CASE REPORT ON NUTRITIONAL MOTHER'S MIDWIFE IN MRS "E" AGE 22 YEARS POST SC IUD WITH SEVERE PRE ECLAMPSIA AT TUGUREJO HOSPITAL, SEMARANG

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ABSTRACT

Postpartum preeclampsia is a rare condition characterized by an increase in blood pressure of 140/90 mmHg or higher, protein in the urine, blurred vision, headaches and swelling of the face and limbs. The risk factors for preeclampsia are having a family history of hypertension, reproductive age that is too young or old, primigravida, pregnancy more than 2 times, diabetes mellitus, kidney disorders, hypertension since before pregnancy, excess weight gain during pregnancy (> 1 kg/week). (Prawirohardjo, 2012). The method used in compiling this final report is a case study method with a midwifery management approach and documentation through SOAP. Data were obtained by means of interviews, physical examination, observation and literature study. The results of the study obtained subjective data of Ny. E, aged 22 years, in the Bougenville room of the Tugurejo General Hospital, the main problems were found, namely the two legs could not be moved, the stomach felt sore, the pain of the surgical wound was like a cut in the lower abdomen on a scale of 5, it came and went. Based on the complaints that the mother felt and based on the results of the examination carried out, currently the mother is experiencing postoperative caesarean section + IUD on day 0 for indications of severe pre-eclampsia. The management provided is to provide verbal informed consent, inform the mother about the results of the examination that has been carried out, collaborate with the doctor to provide therapy and the actions to be taken, provide therapy according to the doctor's advice, observe KU, TTV and PPV, teach the mother the technique deep breath relaxation so that it feels more relaxed and pain is reduced by taking a deep breath through the nose and then exhaling through the mouth, encourage your husband or family to provide encouragement, motivation and prayer to the mother.

Keywords: Postpartum, post SC, Pre-Eclampsia

1. INTRODUCTION

Maternal Mortality Rate (MMR) is one indicator to measure health status. Maternal mortality is a health problem that is of concern to the World Health Organization (WHO). Facts show that more than 350,000 worldwide die every year due to complications of pregnancy and childbirth. In 2016, WHO stated that Indonesia is one of the largest contributors to MMR in the world and in Southeast Asia (WHO, 2020). According to the World Health Organization (WHO), the Maternal Mortality Rate (MMR) is still very high, around 810 women die from complications related to pregnancy or childbirth worldwide every day, and about 295 000 women die during and after pregnancy and childbirth. The maternal mortality rate in developing countries reaches 462/100,000 live births, while in developed countries it is 11/100,000 live births (WHO, 2020).

Based on the results of the Indonesia Demographic Health Survey in 2017, the maternal mortality rate in Indonesia recorded a significant increase, namely 359/100,000 live births. In 2018, the MMR was 228/100,000 live births. In 2019, the MMR was 352/100,000 live births. Many factors cause maternal death including puerperal bleeding around 26.9%, preeclampsia during childbirth 23%, infection 11%, puerperal complications 8%, obstetric trauma 5%, obstetric embolism 8%, abortion 8% and others 10.9 % (Depkes RI, 2019).

In Central Java Province the number of AKI cases during the 2015-2019 period from 111.16 to 76.9 per 100,000 live births, with the cause of death of 29.6% due to hypertension in pregnancy, 24.5% due to bleeding, and 27.6% due to other

causes. These data indicate that hypertension in pregnancy is still the leading cause of maternal mortality in Central Java. (Health Profile of Central Java Province, 2019). While in the city of Semarang Maternal Mortality in the 2018 period there were 55 cases, and in 2019 it increased to 58 cases, this number made the city of Semarang ranked 4th highest maternal mortality in Central Java (Central Java Provincial Health Office, 2019).

The Tugurejo Regional General Hospital (RSUD) is one of the referral hospitals for maternal emergency cases in the city of Semarang, especially the West Semarang area. Based on medical record data at Tugurejo Hospital Semarang in 2020, the number of postpartum mothers who experienced pre-eclampsia was 97 cases (10.9%) and in 2021 the number of postpartum mothers 521 who experienced pre-eclampsia were 54 cases (10.4%).

Postpartum preeclampsia is a rare condition characterized by an increase in blood pressure of 140/90 mmHg or higher, protein in the urine, blurred vision, headaches and swelling of the face and limbs. The risk factors for preeclampsia are having a family history of hypertension, reproductive age that is too young or old, primigravida, pregnancy more than 2 times, diabetes mellitus, kidney disorders, hypertension since before pregnancy, excess weight gain during pregnancy (> 1 kg/week). (Prawirohardjo, 2012).

