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1. **RIWAYAT SUBMIT**


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# Case Report of Pre-Eclampsia in Pregnant Women at the Gayamsari Health Center, Semarang City with the SAN PIISAN Program

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**ABSTRACT**

Pre-eclampsia is a hypertensive disorder of pregnancy, considered one of the leading causes of maternal death in the world. Pre-eclampsia is a multisystemic disease characterized by the development of hypertension after 20 weeks of gestation, with or without urinary protein accompanied by symptoms suggestive of organ injury. The city of Semarang has a program in an effort to reduce MMR, namely SAN PIISAN (Love and Care for Mothers and Children in Semarang City). The SAN PIISAN program is a preventive effort in reducing MMR, namely doing homecare for pregnant women, postpartum mothers and babies. The aim of this program is to prevent the occurrence of 3 late. One of the public health center that runs the SAN PIISAN program and there is a maternal death due to preeclampsia is the Gayamsari Health Center. Based on the results of the assessment that was carried out during the SAN PIISAN visit, The main symptom in this case is an increase in maternal blood pressure to 174/101mmHg accompanied by edema in the mother's legs. Based on the results of the previous anamnesis, the mother had no history of hypertension. The mother explained that she had experienced an increase in blood pressure during her second pregnancy and after the baby was born, her blood pressure returned to normal. The diagnosis in this case was preeclampsia in pregnant women with initial treatment carried out during the SAN PIISAN visit, namely the administration of 250 mg of methyldopa and followed by referral to the hospital. Management of preeclampsia in pregnant women with preeclampsia with the SAN PIISAN program is carried out by home visits with the provision of therapy and followed by referrals and monitoring via online.

***Keywords****: management of preeclampsia, SAN PIISAN, preeclampsia*

## 1. INTRODUCTION

The success of maternal health efforts, among others, can be seen from the MMR indicator. MMR is the number of maternal deaths during pregnancy, delivery and postpartum caused by pregnancy, childbirth, and postpartum or their management. According to the report of the World Health Organization (WHO) in 2020, the causes of maternal death in ASIA are caused by bleeding (34.9%), indirect maternal death (18.1%), direct disorders (15.9%), hypertension (10.8%). %), and others[1].

MMR in Indonesia decreased by 35% between 2000-2017. The most common causes of maternal death in Indonesia are bleeding (39.8%) and hypertension (27.6%), while the least cause of maternal death is HIV/AIDS at 0.1%.[1].

According to the Central Java Health Office report, there was an increase in maternal mortality between 2019-2020. The MMR in 2019 was 76.9 per 100,000 live births (KH), namely 416 cases to 98.6 per 100,000 KH, namely 530 cases. The city of Semarang is included in the 4 cities/districts with the most contribution to MMR, namely 25 cases[2]. The causes of maternal death include preeclampsia (36.80%), bleeding (22.60%), infection (5.20%) and others (35.40%)[3].

Semarang is an example in reducing MMR, IMR and stunting cases[4]. The SAN PIISAN program is a mentoring program from the Semarang City Health Office which has proven effective because it can reduce the MMR in Semarang City from 128 per 100,000 KH in 2015 to 71 per 100,000 KH in 2020. This assistance aims to detect and prevent high-risk pregnancies. In addition to homecare, assistance is also carried out online. So that pregnant women can do consultations easily and health workers can monitor them effectively[5].

However, the Semarang City Health Service Report in 2020 there were 17 cases of maternal deaths out of 23,825 live births (KH) or around 71.35 per 100,000 KH. The maternal mortality rate (MMR) will increase in 2021 as many as 21 cases from 22,030 KH. it is known that the highest maternal mortality is caused by hypertension (41.18%), other causes are due to others (41.18%) and bleeding (17.65%)[6].Preeclampsia belongs to a family of disorders referred to as hypertensive disorders of pregnancy. Patients who are initially diagnosed with gestational hypertension will eventually be diagnosed with preeclampsia[7].

Based on the data above, the authors are interested in studying the management of SAN PIISAN in preeclampsia pregnant women, considering that the highest cause of maternal death is due to hypertension in pregnancy or preeclampsia. SAN PIISAN management is carried out in all health centers in Semarang City. One of the public health center areas where maternal deaths occur due to preeclampsia is in the Gayamsari Health Center area[8].

