



Case Report

## Impact of Obesity with Chronic Hypertension in Pregnancy Age 35 Years

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### ABSTRACT

The incidence of pregnancy with obesity in Indonesia reaches 21.8%. This can be more serious, if the pregnant woman is too old ( $\geq 35$  years) then there will be more complications for the mother and fetus. This case study was written based on midwifery management, in the form of subjective, objective documentation, analysis, and management. Based on a case study conducted on GIP0A0 gestational age 36 weeks, 35 years old with obesity and old age. The impact of obesity found is chronic hypertension which will reduce the supply of oxygen and food from the mother to the baby so that the fetus is diagnosed with suspected Intrauterine Growth Restriction (IUGR). The mother is categorized as level II obese, obesity increases the risk of narrowing of the blood vessels by the accumulation of fat, which causes poor blood circulation which transports O<sub>2</sub> and nutrients to the baby so that the fetus's weight does not match the gestational age, what is detected from TFU does not match the gestational age, in fact, accompanied by minimal amniotic conditions (oligohydramnios). To prevent complications for the mother and baby, delivery is carried out by cesarean section (SC). The mother's baby was a High Social Value Baby (HSVB), and after SC there was no success in providing exclusive breastfeeding, due to the mother's lack of knowledge about how and the benefits of breastfeeding. The mother chose IUD contraception which was inserted at the time of delivery. In conclusion, appropriate care provided by midwives during pregnancy, childbirth, newborns, postpartum and family planning is very important for the health of mothers and babies. So that early detection of risk factors can be minimized and possible complications can be prevented.



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### INTRODUCTION

Pathological pregnancy is a problem in pregnancy caused by disease or pregnancy complications (Pylypjuk et al., 2022). Nutritional problems in Indonesia are still a trend, one of which is overnutrition which is one of the nutritional problems that threatens health in Indonesia. Obesity is ranked in the top three causes of chronic health problems. The incidence of obesity in all regions is known to be higher in women than in men. In fact, nutritional intake for unborn babies during pregnancy comes from the supply of nutrients in the mother's body since the pre-conception period. Therefore, even though the incidence of obesity is small, this nutritional problem still requires special treatment to prevent other health problems, especially during pregnancy (S. Chen et al., 2019) (Pylypjuk et al., 2022). Obesity can become more risky if it is accompanied by chronic hypertension, where obesity is one of the factors that triggers hypertension. Data from the family health program at the Ministry of Health shows an increase in the number of maternal deaths every year, with 7,389 deaths in 2021 in Indonesia, an increase from 4,627 deaths in 2020. Obesity can also affect a woman's fertility level. This makes it difficult for most obese women to have children. Of course, this factor is based on several reasons. Data from January to June 2024 showed 20 cases of obese pregnant women, 19 cases of pregnant women with chronic hypertension, and 37 cases of older pregnant women in RSUD Wahidin Sudirohusodo Kota Mojokerto.

Obesity is caused by internal factors such as family history and psychology, as well as external factors such as lifestyle and diet. (Sureshchandra et al., n.d.). Psychological factors also influence a person's emotional eating patterns. Apart from family history, obesity factors are also closely related to

lifestyle, physical activity, and habits of consuming certain foods which can be external factors in obesity (Li et al., 2019) (Brown et al., 2019). Meanwhile, other risks to the fetus are macrosomia, IUGR, premature birth, and can even increase the incidence of perinatal death (Dai et al., 2021)

Midwives should collaborate with nutritionists and doctors to manage pregnancy with obesity. There are several guidelines for managing pregnancy with obesity. In general, by adjusting the nutrition and diet of pregnant women, namely by eating more fruit and vegetables, consuming more whole grain cereals, choosing leaner cuts of meat and skim milk products, and reducing consumption of high-calorie foods such as fried foods and other foods with added fats and oils, and sweet drinks (Basu et al., 2021). Pregnant women with obesity should avoid eating foods that contain a lot of fat, especially saturated fat, and reduce excessive carbohydrate consumption so that weight gain can be achieved according to existing recommendations (Ferrara et al., 2020) (Hart et al., 2022). Efforts that can be made by midwives are to increase the understanding of mothers and families about the danger signs of pregnancy with obesity, prevent complications of pregnancy with obesity, detect early if there are complications, and monitor the progress of pregnancy through integrated antenatal care services (Luna & Martinovic, 2023). Based on the description above, the author is interested in conducting a case study entitled *The Impact of Obesity and Chronic Hypertension in Pregnancy at the Age of 35 Years*

