patient's active movement within 6-12 hours after surgery, is believed to accelerate the wound healing process and reduce the risk of postoperative complications.

Early mobilization plays a role in improving blood circulation and tissue oxygenation, which are very important in the wound healing process. Previous studies have shown that patients who undergo early mobilization have a shorter recovery time than those who experience longer immobilization. However, the level of implementation of early

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mobilization in various health facilities still varies, depending on cultural factors, hospital policies, and the understanding of patients and health workers.

At the Morotai Island Regional Hospital, there have not been many studies exploring the relationship between early mobilization and the length of wound healing after CS. In fact, delayed wound healing can increase the risk of infection, prolong hospitalization, and increase the burden of treatment costs. Therefore, further studies are needed to understand the extent to which early mobilization contributes to accelerating wound healing after CS in this hospital.

In addition to physiological aspects, psychological factors also play a role in the success of early mobilization. Fear, pain, and anxiety are often obstacles for post-CS mothers to mobilize early. Support from health workers in providing education and motivation is a key factor in increasing patient compliance with early mobilization recommendations.

Several studies have confirmed the benefits of early mobilization on postoperative patient recovery. A study by Armayanti showed that patients who were mobilized early after CS experienced faster pain relief and returned to normal activities in a shorter time. However, further research is still needed that adapts to local conditions, including at the Morotai Island Regional Hospital, to obtain more specific and applicable data.

Considering the importance of early mobilization in the post-CS recovery process, this study aims to analyze the relationship between early mobilization and the duration of wound healing in the obstetrics room of Morotai Island Hospital. The results of this study are expected to provide recommendations for health workers in improving the quality of post-CS care. This study uses a quantitative method with a cross-sectional design, where data will be collected from post-CS patients at Morotai Island Hospital. With this approach, it is hoped that the study can provide stronger scientific evidence regarding the benefits of early mobilization on the duration of post-CS wound healing.

2. Research Method

This study used an analytical design with a cross-sectional approach. The number of respondents in this study was 16 post-section caesarea mothers who were selected using a purposive sampling technique. Data collection was carried out through observation and interviews using a questionnaire sheet and examination of postoperative wound conditions. Data analysis was carried out using the Wilcoxon statistical test to see the relationship between early mobilization and the duration of wound healing.

3. Results and Discussion

3.1. Results

Table 1. Mother's Age

| Information | Frequency | Percent |
|--------------|-----------|--------------|
| <21 year | 3 | 18.8 |
| >21 year | 13 | 81.2 |
| Total | 16 | 100.0 |

In table 1, the age of the mother, most of the 13 respondents (81.2%) were >21 years old and a small number of 3 respondents (18.8%) were <21 years old.

Table 2. Mother's Occupation

| Information | Frequency | Percent |
|---------------|-----------|--------------|
| housewives | 12 | 75.0 |
| self-employed | 4 | 25.0 |
| Total | 16 | 100.0 |

In table 2, it was found that the majority of 12 respondents (75%) were housewives and a small proportion of 4 respondents (25%) were self-employed.

Table 3 Mother's Education

| Information | Frequency | Percent |
|--------------|-----------|--------------|
| SMP | 7 | 43.8 |
| SMA | 9 | 56.2 |
| Total | 16 | 100.0 |

Based on table 3 above, it was found that the majority of 9 respondents (56.2%) had a high school education and a small proportion of 7 respondents (43.8%) had a junior high school education.

Table 4. Early Mobilization * Healing of Sectio Caesarea Wounds Crosstabulation

| Information | | Caesarean Section Wound | | Total |
|--------------------|------|-------------------------|--------|-------|
| | | Fast | Normal | |
| Early Mobilization | Less | 0 | 1 | 1 |
| | Good | 15 | 0 | 15 |
| Total | | 15 | 1 | 16 |
| Uji Chi Square | | | | 0.000 |

Based on table 4 above, the chi square test between the relationship between early mobilization obtained a p-value of 0.000 <0.05, which means that H_0 is rejected and H_1 is accepted, namely there is a relationship between early mobilization and the duration of wound healing after Sectio caesarea in the obstetrics room of Morotai Island Hospital. With 15 respondents who have good early mobilization quickly in treating sectio caesarea wounds and 1 respondent who is less able to treat wounds with normal time.

3.2. Discussion

The results of the chi-square test obtained showed that there was a significant relationship between early mobilization and the duration of wound healing after a caesarean section (CS) with a p-value of 0.000 ($p < 0.05$). This means that early mobilization significantly contributes to the acceleration of wound healing in post-CS patients in the obstetrics room of the Morotai Island Regional Hospital. These results are in line with previous studies showing that early mobilization can accelerate the wound healing process by increasing blood circulation and tissue oxygenation (Johnson et al., 2019).

Early mobilization after CS surgery plays an important role in preventing postoperative complications, such as deep vein thrombosis (DVT), wound infection, and slowed recovery of body functions. With increased movement, blood flow to the wound area becomes more optimal, so that the healing process takes place faster. In this study, 15 respondents who performed early mobilization well experienced faster wound recovery compared to one respondent who did not perform early mobilization and experienced healing within normal time.

In the context of post-CS care, early mobilization also plays a role in reducing pain and increasing patient comfort. A study by Smith & Brown (2020) found that patients who started moving within 6-12 hours after surgery experienced a faster decrease in pain intensity compared to those who remained lying down for a long time. This is supported by physiological mechanisms, where early mobilization helps reduce edema, accelerates the elimination of anesthesia, and increases pain tolerance.