## 2. METHOD

This study uses a qualitative descriptive case report methodology. From June to July 2022, the research was carried out at the Gayamsari Health Center, Semarang City. The sample of this research is Mrs. R is 33 years old with preeclampsia. Guidelines for interviews, observations, physical examinations, and documentation studies in the form of a pregnancy midwifery care format with the SAN PIISAN program.

## 3. PATIENT INFORMATION

The patient named Mrs. R is 33 years old. His last education is high school, works as a private employee, address Kaligawe flats, Gayamsari, Semarang City.

The chief complaint was swollen feet for 1 week. Pregnant with 3rd child and never miscarried. Previous history of hypertension. HPHT: 25-10-2021

## 4. CLINICAL FINDING

General condition is good, Consciousness composmentis, Blood pressure: 172/104 mmHg, Respiration: 20 x/minute, Pulse: 101 x/minute, Temperature: 36.7oC, SPO2: 98%, TFU: 35 cm, head presentation, convergent, contractions: none, FHR: 140 x/min, edema of the lower extremities.

## 5. TIMELINE

| Date and time | Subjective | Objective | Analysis | Planning |
|---|---|---|---|---|
| **30.06.22 11.05** | Swollen legs have been 1 week and sometimes headaches | Blood pressure: 172/104 mmHg, Respiration: 20 x/minute, Pulse: 101 x/minute, Temperature: 36.7oC, SPO2: 98%, TFU: 35 cm, head | Mrs. R G3P2A0 33 years of age 35 weeks pregnant, single fetus alive intra uteri, longitudinal position, cephalic presentation, right back, convergent with | The treatment of SAN PIISAN in cases of preeclampsia is:<br>1. Provides 250mg . methyl dopa<br>2. PE danger sign education<br>3. Nutritional education<br>4. Blood pressure evaluation<br>5. Recommendations to the ER using the referral letter |

| | | | | |
|---|---|---|---|---|
| | | presentation, convergent, contraction: none, FHR: 140 x/minute, lower extremity edema, | preeclampsia | that has been given |
| **30.06.22 16.36** | Mom has been to the hospital | Are not done | Mrs. R G3P2A0 33 years of age 35 weeks pregnant, single fetus alive intra uteri, longitudinal position, cephalic presentation, right back, convergent with preeclampsia | Monitoring SAN PIISAN when patients are in hospital via online, namely:<br>1. Provide support to mother<br>2. Encourage mothers and families to obey the doctor |
| **02.07.22 08.00** | Mother is undergoing SC | Are not done | Mrs. R G3P2A0 33 years of age 35 weeks pregnant, single fetus alive intra uteri, longitudinal position, cephalic presentation, right back, convergent with preeclampsia | Monitoring SAN PIISAN when patients are in hospital via online, namely:<br>1.Monitoring the patient's condition with the results of the patient and the baby being born healthy and safe<br>2.Congratulations to mother and husband on the birth of their 3rd child |

## 6. DIAGNOSTIC CHECK

Investigations performed were urine protein examination with negative results. The diagnosis of this case was preeclampsia. This diagnosis is supported by research results which state that[9]Preeclampsia is a hypertensive condition found at gestational age > 20 weeks with or without urine protein and accompanied by other organ disorders.

The prognosis in this case is preterm delivery. This is in line with Norwitz ER theory, Repke JT in [10] One of the prognosis for preeclampsia in pregnancy is the risk of complications to the mother and fetus, such as impaired fetal growth, preterm birth, placental abruption, and IUFD.

## 7. INTERVENTION THERAPY

The management carried out during the SAN PIISAN visit was to provide 250 mg methyl dopa therapy and re-evaluate blood pressure for 2x15 minutes. followed by counseling on foods that can lower blood pressure. counseling on the danger signs of preeclampsia, and finally referral to the hospital.

## 8. FOLLOW UP DAN OUTCOME

Monitoring after patients in the hospital was carried out by telehealth on 30 July 2022 and 02 July 2022. With the result, pregnancy termination was carried out at 35 weeks of gestation. It is known from online monitoring that the condition of the mother and baby is good.

## 9. DISCUSSION

According to [11] Preeclampsia treatment to regulate blood pressure by giving 250 mg methyldopa tablets. Backed by research[12]which states that methyldopa is the most commonly prescribed antihypertensive in monotherapy and combination, because it is safest during pregnancy.

