



CASE REPORT : MIDWIFE CARE OF MOMS IN DELIVERY WITH SEVERE PREECLAMPSIA IN THE DELIVERY ROOM AT TUGUREJO HOSPITAL SEMARANG

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ABSTRACT

Maternal mortality rate (MMR) is one indicator to determine the health status of a nation. Maternal mortality in Indonesia in 2021 was caused by 1,330 cases of bleeding, 1,110 cases of hypertension in pregnancy, and 230 cases of circulatory system disorders. Preeclampsia is a serious condition that is progressive, characterized by an increase in blood pressure 140/90 mmHg and protein in the urine ≥ 300 mg/24 hours. Tugurejo Hospital is a referral hospital, in 2021 there were cases of preeclampsia/eclampsia in maternity women of 20.85%, premature rupture of membranes (PROM) 19.82%, bleeding 11.46%. The purpose of this study was to provide midwifery care for pregnant women with severe pre-eclampsia using the 7-step Varney approach. The method used in this research is a case study. The location of this case study was conducted at Tugurejo Hospital, Semarang. As for the subject of the case study here are mothers who experience severe pre-eclampsia. This case study was conducted on July 22, 2022. Data collection techniques were interviews, physical examinations, observations, secondary data including documentation studies and literature studies. Result : The care provided in this case is to collaborate with doctors to provide therapy to patients, namely by administering magnesium sulfate to prevent seizures, nifedipine and methyldopa as antihypertensive drugs, conducting close supervision of labor and preparation for delivery. Conclusion: after midwifery care was carried out and an evaluation of the progress of labor was carried out, it turned out that there was no progress in labor so that the patient was delivered by cesarean section, to improve the condition of the mother and save the fetus.

Keywords: *Severe Preeclampsia, Childbirth, Sectio caesarea*

1. INTRODUCTION

The maternal mortality rate (MMR) is one of the indicators to determine the health status of a nation . The more developed a country, the lower the maternal mortality rate in that country. According to the World Health Organization (WHO), most of MMR (75%) in the world are caused by *hypertension* in pregnancy (preeclampsia/eclampsia), bleeding, infection, prolonged *labor* and *abortion* (WHO, 2019).

Based on data from the recording of family health programs at the Ministry of Health in 2021 the MMR in Indonesia was 6,865 , this number showed an increase compared to 2020 of 4, 627 maternal deaths . Maternal deaths in 2021 were caused by bleeding as many as 1,330 cases, *hypertension* in pregnancy as many as 1,110 cases, and circulatory system disorders as many as 230 cases. (MOH RI, 2021).

In Indonesia , *preeclampsia* is the main cause of maternal death with a percentage of 23.9% followed by bleeding at 17.22% and infection at 4.04% (Saraswati, 2016) . To reduce IMR in women with severe *preeclampsia* (PEB) and *eclampsia* , early termination of pregnancy/delivery is carried out. This delivery is carried out regardless of *gestational age*, so the baby tends to be born *prematurely* or *prematurely* .

In Central Java Province, the number of AKI cases in 2020 was 98.6/100,000 KH, with the cause of death of 29.6% due to *preeclampsia/eclampsia* , 24.5% due to bleeding, and 27.6% due to other causes. These data indicate that *preeclampsia/eclampsia* is still the leading cause of maternal mortality in Central Java. (Health Profile of Central Java Province, 2021).



Preeclampsia is a multi-systemic disorder that occurs in pregnant women, which is characterized by *hypertension* and *edema*, and can be accompanied by *proteinuria*, usually occurs at 20 weeks of gestation or above or in the third trimester of pregnancy, most often at 37 weeks of gestation, or can occur immediately after delivery (Lalenoh, 2018).

According to Prawirohardjo (2014) the cause of *preeclampsia* is not clearly known, so it is referred to as the "*theory of disease*". there are several theories that can explain the causes of *preeclampsia*, namely, *primigravida*, *hyperplacensis*, for example: *hydatidiform mole*, multiple pregnancy, *diabetes mellitus*, *hydrops fetalis*, large baby, age, family history of *preeclampsia/eclampsia*, kidney disease and pre-existing hypertension. pregnant.

The principle of PEB management is to treat hypertension, prevent seizures, maintain fluid balance and platelet transfusion if thrombocytopenia occurs. according to POGI and HKFM (2016) that the administration of MgSO₄ as *anticonvulsant prophylaxis*, while *nifedipine* and *α-methyldopa* given as an *antihypertensive*.

Complications of PEB include the mother: *placental abruption*, *hypofibrinogenemia*, *hemolysis*, brain hemorrhage, pulmonary *edema*, Liver *necrosis*, HELPP syndrome, Fetal: IUGR, *Premature*, IUFD.

Based on the results of a preliminary study at the Tugurejo General Hospital, there was an incidence of *preeclampsia/eclampsia* in the Tugurejo Hospital in 2021 by 20.85% of women giving birth with PEB, premature rupture of membranes (PROM) 19.82%, bleeding 11.46% of all labor cases. Meanwhile, cases of maternal death due to direct causes (*preeclampsia/eclampsia*, bleeding and infection) during the COVID-19 pandemic did not exist. Based on this background description, the authors are interested in taking a case with the title "A Case Report of Severe *Preeclampsia* in Maternal Maternity at Tugurejo General Hospital Semarang."

