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The Incidence of Vaginal Deliveries in Obese Mothers at Prof Dr. I.G.N.G Ngoerah Hospital In 2022



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ABSTRACT

Introduction: One of the risk factors seen most frequently in obstetric practice is maternal obesity. Women who were overweight or obese made up more than half of all female fatalities due to direct or indirect causes. Obesity increases the chance that the mother will experience obstetric problems during pregnancy, labour, and delivery, making fetal assessment more technically difficult.

Methods: This study uses quantitative descriptive univariate analysis. The type of data is secondary data taken from the birth register. This study examines women who gave birth in 2022 and were identified as belonging to the obesity category by Prof. Dr. I. G. N. G. Ngoerah Denpasar General Hospital.

Results: At Prof. Dr. I. G. N. G. Ngoerah Denpasar General Hospital, 21 obese pregnant women will give birth throughout 2022. Of the 21 people, 81% give birth by emergency C-section, 4,8% by elective C-section, and 14,2% give birth vaginally. Obese pregnant women have a higher risk of needing a cesarean section. Patients with obese class III had a significantly higher risk of infant morbidity than those with a normal BMI, according to their findings.

Conclusions: Obese pregnant women are at increased risk of having a cesarean section. Therefore, health workers must provide knowledge to pre-pregnant or pre-marital women to maintain their BMI so they do not become obese during pregnancy. Thus, morbidity and mortality rates can also be reduced.

Keywords: obesity, impact, mode of delivery.

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INTRODUCTION

One of the risk factors seen most frequently in obstetric practice is maternal obesity. Women who were overweight or obese made up more than half of all female fatalities due to direct or indirect causes. Obesity increases the chance that the mother will experience obstetric problems during pregnancy, labour, and delivery, making fetal assessment more technically difficult.¹ Due to the prevalence of obesity in women, the potential effects on pregnancy are usually unappreciated, disregarded, or ignored. This is partly due to the absence of clear, evidence-based treatment alternatives. Long-term approaches to combating obesity are required, including based on population public wellness and economic initiatives

and individualized nutritional, behavioral, or medical treatments. Therefore, it is crucial to learn how to manage obesity throughout pregnancy. This management should start before becoming pregnant and continue during the postpartum period.²

According to the World Health Organization, women can be classified as underweight (18.5 kg/m²), normal (18.5-24.9 kg/m²), overweight (25.0-29.9 kg/m²), or obese (30.0 kg/m²).³ According to statistics, 15% to 30% of women are overweight during pregnancy (BMI during order: 25 kg/m²).^{4,5} By 2030, there are expected to be 2.16 billion and 1.12 billion overweight and obese adults, depending on how quickly the secular trend continues. Pregnancy complications such as miscarriage, congenital fetal

anomalies, thrombosis, gestational diabetes, pre-eclampsia, dysfunctional labor, post-partum hemorrhage, wound infections, stillbirth, and neonatal death are all elevated risks when a woman is obese. This group has a lower breastfeeding rate and a higher cesarean section rate when compared to women with a healthy body mass index. Additionally, some data points to obesity as a potential risk factor for maternal fatalities. Evidence also points to obesity as a possible risk factor for maternal fatalities. Compared to the general maternal population, which had an obesity prevalence of 16-19% over the same period, the Confidential Enquiry into Maternal and Child Health Research found that 28% of mothers who died were obese in the 2003-2005 triennium 1. Greater increases in CS and poor

Apgar scores in women undergoing labor induction are associated with high BMI.⁶

Maternal obesity during pregnancy raises the chance of unfavorable results. Preeclampsia, prenatal high blood pressure, and gestational diabetes mellitus all occur at higher rates. The previous study discovered that compared to thinner women, women with a body mass index (BMI) between 25 and 30 had a greater risk of developing severe preeclampsia and gestational hypertension.⁷ Shoulder dystocia and cesarean delivery are more likely to occur during birth. A higher risk of macrosomia exists for the fetus or baby. Maternal obesity has also been linked to higher rates of birth abnormalities, stillbirths, and neonatal deaths.⁷

METHODS

This research involves a retrospective cohort of obese women who gave birth in 2022 at Prof. Dr. I. G. N. G. Ngoerah Denpasar General Hospital. The inclusion criteria also included obese women and those with singleton cephalic presentations. The gestational age at birth, as well as the delivery method (normal vaginal delivery, vaginal delivery with assistance, cesarean section delivery), were included in the labor and delivery information.

This study uses quantitative descriptive univariate analysis. The type of data is secondary data taken from the birth register. All of the analysis data using SPSS v.21.

RESULTS

In Indonesia, data from the 2018 Riskesdas found that 24.7% of women aged 25-29 years were obese and 31.4% aged 30-34 years.⁵ At Prof. Dr.I.G.N.G Ngoerah Denpasar General Hospital, 21 obese pregnant women give birth throughout 2022. Of the 21 people, 81% give birth by emergency C-section, 4,8% by elective C-section, and 14,2% give birth vaginally.

Outcome data for babies born to 21 mothers with obesity at RSUP in 2022 shows in [table 1](#). The majority of infants are born with a normal birth weight (66.7%), while 19% are born with low birth weight, 9.5% are born with extremely low birth weight, and 4.8% are born overweight.