Backed by research[13]who stated that the use of methyldopa changed sFlt-1 levels in 19 preeclampsia patients. In PEB patients, giving methyldopa at a dose of 250 mg and 500 mg can reduce sFlt-1 levels by 17.37% and 44.6%, respectively. It is known that sFlt-1 is mentioned as a mechanism underlying disease in both mother and fetus. Increased sFlt-1 decreases vascular endothelial levels[14].

In addition to drug therapy, the treatment given in cases of preeclampsia is the provision of nutritional IEC during pregnancy that can help lower the mother's blood pressure, such as the recommendation to consume Ambon banana. Based on research[15]The content of sodium and potassium in Ambon bananas is proven to reduce high blood pressure in pregnant women when consumed regularly and with the right dose.

The management of SAN PIISAN in cases of preeclampsia also provides referrals or recommendations to the hospital for further treatment with the patient's consent. Monitoring of patient progress is carried out by means of telehealth via online by whatsapp.

Telehealthas a telecommunications technology used to improve health information and health services. Telehealth, telemedicine, and telenursing service systems use the internet with video conferencing systems, SMS (Short Message System), e-mail, cellular/traditional phones, cameras, robotics, 3D sensors and WAP (Wireless Application Protocol) on communication networks between nurses and patients. Telehealth is useful for pregnant

women in terms of checking and preventing risky pregnancies[16].

## 10. CONCLUSION

Management of preeclampsia in pregnant women with preeclampsia with the SAN PIISAN program was carried out by home visits with therapy and continued with referrals and continued with monitoring via online.

## 11. INFORMED CONSENT

Informed consent has been done on 30.06.2022 and the patient is willing to be a respondent

## AUTHORS' CONTRIBUTION

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


## ACKNOWLEDGMENTS

We would like to thank the Gayamsari Public Health Center, Semarang City, which has helped and supported the author's research and Mrs. R who is willing to be a respondent who has provided information for this research.


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## 3. RIWAYAT REVIEW


# Case Report of Pre-Eclampsia in Pregnant Women at the Gayamsari Health Center, Semarang City with the SAN PIISAN Program

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Ruswita Miliana[1], Indri Astuti Purwanti[2],Fitriani Nur Damayanti[3], Lia Mulyanti[4]

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***Keywords**: management of preeclampsia, SAN PIISAN, preeclampsia*

## 12. INTRODUCTION

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## 16. TIMELINE

| Date and time | Subjective | Objective | Analysis | Planning |
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| | | FHR: 140 x/minute, lower extremity edema, | | |
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## 17. DIAGNOSTIC CHECK

Investigations performed were urine protein examination with negative results. The diagnosis of this case was preeclampsia. This diagnosis is supported by research results which state that[9]Preeclampsia is a hypertensive condition found at gestational age > 20 weeks with or without urine protein and accompanied by other organ disorders.

The prognosis in this case is preterm delivery. This is in line with Norwitz ER theory, Repke JT in [10] One of the prognosis for preeclampsia in pregnancy is the risk of complications to the mother and fetus, such as impaired fetal growth, preterm birth, placental abruption, and IUFD.

## 18. INTERVENTION THERAPY

The management carried out during the SAN PIISAN visit was to provide 250 mg methyl dopa therapy and re-evaluate blood pressure for 2x15 minutes. followed by counseling on foods that can lower blood pressure. counseling on the danger signs of preeclampsia, and finally referral to the hospital.

## 19. FOLLOW UP DAN OUTCOME

Monitoring after patients in the hospital was carried out by telehealth on 30 July 2022 and 02 July 2022. With the result, pregnancy termination was carried out at 35 weeks of gestation. It is known from online monitoring that the condition of the mother and baby is good.

## 20. DISCUSSION

According to [11] Preeclampsia treatment to regulate blood pressure by giving 250 mg methyldopa tablets. Backed by research[12]which states that methyldopa is the most commonly prescribed antihypertensive in monotherapy and combination, because it is safest during pregnancy.

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## 21. CONCLUSION

Management of preeclampsia in pregnant women with preeclampsia with the SAN PIISAN program was carried out by home visits with therapy and continued with referrals and continued with monitoring via online.