2. CLINICAL FINDINGS

Based on the results of the case of midwifery care carried out on Ny. D, aged 21 years, 38 weeks 4 days pregnant, *clinical* findings were obtained, namely the mother had felt rattled since 03.00 WIB and had blood mucus coming out, then

the mother checked with the midwife and said the mother was going to give birth but the mother's blood pressure was very high. Based on the complaints that the mother felt and based on the results of the examination carried out, currently the mother has an *inpartu* with severe *preeclampsia*.

3. HISTORY OF DISEASE

Based on the results of the anamnesis, Mrs. D has never suffered from inherited diseases such as hypertension, DM and a history of infectious diseases such as hepatitis, tuberculosis and HIV/AIDS.

4. DIAGNOSIS

Based on *subjective* data and *objective* data, the *diagnosis* of Ny. D age 21 years G1 P0A0 38 weeks 4 days pregnant, *latent stage 1 labor* with severe *preeclampsia*, *IUGR*. Where there are problems with severe *preeclampsia* and *Inhibited Fetal Growth (IUGR)*, so patients need collaborative action with SpOG doctors for therapy.

In the case of Mrs. D There is a potential diagnosis that is caused, namely the potential for *eclampsia* and *HELP syndrome*.

5. THERAPY INTERVENTION AND FOLLOW UP

Based on the diagnosis obtained, the treatment given to Mrs. D is to give magnesium sulfate therapy to prevent seizures, giving *nifedipine* 3 x 10 mg, *methyldopa* 3 x 500 mg.

Based on the results of the case of midwifery care carried out on Ny. The follow-up provided is by monitoring the progress of labor and the mother's *vital* signs. From the day of monitoring for 4 hours, it turned out that there was no progress in labor so a *caesarean section* was performed.

6. DISCUSSION

Based on the main problem in the case of Midwifery Care for Ny. D age 21 years G1 P0A0 38 weeks 4 days pregnant, *latent stage 1 inpartu* with severe *preeclampsia* in the delivery room at Tugurejo Hospital, Semarang City, currently the mother is experiencing *labor and severe preeclampsia*. Based on the cause of severe *preeclampsia experienced by Mrs. D* is a *primigravida*. In accordance with the results of Dias Kurnia Armadani's research (2019), based on *statistical test analysis* with *chi square statistical*



test . The results of this study indicate that pregnant women who experience *preeclampsia* are more common in *primigravida women* , namely 22 (26.2%). Based on the results of the analysis using the *chi square statistical test*, it was found that $p\text{-value} = 0.027$ ($p\text{-value} < 0.05$) which means that H_1 is accepted. so it can be concluded that there is a relationship between *primigravida* with the incidence of *preeclampsia* .

For cases of IUGR, according to the results of Sri Martini's research (2020), regarding the relationship between pregnant women and severe *preeclampsia* (PEB) on the incidence of low birth weight (LBW), there were 14 pregnant women with PEB who gave birth to babies with low birth weight (LBW. %) and PEB pregnant women who gave birth to 3 (17.6%) non-LBW babies. This shows that there is a significant relationship between pregnant women and PEB on the incidence of LBW. Severe *preeclampsia* (PEB) in pregnant women affects the incidence of low birth weight (LBW).

According to Alfianty Dwi (2018), the results of the study showed that there were 30 respondents (29%) who experienced severe *preeclampsia* during delivery with *sectio caesarea* and 73 respondents (71%). The results of the *chi square test* obtained an Odds Ratio (OR) of 3.716 and a $p\text{ value of } 0.000 < 0.05$ was obtained. It can be concluded that there is a relationship between severe *preeclampsia* and *caesarean section* .

Based on the main problem, the management given to Mrs. D age 21 years G1 P0A0 38 weeks 4 days pregnant, *latent stage 1 inpartu* with severe *preeclampsia* , *IUGR* is by giving 20% *magnesium sulfate therapy* 1 gram/hour, giving oral nifedipine 3 x 10 mg combination of methyldopa 3 x 500 mg to reduce blood pressure.

According to Shafinaz Nabila (2018) showed that the most widely used *antihypertensive drugs in patients with severe preeclampsia* were methyldopa (46%) and the combination of nifedipine and methyldopa (44%). *Dosage regimen* according to guidelines. *The interaction* occurred due to the concurrent use of nifedipine and MgSO₄. The results of therapy showed that 57% of patients had achieved the target of therapy with systolic blood pressure <140 mmHg.

According to Farhana Fitri Amalia (2020) showed that *magnesium sulfate* can also reduce the use of *antihypertensives* in *preeclampsia*

patients, reduce mortality and act as a *neuroprotective agent* in premature infants.

The results of research conducted by KE Eddy et.al. (2021) showed that administration of MgSO₄ to women with *preeclampsia* halved their risk of developing *eclampsia* and more than half their risk of death. According to Sascha Dublin (2021) that nifedipine and methyldopa are the recommended drugs for the management of *hypertension* in patients with severe *preeclampsia* , however, the use of methyldopa may require additional consideration, especially when there is increased concern about the risk of fetal growth retardation.

7. CONCLUSION

After being given midwifery care, the results of the general condition were good, blood pressure dropped, *eclampsia did not occur*, the patient had *collaborative action* and termination of pregnancy with *sectio caesarea* . After *sectio caesarea* , the mother's condition improved and the baby's condition was good with LBW.

8. SUGGESTION

Can provide integrated and comprehensive services in providing health services, especially for women in labor with severe *preeclampsia* .

9. AUTHORS' CONTRIBUTIONS

All authors contributed to research observation, research writing, editing, and review of submissions.

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