# ANALYSIS OF FACTORS THAT RELATED MATERNAL SEVERE PREECLAMPSIA TO THE ASPHYXIA OF NEW BORN BABY IN SOEBANDI HOSPITAL JEMBER REGENCY

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**INTRODUCTION**

An American study (Nawal,M. 2008) said that"Approximately 529,000 women die from pregnancy-related causes annually and almost all (99%) of these maternal deaths occur in developing nations. One of the United Nations' Millennium Development Goals is to reduce the maternal mortality rate by 75% by 2015. Causes of maternal mortality include postpartum hemorrhage, eclampsia, obstructed labor, and sepsis. Many developing nations lack adequate health care and family planning, and pregnant women have minimal access to skilled labor and emergency care. Basic emergency obstetric interventions, such as antibiotics, oxytocics, anticonvulsants, manual removal of placenta, and instrumented vaginal delivery, are vital to improve the chance of survival."

Nationally, East Java province occupies the top five the rising trend in maternal mortality continues to occur in East Java. There were 487 cases in 2008, 535 cases in 2009, 598 cases in 2010 and 627 cases in2011. The area of 'Tapal Kuda' contributes the highest maternal mortality rate, particularly Jember, Banyuwangi, Situbondo, Bondowoso, and Lumajang. Based on data from Health Profile of East Java Province in 2011, Jember occupied the top rank of 38 regencies/cities in East Java. 54 cases of maternal death illustrate the poor state. It can be said that for four consecutive years (2008-2011), Jember Regency had not shifted from the first rank (Dinkes Propinsi Jatim, 2012).

In 2012, from January 1st until December 31th Soebandi hospital noted that 423 mothers with preeclampsia which 319 were severe preeclampsia (Adawiyah, 2014).

Perinatal outcome assessment could be done by using Apgar Score (AS). Less value AS which baby detected in the first minute did not endorse the out come in the future. A retrospective research concluding that AS in the early five minute still being important predictor for neonatal deaths, but it cannot use to know about long life outcome. In other data, amount 13.399 the premature baby (less than 26-36 week) revealed neonatal deaths higher ( 315/ 1000) with AS 0-3 in the first minute than ( 5/1000 ) with AS 5-7 in the early five minutes (Brian, M, et al. 2014).

Equal to the imunologic theory by Sudhaberata (2001), due to the mother on the first pregnant will be formed blocking antibodies. In other side, in the first pregnant being performed Human Leucocyte Antigen Protein G (HLA) which conducted maternal imunity. This can make mother rejects product of conception (placenta) or being intolerated between mother and placenta wich can conduct preeclampsia. Beside that, Desfauza (2008) claimed that any relationship significantly between quantity of give birth with asphyxia of the newborn baby. Data showed mother with 1 - >3 times give birth ( 60,5% asphyxia) more higher risk than 2 – 3 times give birth (36,7% asphyxia).

Gestational nutritional status very important to reach well being health status for mother and baby. Women with low body mass index can get negative effect when labor such as preterm and low weight body of the baby (Papathakis, 2005). Conversely, the women with over BMI gets more high risk in gestational such as abortion, labor with sectio caesare, preeclampsia, trombosis, perinatal deaths, and macrosomia (Yu, 2006).

**METHODS**

This study is a retrospective analytic research using secondary data on maternal neonatal care Soebandi hospital Jember regency. The sample size of this research were 115 pregnant womens who were selected by purposive sampling on the 2015.

Inclusion factors :

1. Mother has gotten medicinal check up on January-October 2015 with severe preeclampsia in Soebandi hospital.
2. Mother with aterm pregnant (37-42 weeks).
3. Mother with spontaneous labor by lies the head of baby.
4. Mother has medical record before the research was conducted.

Exclusion factors:

Everything that makes asphyxia of the newborn baby is exclusion factor, such us:

1. Mother → abnormal bleeding, postdate pregnant, longterm labor, and uterine rupture.
2. Placenta → nuchal cord, short umbilical cord, and prolapse baby's cord.

3. Baby → preterm, congenital abnormality, and positional abnormality.

Variable dependent in this study is the newborn baby with asphyxia from mother with severe preeclampsia. Variable independent are quality of antenatal care, the number of births, and mother's body mass index.

The analysis method used univariate analysis and bivariate analysis. Univariate methods consisted of sampels frequency distribution. Meanwhile, the bivariate methods used non-parametric chi-square analysis to determine the effect between variables.

Results and discussion

Tabel 1. Distribution *ANC* on severe preeclampsia to asphyxia neonatorum [9]

| | Infant | | | |
|---|---|---|---|---|
| | Asphyxia | | Non | |
| | Amount (person) | % | Amount (person) | % |
| Good | 5 | 25% | 15 | 75% |
| Bad | 5 | 50% | 5 | 50% |
| Total | 10 | 33,3 % | 20 | 66,7% |

The last research from Faiqoh (2014), declared about maternal severe preeclampsia occurs 42 (85,7%) because they did not obey midwifery advice when they do ante natal care (ANC). Only 7 (14,29%) mothers with severe preeclampsia do the advices from the medicine doctor or midwife. Conversely, the control group said that 45 (95,9%) mothers obey and only 2 (4,08%) did not obey.

Including Wiknjosastro (2008), give birth quantity is the one risk factor wich related preeclampsia. Primigravida has higher frequency than multigravida.

Tabel 2. Distribution of Body Mass Index [7]

| Kategori | Jumlah | Persentase |
|---|---|---|
| Thin | 4 | 11,8% |
| Normal | 11 | 32,4% |
| Fat | 19 | 55,9% |
| Total | 34 | 100,0% |

Tabel 3. Analysis *chi square* of Body Mass Index [7]

| | Value | Df | Asymptotic Significance (2-sided) |
|---|---|---|---|
| Person Chi-Square | 5,261[a] | 2 | ,072 |
| Likelihood Ratio | 7,594 | 2 | ,022 |
| Linear-by-Linear Association | 2,010 | 1 | ,156 |
| N of Valid Cases | 34 | | |

Blomberg research (2013) noted which one thing that caused asphyxia neonatorum is body mass index of the mother when she was pregnant. Obesity in pregnant (BMI>25) caused 3 times higher risk than normal BMI. On the other side, mother with low BMI (18,5) had less risk in asphyxia neonatorum.

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