THE EFFECTIVENESS OF MOBILIZATION IN IMPROVING MOTHER'S FUNCTIONAL STATUS AFTER CAESAREAN SECTION DELIVERY

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Abstract

Introduction: Over the past 30 years, the incidence of cesarean section or sectio caesarea (SC) has increased. One of the complications of SC is postoperative pain. Pain can interfere with the patient's quality of life and reducing mother's the functional status. One of the physiotherapy management that can be done is mobilization.

Case Presentation: A 28-year-old pregnant woman came to Hospital in Madiun, East Java, Indonesia with complaints of ruptured membranes and breech presentation. The doctor performed a cesarean section (SC) operation on the patient. After SC the patient complained of pain at the incision site. Postoperatively the patient was in bed with an IV and catheter attached. The patient's vital signs are normal.

Management and Outcome: The patient was mobilized for 2 days. This mobilization can be divided into 3 stages. The first stage (0-8 hours postoperatively) the patient sits on the edge of the bed, proceeds to get out of bed then sits in a chair and ambulates according to the patient's tolerance, the second stage (8-24 hours postoperatively) Ambulates according to the patient's tolerance, continues walking 1- 2 minutes (or more), third stage (24-48 hours postoperatively) Walk down the hall 3-4 times (or more), then get out of bed every 8 hours.

Discussion: Mobilization has a good impact on patients after cesarean delivery. Ambulation helps reduce most of the complications by ensuring good blood circulation, improving breathing, and increasing physical strength. This is proven by an increase in the patient's Katz index, where the C score changes to A after mobilization

Conclusion: Exercises given after cesarean delivery can increase transfer and ambulation activities from sleeping to sitting, sitting independently, sitting to standing, standing independently, and walking independently.

Keyword: Sectio caesarea, mobilization, physiotherapy

Introduction

Cesarean section or sectio caesarea (SC) is a surgical procedure at birth with an incision in the abdomen and uterus to remove the baby. According to data from the World Health Organization (WHO) in 2015[1], for 30 years there has been an increase in deliveries by sectio caesarea 10-15% of all deliveries in developing countries. In addition, according to WHO, the prevalence of sectio caesarea increased by 46% in China and 25% in Asia, Europe, and Latin America[2]. This is supported by Corso et al (2017)[3] which states that the prevalence of sectio caesarea is increasing worldwide.

Sectio Caesarea (SC) is a delivery that is performed surgically in the form of an incision in the abdomen (laparotomy) and uterus (hysterectomy). Factors that cause cesarean delivery include narrow pelvis, placenta previa, malpresentation and malposition of the fetus, preventing hypoxia in fetal distress. The breech position is an example of fetal malpresentation while the ideal fetal presentation is the head[4]The side effects of SC are diastasis recti, weakness in the abdominal muscles, leg edema[5]. SC can also affect the quality of life in the mother, and one of the problems after SC is the presence of pain. This pain can reduce the functional status of the mother. Recovery of maternal health after childbirth can be seen from the improvement in functional status.

Physiotherapy can play a role in improving functional status in post-SC conditions with mobilization. Mobilization exercises can reduce pain, increase muscle strength, wound healing, and independent functional activities[6].

Measurements used by researchers are Katz Index, Manual Muscle Testing (MMT), Visual Analog Scale (VAS).

Case Presentation

A 28-year-old pregnant woman, a civil servant came to Hospital in Madiun, East Java, Indonesia a complaint of ruptured membranes, after an examination the doctor advised to do a caesarean section because of fetal malpresentation. After the SC, the patient sleeps in bed with the catheter in place and the IV in the left hand. The patient complains of pain at the incision site. The patient had a miscarriage when she was pregnant with her first child at 3 months of gestation.

Physical examination found blood pressure 120/70 mm/Hg, pulse rate: 80 x/minute, weight: 71 kg, respiratory rate: 20 x/minute, Temperature: 36.5℃, height: 155 cm

Management and Outcome

Physiotherapy management in patients after cesarean delivery for two days was given the following mobilization[8]:

1. 0-8 hours postoperatively: the patient sits on the edge of the bed, then gets out of bed and sits in a chair and ambulates according to the patient's tolerance
2. 8-24 hours postoperatively: Ambulation according to patient tolerance, continued walking 1-2 minutes (duration can be increased)
3. 24-48 hours post surgery: Walk 3-4 times (duration can be increased) in the hallway, then get out of bed every 8 hours

According to research[9] exercises can be given 2 hours after surgery that includes exercise in bed, then sit for 30 minutes followed by sitting next to the bed for 10 minutes in addition to standing.

- Interventions used in the study as follows :

Session	Therapy	Aim/ goal treatment
Day 1	Deep Breathing exercise F: every 2 hour I: 3 sets (8 reps) T: 20 minutes T: breathing exercise Positioning F: every 2 hours I: moderete T: 10 minutes T: Positioning	Improve functional mobility, strengthen muscles because it reduces pain intensity, recovery and improved wound healing[8]
Day 2	Static contranction F: every 3 hour I: 2 sets (8 reps) T: 10 minutes T: Isometric Abdominal muscle strengthening exercises F: every 6 hour I: 3 sets (8 reps) T:according to patient tolerance T: Strengthening Ambulation F: every 8 hours I : moderete	Strengthen muscles, Independent functional activities [8,9]

	T: 10 minutes T : Ambulation	

The result of this study is the improvement of the function of motion after mobilization for 2 days of mobilization exercises include

Instrumen	Pre	Post
Katz Index	C	A
Manual Muscle Testing (MMT)	3	3
Visual Analog Scale (VAS)	5	3

Discussion

Physiotherapy management with mobilization has a good impact on patients after cesarean section. Previous research stated that post cesarean section mobilization showed a significant impact on improving maternal functional status[11]. Mobilization such as ambulation after 6-8 hours can help reduce maternal complications and reduce morbidity after caesarean section.

Mobilization after surgery is one of the keys to improving muscle function quickly and optimally, as well as restoring maternal health[12]. Ambulation helps reduce most of the complications by ensuring good blood circulation, improving breathing, increasing physical strength etc. By doing complete ambulation at this time, can prevent complications that will occur in the future.

Conclusion

Exercises given after cesarean delivery can increase transfer and ambulation activities from sleeping to sitting, sitting independently, sitting to standing, standing independently, and walking independently.

Acknowledgments

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