

## Research Article

# Signs, Symptoms, and Management of Maternity Nursing Care in Post Sectio Caesarea with Indications of Preeclampsia: A Case Report

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**Abstract.**

Preeclampsia is a type of hypertension that manifests as a rise in blood pressure to 140/90 mmHg at a gestational age of more than 20 weeks or after delivery. One of the signs of sectio caesarean is Preeclampsia (SC). This case study examines the indicators of preeclampsia history in post-SC moms as well as the signs, symptoms, and management of maternity nursing care. A case study was used for this research project. The outcomes of the intervention demonstrated that post-SC with preeclampsia symptoms had a higher likelihood of developing the illness. Preeclampsia in post-SC might show symptoms including edema throughout the body, especially in the lower limbs. Management of nursing care for the patients was pain management, circulation care with foot care, warm water foot bath therapy, relaxation therapy, and oxytocin massage.

**Keywords:** preeclampsia, post sectio caesares, nursing care

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## 1. INTRODUCTION

Currently in Indonesia, the direct causes of maternal deaths related to pregnancy and childbirth are still dominated by three main causes, namely bleeding (which mostly occurs after childbirth), infection (after childbirth), and one of them is high blood pressure (hypertension) during pregnancy and after delivery. giving birth (1). Preeclampsia is one of the hypertensive disorders that occur during pregnancy (2). Preeclampsia is hypertension that can occur in pregnancy with gestational age after 20 weeks or postpartum which is characterized by an increase in blood pressure to 140/90 mmHg and accompanied by positive proteinuria or 300 mg/24 hours (3). Preeclampsia is also

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one of the causes of maternal and fetal morbidity and mortality, with an incidence ranging from 0.5% to 38.4% (1).

According to the Ministry of Health, WHO estimates that cases of Preeclampsia are seven times higher in developing countries than in developed countries (1). The prevalence of Preeclampsia in developed countries is 1.3% - 6%, while in developing countries, it is 1.8% - 18% (4). The incidence of Preeclampsia in Indonesia is 128,273 per year or about 5.3% of all pregnancies (5). According to the Ministry of Health, an increase in the number of maternal deaths due to severe Preeclampsia, which was originally in 2012 at 30.7 per 100,000 live births (10%) to 2nd in 2019, which was 76.97 per 100,000 live births alive (26.47%) (6). According to the research results of the East Java Provincial Health Office in 2020, hypertension in pregnancy was the highest cause of maternal death in 2020, which was 26.90% or as many as 152 people (7). According to Aulya et al. (2021), from 35 respondents in their study, 11 respondents (31.4%) had severe Preeclampsia and 24 respondents (68.6%) had mild Preeclampsia (8).

Preeclampsia is one of the indications for Sectio Caesarea (SC). Where SC is an artificial delivery in the lower abdominal area for the birth canal of the fetus through an incision in the front wall of the abdomen and uterine wall with the condition that the uterus is intact and the fetal weight is above 500 grams (9).

Based on an initial study conducted on September 16, 2021 at 08.00 WIB in the Matahari room of Karsa Husada Batu Hospital, an assessment has been carried out on Mrs. S is 30 years old who is one of the patients with post SC cases with severe Preeclampsia (PEB) who was treated in the ward. At the time of the assessment, it was found that the patient complained of pain in the post-SC wound and his body still felt weak, the patient also explained the complaints he felt during pregnancy with severe Preeclampsia, namely the hands and feet began to swell at approximately 7 months of gestation, then felt weak and often dizzy. weight on the back of the head. Based on the interview results, the nurse said that she had carried out an assessment, made a diagnosis according to patient complaints, plans and nursing actions were made according to the SLKI and SIKI standards. One of the interventions provided is pain management, wound care, circulation care, relaxation techniques and *breast care education*.

Nurses have an important role as health care providers in providing comprehensive nursing care to clients both biologically, psychologically, socially, culturally and spiritually by applying promotive, preventive, curative, and rehabilitative aspects (10). Based on the above background, this study aimed to determine the signs, symptoms and management of care in post-SC mothers with indications of Preeclampsia.

## 2. MATERIALS AND METHODS

This research method is a case study (case report).

## 3. RESULTS

Mrs. S 30 years old came to the ER Karsa Husada Batu Hospital on September 15, 2021 at 16.30 referral from Bhayangkara Hasta Brata Hospital with a medical diagnosis of Severe Preeclampsia (PEB). Mrs. S has a high school education, currently the patient does not work, but occasionally helps her husband to maintain the stall. The patient came to the ER with her husband, Mr. H is 35 years old, and works as a fruit trader.

