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Maternal characteristics in obstetric emergency cases at RSUP Dr. M. Djamil Padang

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ABSTRACT

The causes of maternal death in West Sumatra Province in 2020 are bleeding at 2.1%, hypertension in pregnancy at 1.5%, infection at 0.9%, metabolic disorders at 0.6% and other causes at 3.5%. Cases of maternal death can be caused by obstetric emergencies. This study aims to describe the characteristics of mothers in obstetric emergencies at comprehensive emergency obstetric and newborn care (EmONC) RSUP Dr. M. Djamil Padang. This study is a descriptive study with a population of obstetric emergency cases at EmONC. hospital. Dr. M. Djamil Padang period May-June 2022. The sample is 108 respondents. The results of this study showed that from 108 respondents there were 23.1% of respondents with a diagnosis of severe preeclampsia, 79.6% of respondents aged 20-35 years, 84.3% of respondents with parity ≤ 2, the last education of respondents was senior high school 43.5%, 26.9% of respondents did not work, 81.5% of respondents did not have a history of non-communicable diseases, and 73.1% of respondents had a sufficient number of antenatal care (ANC) visits. Most patients with obstetric emergency cases at EmONC RSUP Dr. Mdjamil Padang with a diagnosis of severe preeclampsia, age 20-35 years, and the number of ANC visits is sufficient.

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INTRODUCTION

The mergency is a life-threatening condition that if not treated immediately will result in the death of the mother and fetus (Setyarin dan Suprapti, 2016). Cases of maternal death can be caused by obstetric emergencies directly 66.7% and 33.3% indirect causes. Cases of maternal death can be caused by obstetric emergencies directly by 66.7% and 33.3% indirect causes (Tchounzou et al., 2020). Data from the Indonesian Health Profile in 2020 states that the causes of maternal death are bleeding, hypertension in pregnancy, circulatory system disorders, infections, and other causes.

The causes of maternal death in West Sumatra Province in 2020 are 2.1% bleeding, 1.5% hypertension in pregnancy, 0.9% infection, 0.6% metabolic disorders and 3.5% other causes (Kemenkes RI, 2021).

The definition of emergency though implies that the unexpected, preparation and prevention must always be done to reduce the risk of an emergency occurring (Baker & Kenny, 2011). One of the efforts to prevent maternal emergency cases and accelerate the decline in Maternal Mortality Rate (MMR) is one of the antenatal care (ANC) examinations on time and according to standards (WHO, 2016) (Kemenkes RI, 2021). Routine examinations during ANC aim to detect and intervene if complications are found in pregnancy to prevent obstetric emergencies (Nachinab et al., 2019). Detection that can be done is the detection of risk factors. Risk factors are conditions that adversely affect the health of a woman or fetus during pregnancy and childbirth (Reeder et al., 2013). A risk factor is a condition or certain characteristics in pregnant women that can cause risk or danger of possible complications (Saifuddin et al., 2010).

Education plays a role in reducing maternal mortality and morbidity (Sari, 2019). Education and knowledge mothers with higher education are considered to have more information so that mothers will know how to take better care (Sulistyawati, 2011). Mothers who do work with strenuous physical activity during pregnancy can result in decreased amniotic fluid, placental abruption and low birth weight (Khojasteh et al., 2016). Many medical disorders can affect the condition of the mother and fetus. Some maternal diseases can affect pregnancy, diabetes mellitus, chronic hypertension, heart disorders, kidney disorders, etc. (Decherney et al., 2013). Younger maternal age and older maternal age affect the continuity of pregnancy (King et al., 2019). Grandemultipara women who have birth more than 4 times, with an increased risk of adverse outcomes such as postpartum haemorrhage, gestational hypertension, gestational diabetes mellitus and high perinatal mortality (Muniro et al., 2019).

RSUP Dr. M. Djamil Padang is one of the national referral hospitals, namely a hospital with classification A. Based on data from EmONC RSUP Dr. M. Djamil in 2021, there were 1360 cases of pregnancy complications and including Covid-19 12.3%, preeclampsia 9.04%, premature rupture of membranes (PROM) at 7.57%, placenta previa 6.69%, and anaemia 6.54 % (Preliminary survey data at Dr. M. Djamil Hospital, 2021). This study aims to determine the description of maternal characteristics in obstetric emergency cases at EmONC RSUP. Dr. M. Djamil Padang.