In addition to physiological aspects, psychological factors also influence the success of early mobilization. Patients who receive support from health workers and families tend to be more motivated to move immediately after surgery (Williams et al., 2021). In this study, the factors of assistance and education from health workers are important aspects in ensuring that patients carry out early mobilization optimally.

In this study, one respondent who did not do early mobilization experienced a longer healing time. This indicates that lack of movement can slow down the tissue regeneration process and increase the risk of complications such as wound infection. The causative factors for the lack of early mobilization can come from the patient's fear, excessive pain, or lack of education about the benefits of early mobilization.

This difference in wound healing speed can also be associated with the level of patient compliance with early mobilization recommendations. A study by Garcia et al. in Armayanti showed that patients who were given education before surgery tended to be more compliant in carrying out early mobilization after CS. Therefore, it is important for health workers to provide clear information about the benefits and techniques of early mobilization before patients undergo surgery.

In addition, the implementation of a good early mobilization protocol in hospitals can increase the success rate in accelerating patient recovery. According to the World Health

Organization, hospitals that systematically implement early mobilization policies are able to reduce postoperative complication rates by up to 30%. Therefore, Morotai Island Regional Hospital can consider creating standard operating procedures (SOPs) related to early mobilization after CS to improve the quality of service.

In midwifery practice, the role of midwives is very crucial in supporting the implementation of early mobilization. Midwives are not only responsible for providing midwifery care, but also for providing motivation and education to post-CS patients so that they are more confident in moving early. The success of early mobilization implementation in hospitals is highly dependent on the approach taken by health workers towards patients.

In addition to education, hospital facilities also play a role in supporting the success of early mobilization. The availability of comfortable beds, walking aids, and a safe environment for movement are factors that can increase patient motivation in carrying out early mobilization. Therefore, hospitals need to ensure that facilities that support early mobilization are available and easily accessible to patients.

Another challenge in implementing early mobilization is the lack of patient awareness of the importance of movement after surgery. Some patients still have the perception that complete rest is better for wound healing. Therefore, a more intensive approach is needed in providing education to patients and families so that they better understand the importance of early mobilization in accelerating wound healing.

In addition, individual factors such as age, pre-operative health conditions, and body weight can also affect the effectiveness of early mobilization. Patients with comorbid conditions such as diabetes mellitus or hypertension tend to experience a longer wound healing process even though they have undergone early mobilization. Therefore, in further research, a more in-depth analysis is needed regarding the factors that can influence the relationship between early mobilization and post-CS wound healing.

Although this study shows a significant relationship between early mobilization and wound healing, there are still several limitations that need to be considered. One of them is the limited sample size, so the generalization of the results of this study to a wider population needs to be done with caution. In addition, subjective factors in measuring compliance with early mobilization can also affect the results of the study.

The results of this study can be the basis for policy development at the Morotai Island Regional Hospital in increasing the implementation of early mobilization as part of standard care for post-CS patients. With supportive policies, it is hoped that patients can get maximum benefits from early mobilization and accelerate their wound healing process.

Overall, this study strengthens the evidence that early mobilization has a significant role in accelerating post-CS wound healing. Therefore, health workers, especially midwives, are expected to be more active in encouraging patients to carry out early mobilization to optimize post-operative recovery results.

4. Conclusion

Based on the results of the study, it can be concluded that there is a significant relationship between early mobilization and the duration of wound healing after a caesarean section (CS) in the obstetrics room of Morotai Island Hospital, with a p-value of 0.000 ($p < 0.05$). Early mobilization has been shown to contribute to accelerating the wound healing process by increasing blood circulation, reducing the risk of complications, and accelerating the recovery of body functions after surgery.

A total of 15 respondents who performed early mobilization well experienced faster wound healing compared to one respondent who did not perform early mobilization and experienced healing within normal time. These results indicate that early mobilization is an important factor in the recovery process of post-CS patients.

The support of health workers, especially midwives, in providing education and motivation to patients plays a major role in the success of early mobilization. In addition, hospital policies that support the implementation of early mobilization, as well as adequate facilities, are also important factors in optimizing patient recovery.

Although this study has shown a significant relationship between early mobilization and wound healing, further research is still needed with a larger sample and considering other factors that can affect wound healing, such as the patient's health condition before surgery and the level of postoperative pain.

Early mobilization after cesarean section (CS) has been shown to significantly enhance wound healing and overall recovery for mothers. Alvarez et al. (2021) found that mothers who participated in early mobilization programs experienced faster wound healing and fewer postoperative complications. Similarly, Bhatia et al. (2022) highlighted the positive effects of early ambulation on post-cesarean recovery, showing that it led to quicker recovery times and improved maternal outcomes. A systematic review by Chen et al. (2020) further confirmed that early mobilization not only accelerates wound healing but also reduces the risk of thromboembolic events and improves patient satisfaction. Additionally, Patel and Reddy (2023) emphasized that early postoperative mobilization, initiated within 24 hours of surgery, contributed to faster wound healing and boosted the confidence of mothers in resuming normal activities. Santos et al. (2019) also supported these findings, noting that early physical activity after CS significantly reduced wound complications and contributed to the mothers' functional recovery. These studies collectively suggest that integrating early mobilization into postoperative care could be a key intervention for improving recovery outcomes for post-CS mothers, underscoring the need for healthcare providers to encourage and support early mobilization practices.

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