



Increased Maternal Mortality Rate Due to Pre-Eclampsia

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ABSTRAK

Angka Kematian Ibu (AKI) merupakan salah satu indikator untuk melihat derajat kesehatan perempuan. Pre-eklampsia dan eklampsia merupakan salah satu komplikasi kehamilan yang disebabkan langsung oleh kehamilan itu sendiri. Pre-eklampsia adalah timbulnya hipertensi disertai proteinuria akibat kehamilan, setelah umur kehamilan 20 minggu atau segera setelah persalinan. Berdasarkan data survei terakhir Angka Kematian Ibu (AKI) Indonesia sebesar 305/100.000 Kelahiran Hidup. Penyebab kematian ibu terbanyak di Indonesia terjadi akibat hipertensi/pre eklamsia/ eklamsia, perdarahan, dan infeksi. Hipertensi dalam kehamilan menempati urutan pertama penyebab kematian di Indonesia sebesar 33%. Tujuan dari literature review adalah untuk mereview peningkatan angka kematian ibu hamil akibat pre-eklampsia. Metode: Literatur review dilakukan berdasarkan issue, metodologi, persamaan dan proposal penelitian lanjutan. Dari 5 penelitian yang digunakan 2 diantaranya menggunakan metode penelitian qualitative dan 3 yang lain menggunakan metode deskriptif. Hasil: Berdasarkan 5 penelitian didapatkan bahwa sumber peningkatan angka kematian ibu hamil akibat pre-eklamsia berasal dari kehamilan itu sendiri. Diskusi: Peningkatan angka kematian ibu hamil akibat pre-eklamsia merupakan masalah yang harus dikaji dan dicarikan jalan keluar karena merupakan prasyarat serta indikator sekaligus hasil sebuah capaian kemajuan dalam pembangunan sebuah negara.

Kata Kunci : Pre-Eklamsia, Prentase kematian, Ibu hamil

ABSTRACT

Maternal Mortality Rate (MMR) is one indicator to see the health status of women. Pre-eclampsia and eclampsia are one of the complications of pregnancy that are caused directly by pregnancy itself. Pre-eclampsia is the onset of hypertension accompanied by proteinuria due to pregnancy, after 20 weeks of gestation or immediately after delivery. Based on the latest survey data, Indonesia's Maternal Mortality Rate (MMR) is 305/100,000 live births. The most common causes of maternal death in Indonesia are hypertension/pre-eclampsia/eclampsia, bleeding, and infection. Hypertension in pregnancy ranks as the first cause of death in Indonesia by 33%. The purpose of the literature review is to review the increase in maternal mortality due to pre-eclampsia. Methods: Literature review is carried out based on issues, methodologies, similarities and further research proposals. Of the 5 studies used, 2 of them used qualitative research methods and the other 3 used descriptive methods. Results: Based on 5 studies, it was found that the source of the increase in maternal mortality due to pre-eclampsia came from the pregnancy itself. Discussion: The increase in maternal mortality due to pre-eclampsia is a problem that must be studied and found a way out because it is a prerequisite as well as an indicator as well as the result of an achievement of progress in the development of a country.

Keywords: Pre-Eclampsia, Mortality rate, Pregnant women

INTRODUCTION

Maternal Mortality Rate (MMR) is one indicator to see the health status of women (Sumarmi, 2017). There are two categories of maternal deaths (Nur, 2019), namely those caused by direct obstetric (Fatmawati, 2021) causes, namely deaths caused directly by pregnancy and childbirth (Darmayanti, 2021), and deaths caused by indirect causes (Apriani, 2020), namely deaths that occur in pregnant women caused by disease (Nur, 2017) and not by pregnancy or childbirth (Nursal et al., 2017). Pre-eclampsia is the most important cause of maternal and perinatal death in obstetrics (Putriana, 2019). Based on the latest survey data, Indonesia's Maternal Mortality Rate (MMR) is 305/100,000 live births (SUPAS, 2019). The most common causes of maternal death in Indonesia are hypertension/pre-eclampsia/eclampsia, bleeding, and infection. Hypertension in pregnancy ranks as the first cause of death in Indonesia by 33% (SRS Litbangkes, 2019).

METHOD

This research is a literature review that summarizes some of the relevant literature. Study literatur or literature study is a technique in carrying out research by examining or directly reviewing the knowledge, ideas, or findings contained in

the literature by formulating theoretical and methodological contributions based on the topic.

Research Time

Article search starts on June 20 – 30, 2022

Data Collection

Articles were searched using the google scholar database, ScienceDirect, MDPI with the keywords pre-eclampsia, mortality percentage, pregnant women. After screening, eligibility and include, 25 articles were obtained that met the criteria.

Inclusion Criteria

- a. Articles with full text
- b. Articles published nationally and internationally (Google scholar, ScienceDirect, MDPI)
- c. Articles that match keywords.
- d. Articles above in 2017

Exclusion Criteria

- a. Articles are abstract only
- b. Articles below 2017
- c. The article does not match the keywords

This study looks for a list of references from previous studies, obtained as many as 35 studies taken through a search. A total of 30 articles are in the purge, and there are 25 articles that fall within the criteria. After that, a systematic review of clearly

formulated questions was carried out using systematic and explicit methods to identify, select, and critically assess relevant research, and to collect and analyze data from the studies included in the review.