Table 1. Distribution of Infant Outcomes Based on Birth Weight

Birth Weight Categories	frequency	%
Over birth weight >4000 gram	1	4,80%
Normal birth weight 2500-4000 gram	14	66,70%
Low birth weight (1500-2500)	4	19,00%
Very Low Birth Weight (1000-1500)	0	0,00%
Extremely Low Birth Weight (<1000 grams)	2	9,50%
Total	21	100,00%

Table 2. Distribution of Infant Outcomes Based on Birth Weight

APGAR SCORE	f	%
7-10	18	85,71%
4-6	3	14,29%
0-3	0	0,00%
Total	21	100,00%

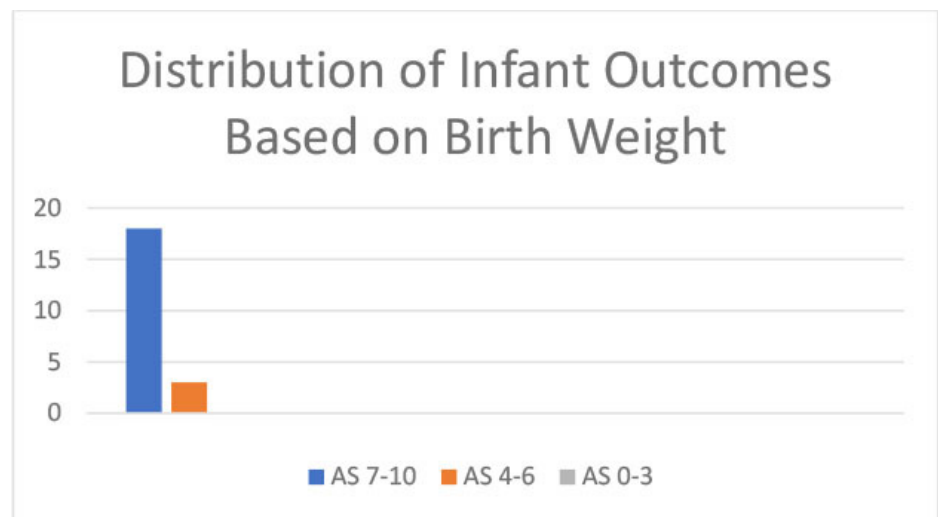


Figure 1. Distribution of Infant Outcomes Based on Birth Weight.

[Table 2](#) show the distribution of APGAR scores in infants. Most babies are born with APGAR scores ranging from 7 to 10 (85.71%), indicating that their condition is normal and does not require further medical attention.

DISCUSSION

Obese women are more likely than women who are of normal weight to develop intrapartum issues, according to observational research. Emergency cesarean sections, shoulder dystocia, and slow labor progression are more common. A meta-analysis of 33 cohort studies found that women who were overweight or obese had higher odds of having a cesarean section (either elective or emergency) than women who were of normal weight, with odds ratios of 1.46 (95% CI 1.34-1.60) and 2.05 (95% CI 1.86-2.27), respectively. Additionally, there is a higher chance of

major postpartum hemorrhage.

Obese pregnant women have a higher risk of needing a cesarean section. Twenty-four thousand four hundred twenty-three nulliparous women were divided into groups based on their pre-pregnancy BMI and pregnancy-related problems, and this data was analyzed. Slim women (BMI 19.8 kg/m²) had a cesarean section rate of 14.3% compared to extremely obese women (BMI 35 kg/m²). According to a meta-analysis of 33 studies published in 2007, the unadjusted odds ratios (ORs) for cesarean delivery were 1.46 (CI1.34e1.60), 2.05 (CI1.86e2.27), and 2.89 (CI2.28e3.79), respectively, for overweight, obese, and severely obese women compared to women of normal weight. Despite gestational diabetes, there was an increase. In a 2008 meta-analysis, it was discovered that those with the obese BMI group had a CS risk that was twice as high as those with

the ideal BMI.¹ The pathophysiological reason for the increased cesarean-section delivery rates has been hypothesized to be the increased BMI, which may predispose women to a reduced response to inducing labor due to altered metabolic status when overweight or obese.^{8,9}

Their study discovered that patients with obesity class III had a considerably higher risk of newborn morbidity than those with a normal BMI (OR: 1.78). This risk rose by 5% each day after WG 41 and before WG 42. The newborn pH and five-minute Apgar scores were not statistically different between obese and non-obese patients in two recent studies, however, these findings were not repeated in those studies.¹⁰

CONCLUSIONS

Pregnant women with obesity greatly affect the method of delivery, where this method of delivery will certainly impact the condition of the mother and baby after delivery. Women with obesity have a lower rate of vaginal delivery and are at increased risk of having a cesarean section. Even during cesarean section, there are many complications in obese mothers. Therefore, health workers must provide knowledge to pre-pregnant or pre-marital women so they can maintain BMI so they don't become obese during pregnancy. Thus, morbidity and mortality rates can also be reduced.

AUTHOR CONTRIBUTION

All authors contributed to this study's conception, data collection and interpretation, article drafting, critical revision, and final approval of the article.

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ETHICAL APPROVAL

This research was approved by the ethical commission of the Faculty of Medicine, Udayana University/Prof IGNG Ngoerah Hospital.

CONFLICT OF INTEREST

There is no conflict of interest for this manuscript.

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