The cause of preeclampsia in pregnant women is not known with certainty, but in general it is caused by (arteriolar vasospasm). Other factors that are expected to influence the onset of preeclampsia include: primigravida, multiple pregnancy, hydramnios, molahidatidosa, multigravida, severe malnutrition, maternal age less than 18 years or more than 35 years and anemia (Maryunani, 2016). Predisposing factors for preeclampsia are age, parity, socioeconomic status, genetics, obtsetrik complications and pre-existing medical conditions (Yogi et al, 2014). Maternal risk factors in preeclampsia are age, gravidity and BMI (Rohmani, 2015).

An increased risk of preeclampsia/eclampsia can occur in mothers who have a history of chronic hypertension, diabetes, and a previous history of preeclampsia/eclampsia. Predisposing factors for preeclampsia include: Nullipara in their teens, poor patients with little or no antenatal care and poor nutrition, especially with a protein-poor diet, have a family history of preeclampsia/eclampsia, have previous hypertensive vascular disease and pregnancy-pregnancy with excessive trophoblast plus chorionic villi (multiple pregnancy, hydatidiform mole, diabetes mellitus, hydrops fetalis) (Eka Fauzia Laila, 2019).

Preeclampsia is initially a mild disease throughout pregnancy, but at the end of pregnancy there is a risk of seizures known as eclampsia. If eclampsia is not treated quickly and appropriately, heart failure, kidney failure and brain hemorrhage can occur which end in death (Fatkhiyah, 2018). Preeclampsia is a serious problem and has a high level of complexity. The magnitude of this problem is not only because preeclampsia affects the mother during pregnancy and childbirth, but also causes postpartum problems due to endothelial dysfunction in various organs, such as the risk of cardiometabolic disease and other complications (Maryunani, 2016).

The government program is to minimize the occurrence of postpartum complications as well as efforts to reduce maternal mortality, with the government's policy of making visits during the postpartum period at least three visits, so that there is interaction between postpartum mothers and health workers. The postpartum program aims to assess the health condition of the mother and baby, in addition to preventing possible health problems for the postpartum mother and her baby, early detecting complications or problems that occur during the puerperium and dealing with complications or problems that arise and interfere with the health of the postpartum mother and child. the baby (Marliandiani, 2015).

Another effort by the Central Java Provincial government is to carry out a program, one of which is Central Java Goyeng Nginceng Wong Meteng (5NG). The Central Java Goyeng Nginceng Wong Meteng program aims to determine the condition of pregnant and postpartum women in their area, by conducting examinations starting from early pregnancy until the postpartum period. The hope is that with this program postpartum mothers who experience complications in this case preeclampsia can be detected early (Central Java Provincial Health Office, 2017).

Based on this preliminary study, it shows that the case of postpartum mothers with pre-

eclampsia is still quite high, so the authors are interested in writing a case report entitled "Midwifery Care for postpartum mothers with pre-eclampsia at Tugurejo Hospital Semarang".

2. PATIENT INFORMATION

In this case, the patient named Mrs. "E" aged 22 years, female gender, Javanese ethnicity, work IRT. Chief Complaint: Postoperative caesarean section + IUD on day 0 for indication of severe pre-eclampsia. I can't move my legs, my stomach feels queasy, the pain of the surgical wound is like being cut in the lower abdomen on a scale of 5, coming and going.

Mother said that she had never suffered from inherited diseases such as hypertension, DM and a history of infectious diseases such as hepatitis, tuberculosis and HIV/AIDS, and had no history of degenerative diseases such as tumors, cancer of the reproductive organs.

3. CLINICAL FINDING

On physical examination, it was found that the general condition of the mother: adequate, consciousness: composmentis, BTV: BP: 165/110 mmHg, N: 88 x/minute, S: 36.7 C, RR: 20 x/minute. There are post-SC surgery scars, strong uterine contractions TFU 2 fingers below the center.

4. TIMELINE

Mother said that I couldn't move my legs, my stomach felt queasy, the pain of the surgical wound was like being cut in the lower abdomen on a scale of 5, coming and going. My mother said that after caesarean section + IUD was indicated for severe pre-eclampsia. The general condition is good composmentis consciousness. TTV : BP: 165/110 mmHg, N: 88 x/minute, S: 36.7 C, RR: 20 x/minute. There are post-SC surgery scars, strong uterine contractions TFU 2 fingers below the center. RL infusion smoothly drips 20 tpm, urinary catheter is attached 200 cc, surgical wound dressing is clean, there is no blood seepage, uterine contractions are strong, and PPV: Lochia Rubra.