## 22. INFORMED CONSENT

Informed consent has been done on 30.06.2022 and the patient is willing to be a respondent

## AUTHORS' CONTRIBUTION

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


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**4. MANUSKRIP SETELAH REVISI**

# Case Report of Pre-Eclampsia in Pregnant Women at the Gayamsari Health Center, Semarang City with the SAN PIISAN Program

**Ruswita Miliana[1], Indri Astuti Purwanti[2],Fitriani Nur Damayanti[3], Lia Mulyanti[4]**

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**ABSTRACT**

Pre-eclampsia is a hypertensive disorder of pregnancy, considered one of the leading causes of maternal death in the world. Pre-eclampsia is a multisystemic disease characterized by the development of hypertension after 20 weeks of gestation, with or without urinary protein accompanied by symptoms suggestive of organ injury. The city of Semarang has a program in an effort to reduce MMR, namely SAN PIISAN (Love and Care for Mothers and Children in Semarang City). The SAN PIISAN program is a preventive effort in reducing MMR, namely doing homecare for pregnant women, postpartum mothers and babies. The aim of this program is to prevent the occurrence of 3 late. One of the public health center that runs the SAN PIISAN program and there is a maternal death due to preeclampsia is the Gayamsari Health Center. Based on the results of the assessment that was carried out during the SAN PIISAN visit, The main symptom in this case is an increase in maternal blood pressure to 174/101mmHg accompanied by edema in the mother's legs. Based on the results of the previous anamnesis, the mother had no history of hypertension. The mother explained that she had experienced an increase in blood pressure during her second pregnancy and after the baby was born, her blood pressure returned to normal. The diagnosis in this case was preeclampsia in pregnant women with initial treatment carried out during the SAN PIISAN visit, namely the administration of 250 mg of methyldopa and followed by referral to the hospital. Management of preeclampsia in pregnant women with preeclampsia with the SAN PIISAN program is carried out by home visits with the provision of therapy and followed by referrals and monitoring via online.

***Keywords**: management of preeclampsia, SAN PIISAN, preeclampsia*

## 1. INTRODUCTION

The success of maternal health efforts, among others, can be seen from the MMR indicator. MMR is the number of maternal deaths during pregnancy, delivery and postpartum caused by pregnancy, childbirth, and postpartum or their management. According to the report of the World Health Organization (WHO) in 2020, the causes of maternal death in ASIA are caused by bleeding (34.9%), indirect maternal death (18.1%), direct disorders (15.9%), hypertension (10.8%). %), and others[1].

MMR in Indonesia decreased by 35% between 2000-2017. The most common causes of maternal death in Indonesia are bleeding (39.8%) and hypertension (27.6%), while the least cause of maternal death is HIV/AIDS at 0.1%.[1].

According to the Central Java Health Office report, there was an increase in maternal mortality between 2019-2020. The MMR in 2019 was 76.9 per 100,000 live births (KH), namely 416 cases to 98.6 per 100,000 KH, namely 530 cases. The city of Semarang is included in the 4 cities/districts with the most contribution to MMR, namely 25 cases[2]. The causes of maternal death include preeclampsia (36.80%), bleeding (22.60%), infection (5.20%) and others (35.40%)[3].

Semarang is an example in reducing MMR, IMR and stunting cases[4]. The SAN PIISAN program is a mentoring program from the Semarang City Health Office which has proven effective because it can reduce the

MMR in Semarang City from 128 per 100,000 KH in 2015 to 71 per 100,000 KH in 2020. This assistance aims to detect and prevent high-risk pregnancies. In addition to homecare, assistance is also carried out online. So that pregnant women can do consultations easily and health workers can monitor them effectively[5].

However, the Semarang City Health Service Report in 2020 there were 17 cases of maternal deaths out of 23,825 live births (KH) or around 71.35 per 100,000 KH. The maternal mortality rate (MMR) will increase in 2021 as many as 21 cases from 22,030 KH. it is known that the highest maternal mortality is caused by hypertension (41.18%), other causes are due to others (41.18%) and bleeding (17.65%)[6].Preeclampsia belongs to a family of disorders referred to as hypertensive disorders of pregnancy. Patients who are initially diagnosed with gestational hypertension will eventually be diagnosed with preeclampsia[7].