### CASE REPORT

This case report uses a case study method with a midwifery management approach, namely through documentation carried out by reviewing patient cases in the hospital's PONEK Room through objective data by establishing analysis and carrying out management in the form of



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care. Data collection techniques were carried out during pregnancy care for a mother (Mrs. E) who was about to give birth in RSUD Dr. Wahidin Sudiro Husodo, Mojokerto City in 2024, namely by interviews, physical examinations, supporting examinations, observations, documentation studies, and literature studies.

The results of the physical examination of Mrs. E is the mother's weight before pregnancy, which is 95 kg, current weight is 105 kg, height is 145 cm, LILA is 44 cm, and BMI is 49.9, which is included in the level II obesity category. Examination of the mother's vital signs (TTV) was normal, except for the mother's blood pressure, which was 150/90 mmHg. On physical examination there was no edema, no enlargement of the thyroid gland, jugular vein, and lymph, and no breast lumps and tenderness. During the abdominal examination, palpation, inspection, and auscultation were carried out, the results showed that the fundus was palpable in the fetus, round, soft, and not bouncy (buttocks). The mother's TFU was 32 cm, the right side felt hard and stretched like a board (back) and the left side felt soft, with small parts. (extremities), at the bottom it feels hard, round, and bouncy (head), the fetal head has entered the upper pelvic inlet area. The fetal heart rate is 144x/minute and fetal movement is active. The analysis carried out was G1P0A0 gestational age 36 weeks with obesity and chronic hypertension at the age of 35 years. The management provided explanations for the results of the mother's examination, collaborating with the midwife on duty to consult the SpOG doctor advised to plan SC surgery the next day, carry out an NST examination, provide education on long-term contraceptive use, and prepare the NICU room for the mother's baby. All advice has been carried out and the results of the repeat NST after 2 hours of observation are normal.

DJJ 134-145 x/minute, his 2x/10'--20-25", and fetal movements are active. The mother was then transferred to the maternity ward.

The next visit is when the mother has finished giving birth. The mother gave birth via SC on May 30 2024 at 10.20 WIB. Gender male, Apgar Score 7-8, weight 2400 grams, body length 48 cm, head circumference 32 cm, and anus present without congenital abnormalities. The postpartum mother is in a normal condition, there is no excessive bleeding, the fundal height is 2 fingers below the center, has good uterine contractions, and there are no danger signs of postpartum. The mother was given 3x1 ketorolac therapy, 3x2 oral paracetamol, 3x1 oral mefenamic acid, and 1x1 oral xepabion. At the end of the care, the mother felt happy and was willing to follow what had been recommended and the therapy that had been given.

### DISCUSSION

Pregnant women's weight gain is influenced by nutritional intake, activities, knowledge, attitudes, age, education, economics, lifestyle, and psychology. Nutritional intake during pregnancy often changes (Bodnar et al., 2024). In this case, the mother has a poor diet and likes spicy and salty food. There are no dietary restrictions so mothers can eat anything without paying attention to the nutritional value and input and output of food absorbed by the body. This is supported by the fact that the mother's husband is also obese, so there are similar hobbies and emotional roles related to the mother's high level of food consumption. The mother also has family genetics for being overweight, from both the mother's and husband's families. This is the same in the second case, the mother does not pay attention to her food intake patterns, according to her, if she is pregnant, she must eat a lot so that the fetus can be guaranteed, but this is wrong,



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this excess will put the mother and fetus in trouble. This is increasingly believed when the support from the family is positive because in the second case, the mother had experienced a miscarriage, so the belief in excessive food intake is considered a good thing (Chang et al., 2018)