The patient said he felt contractions and spots come out since 4 days of SMRS. The patient also said that he had felt decreased fetal movement since 3 days, then the patient and his husband went to the obstetrician for control and an ultrasound was performed. Ultrasound results showed oligohydramnios and calcification of the placenta. The doctor suggested performing a cesarean section, but the patient refused. The patient complained of swelling of the whole body starting from the swollen legs since the gestational age of 7 months, the patient also experienced high blood pressure since the pregnancy check-up at the age of 8 months. The results of further examination with her husband that Mrs. S does not maintain his diet (likes to eat fatty foods and contains coconut milk and drinks soft drinks). In the afternoon (September 15, 2021) the patient felt dizzy, getting worse until he almost fainted, then his husband brought the patient to the Bhayangkara Hasta Brata Hospital and then was referred to the ER Karsa Husada Batu Hospital on September 15, 2021 and was advised to have an SC cito operation immediately (emergency).

The patient was admitted to the hospital (MRS) at the Karsa Husada Batu IGD on September 15, 2021 at 16.30 with complaints of severe headache until he almost fainted and an SC operation was performed at 22.30. The patient moved to the inpatient room on September 16, 2021 at 00.30. The main complaint during the assessment on September 16, 2021 at 08.00, the patient said pain in the post SC wound section with the results of the pain assessment: P : The post SC wound was painful, the pain increased when Mrs. S moves, Mrs. S feels anxious when the wound is touched and shifted, Q: The pain is like pins and needles, R: Pain is felt in the post SC wound, S: 4, T: Pain starts to appear when after SC and anesthesia disappears, the pain that comes and goes almost every 10 minutes.

The patient gave birth to her first child on October 18, 2011 at a midwife in the Ngantang area, the patient gave birth at 9 months of gestation vaginally with a birth weight of 2600 grams, then the patient used milk contraceptives for 9 years, and there were no complaints while using the implant contraceptive device. This second child was born on September 15, 2021 at Karsa Husada Batu Hospital with a gestational age of 38-39 weeks by caesarean section with a doctor's birth attendant, the baby was born with a birth weight of 1550 grams. The patient had 7 years of breastfeeding experience when she had her first child.

On September 16, 2021 the patient received nasal cannula oxygen therapy 3 lpm, infusion of RL + oxytocin 20U (II) 16 tpm, MgSO<sub>4</sub> 40% 1 g/hour via a syringe pump 2.5 cc/hour, tranexamic acid injection 3x 500 mg (IV), injection of ketorolac 3x 30 mg (IV) to reduce post-SC wound pain, injection of ceftriaxone 2x1 vial (IV), Nifedipine 3x10 mg, dopamet 3x250 mg, vip albumin 3x 2 caps, tramadol 3x1 tablet, and a urinary catheter was attached.

### 3.1. Existing conditions

At the time of physical examination on September 16, 2021, the results of compos mentis consciousness were obtained, blood pressure 160/110 mmHg, temperature 36.5°C, pulse 110 x/minute, RR 20x/minute, SPO<sub>2</sub> 99%. There is edema on Mrs. S and there are complaints from Mrs. S that her face also swelled at 7 months of pregnancy. When examining the armpits and breasts, Mrs. S said breast milk does not come out too much like the birth of the first child. On inspection of the abdomen, it appears that there are post sc wounds in the form of a horizontal line, the height of the uterine fundus is 2 cm (about 2 fingers) below the center, there are contractions, diastasis rectus abdominis < 2 fingers / 2 cm, the bladder is empty because the patient has a catheter, Mrs. S complained about the abdominal area, there was post sc wound pain in the lower abdomen with a horizontal wound line of ± 15 cm, the condition of the skin around the wound dressing did not show signs of infection, the gauze bandage did not seep, the wound was still covered with gauze. On examination of the extremities, it was found that akral felt cold and pale skin color, CRT > 2 seconds, Mrs. S also complained of swelling in his lower extremities starting at 7 months of gestation.

TABLE 1: Laboratory Results of Mrs. S on 15th and 16th September 2021.