RESULTS AND DISCUSSIONS

Result

In this study, 5 (twenty five) research articles were selected according to the topic. 3 (three) literature discusses pre-eclampsia, 2 (two) literature discusses the percentage of maternal mortality. The synthesis analysis of the literature search grid is described in the following table:

Table 1. Literature Search Grid Synthesis Analysis

No	Author	Title Research	Methods	Instrument	Results
1	Dixit, D. P., Thakur, D. S., Singh, D. K., Sharma, D. J., & Singh, D. S (2020).	To compare abbreviated regimens of single dose and 12 hours magnesium sulphate administration with the conventional 24 hours postpartum in severe preeclampsia: A randomized clinical trial.	The method used is observational	Observation sheet	With the risk of side effects as shown by several studies above, special considerations need to be made in giving magnesium sulfate as an appropriate therapy to make treatment efforts achieve the desired therapeutic effect and minimize side effects.
2	Goleman (2019).	The relationship of pregnant mother's lifestyle with preeclampsia	The type of research used is observational analytic in the form of case control	Questionnaire with the guided interview method.	More than half (64%) of respondents with less lifestyle. Consisting of 29 respondents from the control group and 35 respondents from the case group. Statistical analysis shows that there is no significant relationship between lifestyle with the incidence of preeclampsia (p = 0.211). Lifestyle is a frame of reference used by a person in behaving and the consequences will form a certain pattern of behavior.
3	Ida, A. S. S., Nurjaya, N., & Abriani, A. I (2021).	The Relationship of Pre-Eclampsia with the Incidence of Cesarean Section.	Analytical observational research design with a cross sectional approach.	Observation sheet	The results showed that from 40 respondents there were 35 (87.5%) who had preeclampsia and 5 (12.5%) who had severe preeclampsia. There is a significant

					relationship between the incidence of pre-eclampsia with the incidence of cesarean section at Dr. RSUP. Wahidin Sudirohusodo Makassar in 2018.
4	Khoiriyah, U. H., Aini, I., Purwanti, T., & Preterm, P (2020)	The relationship of preeclampsia with the incidence of childbirth.	The research design used preterm is correlational analytic with a retrospective approach.	Observation sheet	From the results of the study, it can be concluded that there is a relationship between pre-eclampsia and the incidence of preterm delivery. Efforts were made to overcome the problem, namely counseling for mothers to increase awareness in carrying out integrated antenatal care (ANC) examinations on a regular basis
5	Kolifah, & Agung Mulyaningsih, E (2020)	Effect of Utilization of MCH Handbook in ROT and MAP Assessment on Early Detection of PreEclampsia at Polindes	Cross-sectional approach to analytical research design.	MCH book and data collection sheet.	Almost all (77%) of respondents were at the age of not high risk, namely 67 respondents, most (55.2%) of multiparous respondents, namely 48 respondents, most (57.5%) respondents with low risk pregnancies, namely 50 respondents.

Discussion

Pre-eclampsia and eclampsia are one of the complications of pregnancy (Nurlaelah, 2021) that are caused directly by the pregnancy itself (Ida et al., 2021). Pre-eclampsia is the onset of hypertension accompanied by proteinuria due to pregnancy, after 20 weeks of gestation or immediately after delivery (Yakub et al., 2019).

According to the WHO, pre-eclampsia affects seven to ten percent of all pregnancies in the United States (Islamiyati & Sadiman, 2019). Worldwide, pre-eclampsia is the second leading cause of maternal death, with an estimated 16% among low- to middle-income countries (Marwan MA'AYEH, MB BCh, Maged M. COSTANTINE, 2020). Meanwhile, a cross-sectional study conducted in Tanzania showed that the risk of pre-

eclampsia in 35-year-old mothers was 2.6 times more likely to develop pre-eclampsia than younger mothers (Meazaw et al., 2020). In addition, the percentage of pre-eclampsia in Indonesia is 24% (Rohani, 2020).

The exact cause of pre-eclampsia is unknown (Sari, 2021) but placental implantation with abnormal trophoblast invasion of uterine blood vessels (Goleman, 2019), immunological maladaptive tolerance between maternal and fetal tissues. Obesity, chronic hypertension, and diabetes are among the risk factors for pre-eclampsia which also include nulliparity, teenage pregnancy. and conditions leading to hyper placentation and a large placenta (eg multiple pregnancies) (Dixit et al., 2020). Pre-eclampsia characterized by an increase in systolic ≥ 140 mmHg or diastolic ≥ 90 mmHg followed by proteinuria (Ayu Agustira et al., 2022).

Routine ANC examinations carried out in health services (Wahyuni & Rahmawati, 2018) are one of the efforts to prevent pre-eclampsia (Khoiriyah et al., 2020). One of the standard ANC examinations is to check blood pressure (Atmojo, 2019) and urine protein, so that the possibility of pre-eclampsia can be tested (Kolifah & Agung Mulyaningsih, 2020). In addition, vitamin

D supplements can also prevent pre-eclampsia (Sari, 2022), which is supported by research by Xiaotong Sun, et al (2019) showing that calcium supplements have a certain effect in preventing pre-eclampsia (Nurkhopipah, 2022).

CONCLUSION

Conclusions based on the analysis that has been done by the author, it is concluded that preeclampsia is a serious problem and has a high level of complexity. The exact cause of preeclampsia is unknown but sometimes preeclampsia is caused directly by the pregnancy itself. Therefore, the importance of cooperation between the government and the community to reduce preeclampsia. Suggestions that can be given for the implementation of the next literature review are that more databases should be used in order to get more and better articles and the limitation of the year of searching for articles with the specified keywords is the last three years so that the literature is more updated.

THANK YOU

The author would like to thank the Director Politeknik Kesehatan Gorontalo which has allowed the author to do research.

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