RESEARCH METHOD

This study is a descriptive study, which aims to describe the characteristics of mothers with obstetric emergency cases at EmONC RSUP. Dr. M. Djamil Padang. The population in this study were all obstetric emergency cases that were admitted to EmONC RSUP Dr. M. Djamil Padang in May-July 2022. The sample in this study is part of the population that meets the inclusion and exclusion criteria that have been set with a total of 108 respondents. The sampling method in this study was done by consecutive sampling. Samples that meet the inclusion and exclusion criteria are included in the study sequentially until the number of samples is met. This research has passed the research ethics test by the research ethics committee of the Faculty of Medicine, Andalas University with license number No.707/UN/16.2/KEP-FK/2022. This research has also passed the ethical test by the ethics commission of RSUP Dr. M. Djamil Padang, as one of the requirements to conduct research at RSUP Dr. M. Djamil with license number LB/02/02/5.7.163/2022. Informed consent was obtained from the participants.

RESULTS AND DISCUSSIONS

Results

This study is a descriptive study using secondary data on medical records. Respondents in this study were all maternal emergency cases at EmONC RSUP. Dr. M. Djamil Padang, in the period May-July 2022 who met the inclusion and exclusion criteria.

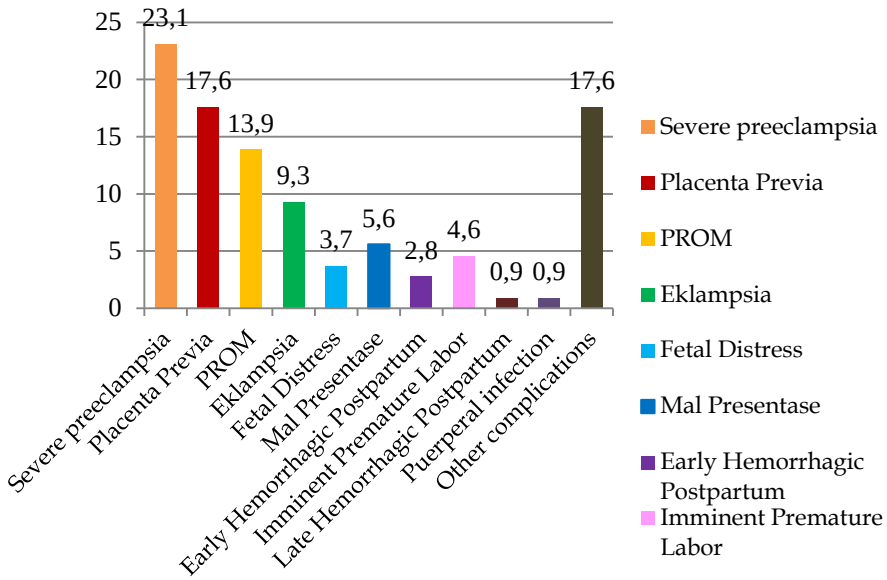

Figure 1 Distribution of Respondents Diagnosis

Figure 1 shows the frequency distribution of respondents based on diagnosis, most of the respondents in this study were diagnosed with severe preeclampsia by 23.1%, placenta previa by 17.06%, and Premature Rupture of Membranes (PROM) by 13.9%.

Tabel 1 Maternal Characteristics

Characteristics of respondents	Categories	f (n=108)	%
Age (years)	<20	3	2.8
	20-35	86	79.6
	>35	19	17.6
Parity	≤ 2	91	84.3
	> 2	17	15.7
Education	Elementary school	13	12.0
	Junior high school	13	12.0
	Senior high school	47	43.5
	College	35	32.4
Employment status	Work	29	26.9
	Doesn't work	79	73.1
History of Non-Communicable Diseases (NCD)	Yes	20	18.5
	No	88	81.5
ANC Quantity	Not enough	29	26.9
	Enough	79	73.1