Based on the data above, the authors are interested in studying the management of SAN PIISAN in preeclampsia pregnant women, considering that the highest cause of maternal death is due to hypertension in pregnancy or preeclampsia. SAN PIISAN management is carried out in all health centers in Semarang City. One of the public health center areas where maternal deaths occur due to preeclampsia is in the Gayamsari Health Center area[8].

## 2. METHOD

This study uses a qualitative descriptive case report methodology. From June to July 2022, the research was carried out at the Gayamsari Health Center, Semarang City. The sample of this research is Mrs. R is 33 years old with preeclampsia. Guidelines for interviews, observations, physical examinations, and documentation studies in the form of a pregnancy midwifery care format with the SAN PIISAN program.

## 3. PATIENT INFORMATION

The patient named Mrs. R is 33 years old. His last education is high school, works as a private employee, address Kaligawe flats, Gayamsari, Semarang City.

The chief complaint was swollen feet for 1 week. Pregnant with 3rd child and never miscarried. Previous history of hypertension. HPHT: 25-10-2021

## 4. CLINICAL FINDING

General condition is good, Consciousness composmentis, Blood pressure: 172/104 mmHg, Respiration: 20 x/minute, Pulse: 101 x/minute, Temperature: 36.7oC, SPO2: 98%, TFU: 35 cm, head presentation, convergent, contractions: none, FHR: 140 x/min, edema of the lower extremities.

## 5. TIMELINE

| Date and time | Subjective | Objective | Analysis | Planning |
|---|---|---|---|---|
| **30.06.22 11.05** | Swollen legs have been 1 week and sometimes headaches | Blood pressure: 172/104 mmHg, Respiration: 20 x/minute, Pulse: 101 x/minute, Temperature: 36.7oC, SPO2: 98%, TFU: 35 cm, head presentation, convergent, contraction: none, FHR: 140 x/minute, lower extremity edema, | Mrs. R G3P2A0 33 years of age 35 weeks pregnant, single fetus alive intra uteri, longitudinal position, cephalic presentation, right back, convergent with preeclampsia | The treatment of SAN PIISAN in cases of preeclampsia is:<br>11. Provides 250mg . methyl dopa<br>12. PE danger sign education<br>13. Nutritional education<br>14. Blood pressure evaluation<br>15. Recommendations to the ER using the referral letter that has been given |
| **30.06.22 16.36** | Mom has been to the hospital | Are not done | Mrs. R G3P2A0 33 years of age 35 weeks pregnant, single fetus alive intra uteri, longitudinal position, cephalic presentation, right back, convergent with preeclampsia | Monitoring SAN PIISAN when patients are in hospital via online, namely:<br>5. Provide support to mother<br>6. Encourage mothers and families to obey the doctor |
| **02.07.22 08.00** | Mother is undergoing SC | Are not done | Mrs. R G3P2A0 33 years of age 35 weeks pregnant, single fetus alive intra uteri, longitudinal position, cephalic presentation, right back, convergent with preeclampsia | Monitoring SAN PIISAN when patients are in hospital via online, namely:<br>5.Monitoring the patient's condition with the results of the patient and the baby being born healthy and safe<br>6.Congratulations to mother and husband on the birth of their 3rd child |

## 6. DIAGNOSTIC CHECK

Investigations performed were urine protein examination with negative results. The diagnosis of this case was preeclampsia. This diagnosis is supported by research results which state that[9]Preeclampsia is a hypertensive condition found at gestational age > 20 weeks with or without urine protein and accompanied by other organ disorders.

The prognosis in this case is preterm delivery. This is in line with Norwitz ER theory, Repke JT in [10] One of the prognosis for preeclampsia in pregnancy is the risk of complications to the mother and fetus, such as impaired fetal growth, preterm birth, placental abruption, and IUFD.

## 7. INTERVENTION THERAPY

The management carried out during the SAN PIISAN visit was to provide 250 mg methyl dopa therapy and re-evaluate blood pressure for 2x15 minutes. followed by counseling on foods that can lower blood pressure. counseling on the danger signs of preeclampsia, and finally referral to the hospital.

## 8. FOLLOW UP DAN OUTCOME

Monitoring after patients in the hospital was carried out by telehealth on 30 July 2022 and 02 July 2022. With the result, pregnancy termination was carried out at 35 weeks of gestation. It is known from online monitoring that the condition of the mother and baby is good.

