

Urine Protein Level In Pregnant Women Trimester Second And Third In Singaran Pati District Of Bengkulu City

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I. ABSTRACT

Proteinuria in pregnancy screening focused on the detection of plasma and renal glomerular filtration rate, and changes in pre-eclampsia as the most common cause of proteinuria in pregnancy. Protein urine exceeded the normal values caused by the hormone estrogen aldosterone and increased in pregnancy which causes fluid retention by the kidneys. The older age of the pregnancy, it will aggravate the leakage of protein in the urine. This study aims to reveal the protein levels in the urine of pregnant women trimester II and III. This research method descriptive with laboratory tests. The samples in this study were 23 pregnant women trimester II and III in Puskesmas Jembatan Kecil Singaran Pati, Bengkulu province. This study used random technique sampling. They were collecting data by measurement of urinary protein levels using acetic acid 6%. The results of the 23 respondents obtained 13 the pregnant women second trimester showed urine protein positive (+) for 2 persons (15.3%) whereas 10 pregnant women third trimester showed urine protein positive (+) for 2 persons (20.0%) and double positive (++) for 2 persons (20.0%) having the risk of preeclampsia in pregnancy.

The incidence of proteinuria is more common in the third trimester pregnant women with higher levels of proteinuria. So for pregnant women are expected to increase knowledge about pregnancy tests further regularly and have a healthy life.

Keywords: pregnant women, urinary protein, second trimester, third trimester.

II. INTRODUCTION

The risk of pregnancy is dynamic because pregnant women were initially normal, suddenly can be high-risk [1]. According to the World Health Organization (WHO) estimated the total number of women died that 10.7 million people due to give birth in 25 years from 1990 until 2015. In 2008, the incidence of pre-eclampsia worldwide ranged between 0.51% - 38.4% [2]. Maternal mortality in Indonesia

is dominated by three major causes of death, namely, hemorrhage, hypertension in pregnancy and infections. The third proportion of maternal mortality has been changed, as bleeding and infection tended to decrease while increasing the proportion of hypertension. More than 30% of maternal deaths in Indonesia in 2010 caused by HDK that the cause of pre-eclampsia and eclampsia [3]. If viewed from the CFR (Case Fatality Rate), is the most significant cause of death eclampsia and pre-eclampsia with CFR 2.35%, although the percentage of cases is not as high as 4.91% of the total cases obstetric [4]. Eclampsia gives symptoms of edema, proteinuria, hypertension, and seizures in pregnancy. Hypertension in pregnancy is the leading cause of maternal deaths could be prevented by early detection through testing of proteinuria in pregnant women with antenatal [5]. Pre-eclampsia is more experienced by pregnant women in the third trimester of pregnancy or near the time of birth. Pre-eclampsia is more experienced by pregnant women older than 30 years and are under 20 years old and contains the first child or pregnant women who had a previous history of pre-eclampsia [6].

Based on data from Bengkulu City Health Department in 2016 maternal mortality rate (MMR) of Bengkulu was 91 per 100,000 live births with the number of deaths of 6 people. The number of maternal deaths in 2016 has decreased compared to the last three years, as the number of maternal deaths in 2015 was 15, in 2014 and 2013 were nine people [7].

Based on data from Bengkulu City Health Department in 2016 still a lack of awareness of pregnant women for antenatal diagnosis of diseases which

should be in pregnancy such as proteinuria. Based on the preliminary survey authors, the data obtained the highest cases of preeclampsia as many as 18 people at health centers Singaran Pati district Bengkulu City with 627 people the number of pregnant women.

III. METHODS

This study uses a survey of laboratory analytic approach. This research has been conducted in Puskesmas Jembatan Kecil, Singaran Pati District of the city of Bengkulu and Bengkulu Integrated Laboratory of the Ministry of Health Polytechnic in December 2017 - January 2018. The samples in this study using total sampling technique by taking the entire trimester pregnant women in health centers II and III at the time of the research so get trimester pregnant women respondents II and III as many as 23 people. The measurement of the protein urine level used acetic acid 6%.

IV. RESULTS AND DISCUSSION

Table 1. The frequency distribution levels Protein Urine In Pregnancy Trimester II and III in Bengkulu City Health Center Small Bridge 2018

Trimester	n (%)					Total
	-	+	++	+++	++++	
II	11 (84,6)	2 (15,4)	-	-	-	13
III	6 (60)	2 (20)	2 (20)	-	-	10
Total						23

In studies that have been implemented in the working area, Puskesmas Jembatan Kecil, Singaran Pati District of Bengkulu city, with a total sample of 23 respondents trimester pregnant women II and III showed 6 (26.08%) pregnant women with positive urine protein. Based on the interview on trimester II and III pregnant women at health centers, there are 2 (8.69%) third-trimester pregnant women had a blood pressure of 140/90 mmHg, and both have positive urine protein test results. Previous research conducted in East Nusa Tenggara mentioned the high prevalence of urine protein in pregnant women in the second and third trimesters.[5].

In this study pregnant women who had edema as much as two people (20%) in the third trimester, both of which were followed by positive urine protein results and had a high blood pressure of 140/90 mmHg, so that pregnant women were at risk of developing preeclampsia. This situation is by the research of Arsani et al. in West Denpasar which obtained results, from 39 respondents three pregnant women including edema and positive protein results [8].

Based on the results of urine protein to 23 pregnant women trimester II and III obtained 6 (26.08%) samples were positive and 17 negative samples (73.91%). Positive samples found in the urine of pregnant women trimester II and III with a value that is variable between another four samples (17.39%) positive 1 (+) and two samples (20%) positive 2 (++). These results are consistent with studies conducted in West Denpasar obtained results of the urine protein in pregnant women trimester II and III, 29 negative samples and 7 samples (17.95%) positive 1 (+), two samples (5.13%) positive 2 (++) and one sample (2.56%) positive 3 (+++) [8].

On examination of urine protein that has been carried out on 13 pregnant women in the second trimester obtained a positive result of 1 (+) as many as 2 people (15.3%) while in 10 pregnant women in the third trimester obtained a positive result of 1 (+) 2 people (20 %) and positive 2 (++) as many as 2 people (20%). These results indicate that third trimester pregnant women are more likely to experience proteinuria than pregnant women in the second trimester. In previous studies, it was stated that urine protein disorders in pregnant women in the third trimester were more substantial than in pregnant women in the second trimester [8]. The result of this condition is suspected because of vascular reactivity beginning about age 20 weeks, though these are generally detected in the second trimester of pregnancy so that the examination of urine protein in pregnant women essential starting from the first trimester [9].

Proteinuria in pregnancy screening focused on the detection of plasma and renal glomerular filtration rate, and changes in pre-eclampsia, the most common cause of proteinuria in pregnancy [10]. Proteinuria is a condition in

which urine contains an abnormal amount of protein. Proteinuria is the presence of protein in the urine of humans that exceeds the average value of more than 150 mg / 24 hours [11]. Proteinuria is formed through the formation of urine in the glomerulus, the glomerular filtration leak when high, large protein molecules to be wasted in the urine, causing proteinuria [12].

V. CONCLUSION

Obtained from the data, it was stated that urine protein disorders in pregnant women in the third trimester were more substantial than in pregnant women in the second trimester.

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