Table 1 shows the results of the univariate analysis describing the characteristics of respondents in maternal emergency cases for the period May-June 2022 at EmONC Dr. RSUP. M. Djamil Padang. The majority of respondents are in the age range of 20-35 years by 79.6%. There

were 2.8% of respondents aged < 20 years, and 17.6% of respondents aged > 35 years. Most of the respondents in this study with parity ≤ 2, amounting to 84.3%. Maternal emergency cases occurred in the majority of respondents with senior high school education, amounting to 43.5%. In respondents who do not work, the incidence of maternal emergency is 73.1%. Most of the respondents in the study had no history of non-communicable diseases by 81.5%. In this study, maternal emergency cases were found in mothers with an insufficient number of ANC visits, namely 26.9%.

Discussions

Based on the results of the study, there were 3 most diagnoses of the most maternal emergency patients who entered through EmONC RSUP. Dr. M. Djamil namely severe preeclampsia 23.1%, placenta previa 17.6%, and PROM 13.9%. This is in line with research conducted in the emergency room (ER) RSCM in 2021, which stated that severe preeclampsia was the most frequently established diagnosis, which was 32% (Ocviyanti et al., 2021). The incidence of hypertensive disorders of pregnancy increased from 16.30 million to 18.08 million globally, with a total increase of 10.92% from 1990 to 2019 (Wang et al., 2021). Hypertension in pregnancy is the most common diagnosis in emergency cases in Cameroon with a proportion of 20.57% (Tchounzou et al., 2020).

Based on the results of the study, placenta previa was the second most common diagnosis of 17.6%. Of the 160 obstetric emergencies, the proportion of placenta previa was 11.8% (Ayres-de-Campos, 2017). There are several risk factors for placenta previa, namely a history of abortion, advanced maternal age, assisted reproductive techniques (ART), history of caesarean section, endometriosis, uterine leiomyoma, smoking, cocaine use, chronic hypertension, pregnancy-induced hypertension, and preeclampsia (Jenabi et al., 2022). The results showed that the incidence of PROM was 13.9%. Globally, the incidence of PROM is 1-4% of every pregnancy. A pregnancy interval less than 18 months is a risk factor for PROM (Jena et al., 2022).

Based on the age of the respondents in this study, was dominated by the age range of 20-35 years, namely 79.6% (86 people). In line with the results of Nirmala's research, et al stated that the characteristics of the maternal age who experienced the most emergencies were from the age range of 20-35 years, namely 68.9%(Nirmala et al., 2018). Another study conducted by Novianti, Safitri, and Munjidah in 2022 stated that 85.1% of respondents in maternal emergency cases were in the age range of 20-35 years (Novianti et al., 2022). A safe reproductive age for a mother is between the ages of 20-35 years, below and above that age will pose a risk of pregnancy and childbirth (Untari & Sehmawati, 2019).

The results of the study also found that respondents aged < 20 years were 2.8% and respondents aged > 35 years were 17.6%. This is in line with research conducted by Ocviyanti and Sari, in 2021, namely in the case of referrals to pregnant women at emergency room RSCM there were 9.1% of respondents aged <20 years and 19.5% of respondents aged >35 years (Ocviyanti et al., 2021). At a young age, a woman's reproductive organs are not completely perfect and their mental development is not yet mature so they are not ready to become a mother and accept pregnancy where which can result in obstetric complications that can increase maternal mortality (Untari & Sehmawati, 2019). Teenage pregnancies are at a higher risk of anaemia, premature delivery, and preeclampsia compared to women aged 20 to 35 years (Cunningham et al., 2018).

Women after the age of 35 are at increased risk of obstetric complications and perinatal morbidity and mortality (Cunningham et al., 2018). As women age, the risk of diabetes, hypertension, and other chronic diseases increases. This chronic condition increases the risk of poor perinatal outcomes. Therefore, it is often difficult to distinguish risk secondary to age from risk secondary to a combination of age and chronic conditions. Although 35 years of age is often used as a threshold for identifying women at high risk, most of these risks increase gradually over time (King et al., 2019). The results of this study indicate that the majority of maternal emergency cases occur in the age range of 20-35 years. This happens because the productive reproductive age

is in the age range of 20-35 years, so the proportion of women who are pregnant is more in that age range than the gestational age of < 20 years and > 35 years.