Checking type	Results	Unit	Referral Value
<b>Date : 15 September 2021</b>			
<b>Complete Hematology XN1000</b>			
HGB	15.2	g/dL	12.3 – 15.3
RBC	4.72	10 <sup>6</sup> /uL	4.1 – 5.1
HCT	39.9	%	34.0 – 47.0
MCV	84.5	fL	80.0 – 97.0
MCH	32.2	Pg	26.5 – 33.5
MCHC	38.1 (H)	g/dL	31.5 – 35.0
RDW-SD	43.4	fL	35 – 47
RDW-CV	14.2	%	11.5 – 14.5
WBC	12.59 (H)	10 <sup>3</sup> /uL	4.4 – 11.3
<b>Complete Urine UX2000</b>			
<b>Macroscopic</b>			
Color	Yellow		
Specific gravity	1.022		
Clarity	Clear		
pH	8.00 (H)		7.35-7.45
Leukocytes	Negative		Negative
Nitrite	Negative		Negative
Protein	<b>Positive (+3)</b>		Negative
Glucose	Negative	mg/dL	Negative
Ketones	Negative	mg/dL	Negative
Blood	<b>Positive (+2)</b>		Negative
Urobilinogen	Negative		Negative
Bilirubin	Negative		Negative

TABLE 2

<b>Date : September 16, 2021</b>			
<b>Complete Hematology XN1000</b>			
HGB	15.5 (H)	g/dL	12.3 – 15.3
RBC	4.80	10 <sup>6</sup> /uL	4.1 – 5.1
HCT	40.6	%	34.0 – 47.0
MCV	84.6	fL	80.0 – 97.0
MCH	32.3	Pg	26.5 – 33.5
MCHC	38.2 (H)	g/dL	31.5 – 35.0
RDW-SD	43.1	fL	35 – 47
RDW-CV	14.1	%	11.5 – 14.5
WBC	22.18 (H)	10 <sup>3</sup> /uL	4.4 – 11.3
<b>Blood Chemistry</b>			
Albumin	2.50 (L)	g/dL	3.2-5.5

### 3.2. Implementation

For 3 days, from September 16 to September 18, 2021, nurses carried out the implementation carried out to overcome the diagnosis of acute pain related to physical injury agents (the presence of post-SC wounds) was to identify pain, (location, characteristics, duration, frequency, quality, intensity), pain scale), identify factors that relieve and aggravate pain, then teach pain management with deep breathing—collaborating with analgesic administration with the injection of ketorolac.

Implementation carried out to overcome the diagnosis of ineffective peripheral perfusion associated with increased blood pressure is to check peripheral circulation: there is edema in the upper and lower extremities and pale skin color, identify risk factors for circulation disorders: blood pressure 160/110 mmHg, prevent infection, perform foot and nail care, encourage families to do warm water foot bath therapy as an effort to reduce edema in the lower extremities, and encourage patients to take blood pressure-lowering drugs regularly and routinely.

Implementation carried out to overcome the diagnosis of ineffective breastfeeding related to inadequate milk supply is to identify relaxation techniques that have been effectively used: deep breathing relaxation techniques, checking BP before exercise: 154/100 mmHg, BP after exercise: 140/100 mmHg, monitoring response on relaxation techniques, creating comfortable and calm conditions, explaining the goals and benefits of deep breathing relaxation techniques and explaining in detail the intervention of deep breathing relaxation techniques, recommending frequent repetition and practicing deep breathing relaxation techniques, as well as demonstrating and practicing deep breathing relaxation techniques and providing interventions breast care and pumping breast milk accompanied by providing education on oxytocin massage.

### 3.3. Results

After 3 days, there was a better change in the patient's condition. Mrs. S can move or mobilize without feeling pain in the post-SC wound, there is edema on Mrs. S reduced significantly in the lower extremities, Ny. S is also improving, as well as Mrs. S is more calm and relaxed about her baby's condition and Mrs. S already understands how to take care of her breasts and massage oxytocin to deal with her milk that comes out only a little.

## 4. DISCUSSION

Mrs. S experiencing Preeclampsia may be caused by various factors such as primigravida, obesity, gestational age, history of hypertension, and maternal age. Client on behalf of Mrs. S 30 years old with obstetric status P2002 Ab000. From the results of the study, Mrs. S has no history of hypertension, the last pregnancy is currently her second pregnancy. Then Mrs. S had a history of normal delivery 9 years ago, but it was different from the first delivery because this time the client had to have a cesarean section. Mrs. body S is completely swollen starting from the lower extremities at 7 months of gestation. Mrs. S also did not regulate her diet properly, such as consuming fatty foods and excessive coconut milk, making Mrs. S rise from 3 months of gestation. Based on the results of this study, the researchers correlated the results of the study by Sailaja et al (2018) that the risk factors for severe Preeclampsia (PEB) include various factors such as maternal age, parity, frequency of ANC, multiple pregnancies, history of hypertension before pregnancy, kidney disease, gestational diabetes, obesity, excess weight gain during pregnancy, gestational age and technology-assisted pregnancy (ART) (11).

