ABSTRACT

One of the causes of high maternal mortality rate in the Surabaya city is a prolonged labor which occupies the fifth position of the 10 problem of maternal mortality. Obesity is said to be one of the factor that led to labor becomes elongated. The aim of this research was to determine the relationship between gestational weight gain and the duration of labor.

This retrospective cross sectional study included 141 women who delivered their baby with vaginal deliveries in RSUD dr. M. Sowandhie Surabaya between December 2015 and May 2016. Data of pre-pregnancy maternal BMI, gestational weight gain, antenatal BMI, duration of labor where began at 3cm dilation until fully dilated, and duration of second stage of labor were collected from medical records and analyzed using SPSS version 23 with Spearman rho test and Mann Whitney U test differences. Adjustments were made for parity, maternal age, interval on birth timing, maternal height and birthweight.

After the bivariate analysis where differentiated between parity showed that there were relationship on a BMI of pre-pregnancy (p = 0.048), gestational weight gain (p = 0.002) and antenatal BMI (p = 0.009) in the primiparous with duration of labor where began at 3cm dilation until fully dilated. Another factor is the baby's birth weight (p = 0.000) as well as maternal parity with significant differences in the duration of labor where began at 3cm dilation until fully dilated (p = 0.000) and duration of second stage of labor (p = 0.001).

The conclusion of this study is there are significant correlation with meaningful in pre-pregnancy BMI, gestational weight gain and antenatal BMI towards the duration of labor where began at 3cm dilation until fully dilated in primiparous mother.

Keywords: duration of labor, gestational weight gain, maternal BMI.