Based on the results of the research, respondents were dominated by high school seniors 43.5%. The results of Darmayanti, Mukhtar, and Setiawati's research in 2021 stated that 44% of emergency cases occurred in mothers who had a secondary education level (Darmayanti et al., 2021). This is in line with the research conducted by Ocviyanti, Sari, and Meutia in 2021 which stated that in the case of referrals to pregnant women in the ER, 74.3% of respondents had high school education (Ocviyanti et al., 2021). Education is associated with knowledge, mothers with higher education are considered to have more information so that mothers will know how to take care of their pregnancy (Sulistyawati, 2011). Mothers who have a better level of education increase their chances of making ANC visits as recommended. This is because education has a positive impact on the utilization of health services and increases knowledge about certain issues (Tessema et al., 2021).

In terms of employment status, most of the respondents did not work, namely 73.1% (79 people). The results of this study are in line with research by Darmayanti, Mukhtar, and Setiawati in 2021 which stated that more than half of emergency cases occurred in mothers who did not work, namely 52% (Darmayanti et al., 2021). The results of the research by Khojasteh et al in 2016 said that obstetric complications occurred in 53.3% of housewives (Khojasteh et al., 2016). Some types of work, however, can increase the risk of pregnancy complications (Cunningham et al., 2018). Mothers who do work with strenuous physical activity during pregnancy can result in a decrease in amniotic fluid, placental abruption and low birth weight (Khojasteh et al., 2016).

Work fatigue is estimated by the number of hours of standing, the intensity of physical and mental demands, and environmental stress associated with an increased risk of premature rupture of membranes (Cunningham et al., 2018). Thus, any work that causes the expectant mother to experience severe physical strain should be avoided. Ideally, no work should be continued until undue fatigue occurs. Adequate rest time should be provided. Women with previous pregnancy complications should minimize strenuous physical work.

Based on the results of the study, it was found that 18.5% of respondents had a history of non-communicable diseases, such as diabetes mellitus and hypertension. Many medical disorders can affect the condition of the mother and fetus. This depends on the severity and the treatment that has been obtained. Some maternal diseases can affect pregnancy, such as diabetes mellitus, chronic hypertension, heart disorders, kidney disorders, etc (Decherney et al., 2013). . Chronic hypertension was the most NCD affecting 30.8% (309) women, followed by cardiovascular disease at 15.9%. Women diagnosed with NCDs before pregnancy had better maternal outcomes than those diagnosed during pregnancy (Kumari et al., 2022).

In this study, the number of ANC visits of respondents who made ANC visits 6 times during their pregnancy was 73.1%. The results of research conducted by Bantas, Aryastuti, and Gayatri in 2019 stated that 79.3% of respondents conducted ANC visits according to standards (Bantas et al., 2019). Antenatal check-up visits at 4-week intervals until 28 weeks gestation, then every 2 weeks until 36 weeks gestation, and every week thereafter. Pregnant women with complications such as multiple pregnancies or diabetes require return visits at 1 to 2-week intervals. Follow-up antenatal visits are patient-specific (Cunningham et al., 2018). The frequency of ANC examinations less than 4 times during pregnancy tends to increase the risk of maternal death due to obstetric haemorrhage (Omari et al., 2021). Bantas, Aryastuti and Gayatri 2019 conducted a study on the relationship between antenatal care and childbirth complications. The results of the study stated that 92.6% of cases of labour complications were found in mothers with a history of ANC examinations not being carried out according to standards (Bantas et al., 2019). The optimal number of ANC visits will be able to prevent the occurrence of maternal emergencies.

CONCLUSION

Based on the result research on obstetric emergency cases at the EmONC RSUP Dr. M. Djamil Padang, most of the respondents with a diagnosis of preeclampsia, aged 20-35 years, parity <2, last high school education, no history of non-communicable diseases, good number of ANC visits. Health provider in ANC services are expected to provide health promotion, screening and diagnosis and proper disease prevention. ANC provided by skilled health professionals ensures good health conditions for both mother and fetus during pregnancy, as well as early detection risk factor of complications that can end in obstetric emergencies.

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