The causes/predisposing factors for the occurrence of Preeclampsia are poor maternal diet, obesity with BMI > 25, primigravida mothers, anxiety before delivery so that mothers lack rest, lack of regular pregnancy check-ups in health facilities so that the health of the mother and baby is not monitored. The causes that have a big influence on the occurrence of Preeclampsia are a bad *lifestyle*, such as smoking, poor diet, and lack of exercise. This *life style* shows the whole person who interacts with the environment. Changes in *life style* according to generation, there will also be a shift in lifestyle accompanied by changes in diet (12). This is in line with Astin & Zaenab (2019) which found a link between eating habits and pregnant women with Preeclampsia at the Kendari Hospital in 2019 that poor eating habits had a 5.4 times greater risk of developing Preeclampsia (13). According to Wainstock et al. (2020), the true cause of Preeclampsia is largely unknown, several risk factors for Preeclampsia have been identified, including a history of Preeclampsia, maternal obesity, and other chronic maternal health conditions including hypertension, diabetes, and chronic heart disease (14).

Based on one of the case studies by Anggraeni & Ekacahyaningtyas (2020) with the title "Nursing Care for Severe Preeclampsia Patients in Fulfilling Safe and Safety Needs," the results of his research found a woman named Ny. F, 28 years old, had a cesarean delivery on the criteria of excessive weight gain, followed by edema, hypertension and proteinuria, and the patient was brought to the IGD Ponok RSUD Dr. Moewardi

Surakarta. The patient had never had this disease before. In this case, the patient said that he was worried about the stitches due to pain, the patient complained of being a little dizzy and confused and felt his heart beating fast (15). This is the same as the case experienced by Mrs. S in this study.

There are several nursing problems in post sc patients with indications of Preeclampsia that must be addressed immediately. The nursing problems are acute pain, ineffective peripheral perfusion and ineffective breastfeeding. These three diagnoses become priority diagnoses that need to be addressed so that the patient's condition can return to stability.

Pain management is identifying and managing sensory or emotional experiences related to tissue or functional damage with sudden or slow onset and of mild to severe and constant intensity (16). Pain management is an effort in medical science to eliminate pain complaints patients feel. Some nursing pain management include adjusting the physiological position and immobilizing the extremity experiencing pain, resting the client, compressing, environmental management, deep breathing relaxation techniques, distraction techniques, touch management. This non-pharmacological therapy can be used as a complement to get a better pharmacological treatment effect (17). Relaxation is done in various ways, including Progressive Muscular Relaxation (PMR), jaw relaxation, meditation, rhythmic breathing and so on. A simple relaxation technique is rhythmic belly breathing, one of the simplest and most ancient relaxation techniques. In addition to the benefits of relaxation, this technique causes cognitive impairment and changes in the structure of noxious stimuli such as pain and stress. The way that can be done is relax the muscles of the body, breathe slowly and regularly and uniformly (inhale, exhale, relax), so inhale air from the nose and then exhale slowly through the mouth, and at every breath, pay attention to the increase in chest size, movement stomach and shoulders. (18). In line with the research above, one of the studies with an analysis of the literature with the title "*Breathing technique in pain and cognitive function: a systematic review of the literature*" also shows an average (19). The average study conducted by 16 case studies showed that the deep breathing technique significantly reduced pain in patients. Inhalation techniques in pain management have been shown to increase sympathetic arousal. Research conducted by Puspitaningdyah et al (2021) with the title "*Effectiveness Of Deep Breathing Relaxation And Music Therapy As A Pain-Reducing Intervention In Post-cesarean Section Patients*" shows the combination of deep breathing relaxation technique therapy and music therapy is a more effective therapy to reduce pain. post SC rather than deep breathing relaxation techniques alone (20).



Circulatory care is to identify and treat local areas with limited peripheral circulation (16). In circulation care, the peripheral circulation examination includes checking for peripheral pulses, edema, capillary refill, color, temperature, and ankle-brachial index. One of the things that pregnant women often experience is edema of the extremities. The cause of lower extremity edema in pregnant women is due to pressure on large blood vessels in the lower part of the body (inferior vena cava) and pelvic veins by an enlarged uterus, causing an increase in hydrostatic pressure in the legs and fluid from the blood vessels out into the surrounding tissues (21). Edema in the legs of pregnant women or mothers who have given birth should receive proper treatment. One of the treatments to reduce edema in the lower extremities is to perform complementary therapies such as warm water foot bath therapy.