## 9. DISCUSSION

According to [11] Preeclampsia treatment to regulate blood pressure by giving 250 mg methyldopa tablets. Backed by research[12]which states that methyldopa is the most commonly prescribed antihypertensive in monotherapy and combination, because it is safest during pregnancy.

Backed by research[13]who stated that the use of methyldopa changed sFlt-1 levels in 19 preeclampsia patients. In PEB patients, giving methyldopa at a dose of 250 mg and 500 mg can reduce sFlt-1 levels by 17.37% and 44.6%, respectively. It is known that sFlt-1 is mentioned as a mechanism underlying disease in both mother and fetus. Increased sFlt-1 decreases vascular endothelial levels[14].

In addition to drug therapy, the treatment given in cases of preeclampsia is the provision of nutritional IEC during pregnancy that can help lower the mother's blood pressure, such as the recommendation to consume Ambon banana. Based on research[15]The content of sodium and potassium in Ambon bananas is proven to reduce high blood pressure in pregnant women when consumed regularly and with the right dose.

The management of SAN PIISAN in cases of preeclampsia also provides referrals or recommendations to the hospital for further treatment with the patient's consent. Monitoring of patient progress is carried out by means of telehealth via online by whatsapp.

Telehealthas a telecommunications technology used to improve health information and health services. Telehealth, telemedicine, and telenursing service systems use the internet with video conferencing systems, SMS (Short Message System), e-mail, cellular/traditional phones, cameras, robotics, 3D sensors and WAP (Wireless Application Protocol) on communication networks between nurses and patients. Telehealth is useful for pregnant women in terms of checking and preventing risky pregnancies[16].

## 10. CONCLUSION

Management of preeclampsia in pregnant women with preeclampsia with the SAN PIISAN program was carried out by home visits with therapy and continued with referrals and continued with monitoring via online.

## 11. INFORMED CONSENT

Informed consent has been done on 30.06.2022 and the patient is willing to be a respondent

## AUTHORS' CONTRIBUTION

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


## ACKNOWLEDGMENTS

We would like to thank the Gayamsari Public Health Center, Semarang City, which has helped and supported the author's research and Mrs. R who is willing to be a respondent who has provided information for this research.


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## ORAL PRESENTATION ACCEPTANCE

August, 12th 2022

Dear **Ruswita Miliani**,

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|---|---|
| ID | : **PR129** |
| Title | : ***Case Report Of Pre-Eclampsia in Pregnant Women At the Gayamsari Health Center, Semarang City With the San Piisan Program*** |
| Authors | : Ruswita Miliani |
| Presenting Author | : Ruswita Miliani |

Please check the above details of your presentation carefully as all conference material will be printed this information. If there are any corrections please inform the committee as soon as possible by email. You will be informed in a separate email about the scheduling of your presentation and you will be given a final programme at the conference.

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Indri Astuti Purwanti

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# CASE REPORT OF PRE-ECLAMPSIA IN PREGNANT WOMEN AT THE GAYAMSARI HEALTH CENTER, SEMARANG CITY WITH THE SAN PIISAN PROGRAM

**Ruswita Miliana[1], Indri Astuti Purwanti[2],Fitriani Nur Damayanti[3], Lia Mulyanti[4]**
*[1,2]Midwife Professional Education Department, Universitas Muhammadiyah Semarang*
*[3,4]Midwifery Undergraduate Department, Universitas Muhammadiyah Semarang*