5. DIAGNOSTIC CHECK

Diagnostic examination in this case was carried out by supporting examinations, namely from laboratory results: Hb: 11.3 g/dl, GDS: 65, HBsAg: negative, urine protein: positive 3, Platelets: 190000/mm, Leukocytes: 12.61/mm, Hematocrit : 33.6%.

6. THERAPEUTIC INTERVENTION

The management provided is to provide verbal informed consent, inform the mother about the results of the examination that has been carried out, collaborate with the doctor to provide therapy and the actions to be taken, provide therapy according to the doctor's advice, observe KU, TTV and PPV, teach the mother the technique deep breath relaxation to feel more relaxed and the pain is reduced by taking a deep breath through the nose and then exhaling through the mouth, encourage your husband or family to provide encouragement, motivation and prayer to the mother

7. FOLLOW UP AND OUTCOME

The follow-up carried out in this case was conducting KU, TTV and PPV observations.

8. DISCUSSION

Based on the results of the case of midwifery care carried out on July 26, 2022 on Ny. E, aged 22 years, in the Bougenville room of the Tugurejo General Hospital, the main problems were found, namely the two legs could not be moved, the stomach felt sore, the pain of the surgical wound was like a cut in the lower abdomen on a scale of 5, it came and went. Based on the complaints that the mother felt and based on the results of the examinations carried out, the mother is currently experiencing postoperative caesarean section + IUD for indications of severe pre-eclampsia.

Preeclampsia is an acute complication of pregnancy and can occur ante, intra, and postpartum. From the clinical symptoms of preeclampsia can be divided into mild and severe preeclampsia. The division of preeclampsia into severe and mild does not mean that there are two distinctly different diseases, because it is often found that patients with mild preeclampsia can suddenly experience seizures and fall into a coma (Prawirohardjo, 2012). Patients who experience hypertension in pregnancy need optimal management, namely by being observed to detect any symptoms or signs so that the diagnosis can be made immediately and the patient can be immediately given appropriate management, such as considerations for determining the optimal time of birth for the safety of the mother and fetus

(Roberts et al. al., 2013). One thing that can be done is by giving magnesium sulfate (MgSO4) (POGI, 2016).

Comprehensive management is carried out by providing education on rest and salt restriction, low-dose aspirin therapy, antihypertensive therapy, calcium supplementation, antioxidant supplementation, and active management of preeclampsia treatment. Primary care in the form of preventing preeclampsia-eclampsia can be done by giving MgSO4 (Wibowo, Nuryono, et al., 2016).

Based on the main problems above, the management given to Mrs. E mother had an increase in blood pressure of 165/110, so it was included in the classification of severe pre-eclampsia. The therapy given in this case is giving RL + oxytocin 20 IU 12 drops/minute (2 bottles 1), inserting a catheter, Syring pump MgSO4 20% 1 gram/hour for 24 hours (up to 27 July 2022 at 10.30), Ketorolac injection 30 mg/8 hours., Bactesyn injection 1 x 1.5 grams/24 hours., Kalnex injection 3 x 500 mg., Metoclopramide injection 3 x 1 amp, and Oral drugs: Emineton 1 x 1 caplet, Vit A 200,000 IU/24 hours, nifedifine 3x10mg (if BP 160/100 mmHg).

This is in accordance with the POGI theory (2016) that the administration of magnesium sulfate is significant in preventing seizures and recurrent seizures. Administration of magnesium sulfate for preeclampsia and eclampsia in pregnant women is considered to be better in preventing seizures or recurrent seizures than other anticonvulsants (POGI, 2016). Its mechanism of action is to cause vasodilation through relaxation of smooth muscle, including smooth muscle in peripheral blood vessels and the uterus. Apart from being an anticonvulsant, magnesium sulfate is also useful as an antihypertensive and tocolytic. MgSO4 also plays a role in inhibiting N-methyl-D-aspartate (NMDA) receptors in the brain. Activated NMDA receptors will cause asphyxia and cell damage resulting in seizures (POGI, 2016). In line with other studies, the anticonvulsant mechanism of MgSO4 is not fully known with certainty, but the peripheral resistance-reducing property of MgSO4 is known as one of the mechanisms. This property counteracts vasospasm induced by vasoconstrictor substances, and can act on most types of calcium channels in vascular smooth muscle so that it is expected to reduce intracellular calcium. Low intracellular calcium will result in myosin light chain kinase activity being inactive and a decrease in contraction, causing arterial relaxation and can further reduce cerebral and peripheral vascular resistance, relieve vasospasm, and reduce arterial blood pressure (Oliveira CA, Moreira De Sa RA, Zamprogno KV, Gutierrez Da Matta F, Do Vale Araújo F., 2017). After being given antihypertensive drugs, Mrs. E dropped from 172/116 mmHg to 165/110 mmHg.