Warm water foot soak therapy plus a mixture of salt and lemongrass naturally aims to increase blood circulation, reduce edema, increase muscle relaxation, nourish the heart, relax muscles, relieve stress, muscle pain, relieve pain, increase capillary permeability, provide warmth to the body. Body so that it is very useful for blood pressure reduction therapy in hypertension, and the working principle of this therapy is heat transfer from warm water to the body so that it will cause blood vessel dilation and can reduce muscle tension (22). Besides being able to reduce edema in the lower extremities, in the study with the title "*The Effect Of Hydrotherapy On The Reduction Of Blood Pressure In Pregnant Women With Hypertension At The Primary Health Careastanajapura Cirebon District In 2019*" showed that *hydrotherapy* or soak therapy feet of warm water with a water temperature of 40°-43°C can lower blood pressure (systolic and diastolic) in pregnant women (23). In addition to doing warm water foot bath therapy to reduce edema in the lower extremities, it should also be balanced with taking hypertension medication regularly to stabilize blood pressure.

Relaxation therapy is using stretching techniques to reduce signs and symptoms of discomfort such as pain, muscle tension, or anxiety (16). Techniques that can be used to reduce anxiety are deep breathing relaxation. The deep breathing relaxation technique is a nursing action by exhaling slowly, in addition to reducing pain intensity, deep breathing relaxation techniques can also increase pulmonary ventilation and increase blood oxygenation so that it can also reduce anxiety levels (24). In addition to trying to reduce the anxiety felt by the patient, the patient must also increase knowledge related to breast care and octocin massage interventions.

Health education is teaching the management of disease risk factors and clean and healthy living behavior (16). Health education interventions that can be carried out are identifying readiness and ability to receive information, identifying factors that

can increase and decrease motivation for clean and healthy living behavior, provide health education materials and media, provide opportunities to ask questions, explain risk factors that can affect health, teach clean and healthy behavior and teach strategies that can be used to improve clean and healthy living behavior.

According to Jamil et al, (2018) in a journal entitled "*Knowledge, Attitude and Breast-feeding practices of Mothers of Infants: An Experience from a Tertiary Care Hospital in Lahore*" states that knowledge about breastfeeding is widely known by mothers, but for knowledge related to nursing breasts are still unknown to mothers (25). Breast care, which includes oxytocin massage, is one of the actions that mothers are less aware of. Health education is very important for patients, especially to reduce worsening symptoms from recurring. One study showed that patients prefer to be given directions to information that can help them in the process of healing and easy prevention, as well as reduce risk factors. It is easy to get information through the internet, but patients feel confused by the information and prefer that information be given to them directly, for example, when they are seeking treatment. Incidence of breast milk not gushing or inverted nipples is very common, so it is very important to know health information/education regarding breast care and oxytocin massage.

Health education and promotion to increase the production and fluency of breast milk can be done by increasing the knowledge of mothers and prospective mothers regarding breast care and oxytocin massage. This is in line with one of the research journals conducted by Rahmi et al. (2021) with the title "Health Education About Breast Care, Oketani Massage and *Hypnobreastfeeding* in Increasing Breast Milk Production and Smoothness" in this journal states that some mothers still have problems in breastfeeding (26). Breastfeeding during the puerperium, and in this journal an effort is made to increase knowledge about breast care, oketani massage and *Hypno-breastfeeding* through webinar events with media via zoom.

## 5. CONCLUSION

Mrs. S is a post *sectio caesarea patient* with an indication of Preeclampsia. The patient had no previous history of hypertension and a poor diet, so it became one of the causes of Preeclampsia. On physical examination found post SC scars and edema throughout the body, especially in the lower extremities. The patient complained of pain in the post SC scar. In these conditions, several nursing problems arise: acute pain related to physical injury agents (there are post-SC wounds), ineffective peripheral perfusion associated with increased blood pressure, and ineffective breastfeeding related to

inadequate milk supply. Nurses are advised to provide appropriate interventions related to problems that arise in Mrs. the S. Interventions that can be given for nursing problems that arise, such as: pain management with deep breath relaxation therapy, circulation care with foot care, warm water foot bath therapy as an effort to reduce edema in the lower extremities, relaxation therapy to reduce anxiety and education related to *breast care* and massage oxytocin. Therefore, it is recommended that all nurses who treat post-SC patients with indications of Preeclampsia can make regular observations and deal with each patient's complaints appropriately so as to reduce the risk of complications of Preeclampsia suffered by the patient.

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