*Corresponding author. E-mail:ruswitamiliana@gmail.com*

***ABSTRACT***

Pre-eclampsia is a hypertensive disorder of pregnancy, considered one of the leading causes of maternal death in the world. Pre-eclampsia is a multisystemic disease characterized by the development of hypertension after 20 weeks of gestation, with or without urinary protein accompanied by symptoms suggestive of organ injury. The city of Semarang has a program in an effort to reduce MMR, namely SAN PIISAN (Love and Care for Mothers and Children in Semarang City). The SAN PIISAN program is a preventive effort in reducing MMR, namely doing homecare for pregnant women, postpartum mothers and babies. The aim of this program is to prevent the occurrence of 3 late. One of the public health center that runs the SAN PIISAN program and there is a maternal death due to preeclampsia is the Gayamsari Health Center. Based on the results of the assessment that was carried out during the SAN PIISAN visit, The main symptom in this case is an increase in maternal blood pressure to 174/101mmHg accompanied by edema in the mother's legs. Based on the results of the previous anamnesis, the mother had no history of hypertension. The mother explained that she had experienced an increase in blood pressure during her second pregnancy and after the baby was born, her blood pressure returned to normal. The diagnosis in this case was preeclampsia in pregnant women with initial treatment carried out during the SAN PIISAN visit, namely the administration of 250 mg of methyldopa and followed by referral to the hospital. Management of preeclampsia in pregnant women with preeclampsia with the SAN PIISAN program is carried out by home visits with the provision of therapy and followed by referrals and monitoring via online.

***Keywords**: management of preeclampsia, SAN PIISAN, preeclampsia*

## 1. INTRODUCTION

The success of maternal health efforts, among others, can be seen from the MMR indicator. MMR is the number of maternal deaths during pregnancy, delivery and postpartum caused by pregnancy, childbirth, and postpartum or their management. According to the report of the World Health Organization (WHO) in 2020, the causes of maternal death in ASIA are caused by bleeding (34.9%), indirect maternal death (18.1%), direct disorders (15.9%), hypertension (10.8%). %), and others[1].

MMR in Indonesia decreased by 35% between 2000-2017. The most common causes of maternal death in Indonesia are bleeding (39.8%) and hypertension (27.6%), while the least cause of maternal death is HIV/AIDS at 0.1%.[1].

According to the Central Java Health Office report, there was an increase in maternal mortality between 2019-2020. The MMR in 2019 was 76.9 per 100,000 live births (KH), namely 416 cases to 98.6 per 100,000 KH, namely 530 cases. The city of Semarang is included in the 4 cities/districts with the most contribution to MMR, namely 25 cases[2]. The causes of maternal death include preeclampsia (36.80%), bleeding (22.60%), infection (5.20%) and others (35.40%)[3].

Semarang is an example in reducing MMR, IMR and stunting cases[4]. The SAN PIISAN program is a mentoring program from the Semarang City Health Office which has proven effective because it can reduce the MMR in Semarang City from 128 per 100,000 KH in 2015 to 71 per 100,000 KH in 2020. This assistance aims to detect and prevent high-risk pregnancies. In addition to homecare, assistance is also carried out online. So that pregnant women can do consultations easily and health workers can monitor them effectively[5].

However, the Semarang City Health Service Report in 2020 there were 17 cases of maternal deaths out of 23,825 live births (KH) or around 71.35 per 100,000 KH. The maternal mortality

rate (MMR) will increase in 2021 as many as 21 cases from 22,030 KH. it is known that the highest maternal mortality is caused by hypertension (41.18%), other causes are due to others (41.18%) and bleeding (17.65%)[6].Preeclampsia belongs to a family of disorders referred to as hypertensive disorders of pregnancy. Patients who are initially diagnosed with gestational hypertension will eventually be diagnosed with preeclampsia[7].

Based on the data above, the authors are interested in studying the management of SAN PIISAN in preeclampsia pregnant women, considering that the highest cause of maternal death is due to hypertension in pregnancy or preeclampsia. SAN PIISAN management is carried out in all health centers in Semarang City. One of the public health center areas where maternal deaths occur due to preeclampsia is in the Gayamsari Health Center area[8].

## 1. METHOD

This study uses a qualitative descriptive case report methodology. From June to July 2022, the research was carried out at the Gayamsari Health Center, Semarang City. The sample of this research is Mrs. R is 33 years old with preeclampsia. Guidelines for interviews, observations, physical examinations, and documentation studies in the form of a pregnancy midwifery care format with the SAN PIISAN program.

## 2. PATIENT INFORMATION

The patient named Mrs. R is 33 years old. His last education is high school, works as a private employee, address Kaligawe flats, Gayamsari, Semarang City.

The chief complaint was swollen feet for 1 week. Pregnant with 3rd child and never miscarried. Previous history of hypertension. HPHT: 25-10-2021

## 3. CLINICAL FINDING

General condition is good, Consciousness composmentis, Blood pressure: 172/104 mmHg, Respiration: 20 x/minute, Pulse: 101 x/minute, Temperature: 36.7oC, SPO2: 98%, TFU: 35 cm, head presentation, convergent, contractions: none, FHR: 140 x/min, edema of the lower extremities.