The recommended use of magnesium sulfate for the prevention and management of eclampsia is intravenously or intramuscularly (WHO, 2011). But in Indonesia, intramuscular use has been reduced because it causes pain (POGI, 2016). The administration of MgSO4 is carried out at a dose of 4 grams of 40% MgSO4 in 10 cc for 15-30 minutes at the beginning of the seizure. Then give the maintenance dose by infusion of 6 grams in lactated Ringer's solution and monitored within 4-6 hours. The administration is continued until 24 hours postpartum or the last seizure (Prawirohardjo, 2016). Before administering MgSO4, an antidote for MgSO4 must be available to anticipate in the event of intoxication, namely 10% calcium gluconate in 10 cc, which is 1 gram (Prawirohardjo, 2016). Give calcium gluconate intravenously for 3 minutes until breathing improves. Monitoring for possible intoxication is carried out by observing the patient's respiratory rate of at least 16 times per minute, positive patellar reflexes, and urine of at least 30 ml/hour in the last 4 hours (Pascoal et al., 2019). Administration of MgSO4 was discontinued if there were signs of intoxication (Smith et al., 2013).

9. CONCLUSION

In this case the patient did not share any experiences because this was the first pregnancy and delivery.

10. INFORMED CONSENT

In this case, informed consent was given orally.

REFERENCES

[1] Dinas Kesehatan Provinsi Jawa Tengah. (2017). *Profil kesehatan Profinsi Jawa Tengah Tahun 2017*. *3511351*(24), 1–112.

[2] Dinas Kesehatan Provinsi Jawa Tengah. (2019). Profil Kesehatan Provinsi Jateng Tahun 2019.

Dinas Kesehatan Provinsi Jawa Tengah, *3511351*(24), 61.

[3] Marliandiani. (2015). *Buku Ajar Asuhan Kebidanan pada Masa Nifas dan Menyusui*. Salemba Medika.

[4] Maryunani, A. (2016). *Kehamilan dan Persalinan Patologis (Risiko Tinggi dan Komplikasi) Dalam Kebidanan*. CV Trans Info Media.

[5] Oliveira CA, Moreira De Sa RA, Zamprogno KV, Gutierrez Da Matta F, Do Vale Araújo F. (2017). Magnesium sulfate and ophthalmic artery Doppler velocimetry in patients with severe preeclampsia: A case series. J Med Case Rep. vol. 11. no. 1. hh. 1-6.

[6] Pascoal, A. C. F., Katz, L., Pinto, M. H.,Santos, C. A., Braga, L. C. O.,Maia, S. B., … Adam, S. (2019).Serum magnesium levels during magnesium sulfate infusion at 1gram/hour versus 2grams/hour as a maintenance dose to prevent eclampsia in women with severe preeclampsia: A randomized clinical trial. Medicine (United States), 98(32). https://doi.org/10.1097/MD.0000000000016779

[7] POGI. (2016). *PNPK Diagnosis dan Tatalaksana Preeklampsia*. Himpunan Kedokteran Feto Maternal POGI.

[8] Prawirohardjo, S. (2012). *Ilmu Kebidanan*. PT. Bina Pustaka.

[9] Smith, J. M., Lowe, R. F., Fullerton, J., Currie, S. M., Harris, L., & Felker-Kantor, E. (2013). An integrative review of the side effects related to the use of magnesium sulfate for pre-eclampsia and eclampsia management. BMC Pregnancy and Childbirth, 13(1), 1. https://doi.org/10.1186/1471- 2393-13-34

[10] Wibowo, Nuryono, et al. (2016). PNPK Diagnosis Dan Tatalaksana Preeklampsia. Jakarta: Perkumpulan Obstetri dan Ginekologi Indonesia.