## 2. TIMELINE

| Date and time | Subjective | Objective | Analysis | Planning |
|---|---|---|---|---|
| **30.06.22 11.05** | Swollen legs have been 1 week and sometimes headaches | Blood pressure: 172/104 mmHg, Respiration: 20 x/minute, Pulse: 101 x/minute, Temperature: 36.7oC, SPO2: 98%, TFU: 35 cm, head presentation, convergent, contraction: none, FHR: 140 x/minute, lower extremity edema, | Mrs. R G3P2A0 33 years of age 35 weeks pregnant, single fetus alive intra uteri, longitudinal position, cephalic presentation, right back, convergent with preeclampsia | The treatment of SAN PIISAN in cases of preeclampsia is:<br>1. Provides 250mg . methyl dopa<br>2. PE danger sign education<br>3. Nutritional education<br>4. Blood pressure evaluation<br>5. Recommendations to the ER using the referral letter that has been given |
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| | | | | |
|---|---|---|---|---|
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## 4. DIAGNOSTIC CHECK

Investigations performed were urine protein examination with negative results. The diagnosis of this case was preeclampsia. This diagnosis is supported by research results which state that[9]Preeclampsia is a hypertensive condition found at gestational age > 20 weeks with or without urine protein and accompanied by other organ disorders.

The prognosis in this case is preterm delivery. This is in line with Norwitz ER theory, Repke JT in [10] One of the prognosis for preeclampsia in pregnancy is the risk of complications to the mother and fetus, such as impaired fetal growth, preterm birth, placental abruption, and IUFD.

## 5. INTERVENTION THERAPY

The management carried out during the SAN PIISAN visit was to provide 250 mg methyl dopa therapy and re-evaluate blood pressure for 2x15 minutes. followed by counseling on foods that can lower blood pressure. counseling on the danger signs of preeclampsia, and finally referral to the hospital.

## 6. FOLLOW UP DAN OUTCOME

Monitoring after patients in the hospital was carried out by telehealth on 30 July 2022 and 02 July 2022. With the result, pregnancy termination was carried out at 35 weeks of gestation. It is known from online monitoring that the condition of the mother and baby is good.

## 7. DISCUSSION

According to [11] Preeclampsia treatment to regulate blood pressure by giving 250 mg methyldopa tablets. Backed by research[12]which states that methyldopa is the most commonly prescribed antihypertensive in monotherapy and combination, because it is safest during pregnancy.

Backed by research[13]who stated that the use of methyldopa changed sFlt-1 levels in 19 preeclampsia patients. In PEB patients, giving methyldopa at a dose of 250 mg and 500 mg can reduce sFlt-1 levels by 17.37% and 44.6%, respectively. It is known that sFlt-1 is mentioned as a mechanism underlying disease in both mother and fetus. Increased sFlt-1 decreases vascular endothelial levels[14].

In addition to drug therapy, the treatment given in cases of preeclampsia is the provision of nutritional IEC during pregnancy that can help lower the mother's blood pressure, such as the recommendation to consume Ambon banana. Based on research[15]The content of sodium and potassium in Ambon bananas is proven to reduce high blood pressure in pregnant women when consumed regularly and with the right dose.

The management of SAN PIISAN in cases of preeclampsia also provides referrals or recommendations to the hospital for further treatment with the patient's consent. Monitoring of patient progress is carried out by means of telehealth via online by whatsapp.

Telehealthas a telecommunications technology used to improve health information and health services. Telehealth, telemedicine, and telenursing service systems use the internet with video conferencing systems, SMS (Short Message System), e-mail, cellular/traditional phones, cameras, robotics, 3D sensors and WAP (Wireless Application Protocol) on communication networks between nurses and patients. Telehealth

is useful for pregnant women in terms of checking and preventing risky pregnancies[16].

## 8. CONCLUSION

Management of preeclampsia in pregnant women with preeclampsia with the SAN PIISAN program was carried out by home visits with therapy and continued with referrals and continued with monitoring via online.

## 9. INFORMED CONSENT

Informed consent has been done on 30.06.2022 and the patient is willing to be a respondent.

## 10. AUTHORS' CONTRIBUTION

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

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