Emotional eating patterns play an important role in what we eat and what nutrients our bodies will get (Dwitama et al., 2021). The emotional eating pattern is a habit of eating excessive amounts and tending to choose unhealthy types of food, namely high levels of sugar, salt, and fat, which is caused by emotions, not hunger (Bakouei et al., 2020). So, in managing obesity during pregnancy, a person needs help to recognize the type of emotions they have and how to understand these emotions. Psychologically, the baby is the first child in 16 years of marriage (Nishino et al., 2021). Other research states that obesity is a condition where the body is overweight due to the accumulation of fat, for men and women respectively exceeding 20% and 25% of body weight and can endanger health (Van Denakker et al., 2023). Obesity can cause high cholesterol in the blood and also cause the heart to work harder, because the amount of blood in the body is around 15% of body weight, so the fatter a person is, the more blood there is in the body, which means the harder the pumping function is the heart. So it can contribute to the occurrence of preeclampsia (Bhutani et al., 2022) (Villamizar-Durán et al., 2017). Researchers assume that if a pregnant woman is obese, the risk of preeclampsia is greater because the amount of fat in the body increases, so the fatter a person is, the more blood there is in the body, which means the heavier the heart's pumping function. The results of the mother's diagnosis of suspected preeclampsia (Valencia et al., 2023) (González-Plaza et al., 2022).

According to (Sominsky et al., 2023), 4 risk factors for pregnancy can cause morbidity and death in mothers and babies, namely too young the age of pregnant mother ( $\leq 20$  years), too old the age of the pregnant mother ( $\geq 35$  years), too many parties (number of children  $\geq 4$ ), too close birth spacing (distance  $\leq 2$  years). as in research (Zhang et al., 2019), in China, pregnant women aged  $\geq 35$  years experienced complications such as gestational hypertension, gestational diabetes, anemia, postpartum hemorrhage, cesarean section, and premature birth. Mrs. E is 35 years old. Based on the risk factors for Mrs. E is included in the risk factors for being too old ( $\geq 35$  years) and this is her first pregnancy, which is called old primi. Old primi are at risk for mothers with hypertension (high blood pressure), pre-eclampsia, premature rupture of membranes, obstructed labor, bleeding after the baby is born, and babies born with low birth weight. (Kirkham et al., 2023). This theory is by Mrs. E is 35 years old with risks from old age, namely, chronic hypertension and low birth weight (2400 grams) (Holmquist et al., 2021) (Bernardi et al., 2024).

Cases of pregnancy with obesity require special treatment to prevent risks to the mother and fetus. The role of midwives is very important in providing integrated antenatal care. The role that midwives can play is to carry out promotive and preventive efforts (Shaban et al., 2023). Promotive efforts, in this case, are to increase the mother's and family's understanding of physiological discomfort during pregnancy and how to overcome it, providing counseling about the danger signs of pregnancy, especially pregnancy with obesity (Yata et al., 2020). Preventive efforts that midwives can take are through integrated antenatal services. The midwife accompanies and monitors each pregnancy visit. Another role of the midwife is to explain needs during pregnancy, especially nutritional needs (Mossie et al., 2022). A



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person's weight gain is influenced by the nutritional intake consumed by the mother. The midwife explains the nutritional needs that must be met by calculating the client's daily calorie needs and additional calories during pregnancy. Each person's calorie needs are different. The number of calories can be calculated by taking into account a person's BMR and daily activity level (S. N. Chen et al., 2019). All of the factors above are a benchmark for all pregnant women to prepare for their pregnancy and prevent childbirth which has many complications and is dangerous for the mother and baby. Pregnant women-to-be can consider all aspects of their health. Starting from nutrition, a strong and ideal body, psychology, and when you will get married because it can affect the gestational age.

### CONCLUSION

All organ systems in a pregnant woman's body experience anatomical and physiological adaptations and changes. Automatically, the pregnant woman's body will adapt to these changes. Adaptations are carried out to maintain normal organ function so that they can support the health and well-being of the mother and the fetus she is carrying, although pregnancy complications can still occur in a number of pregnant women. One condition that can cause complications in pregnancy is obesity. Obesity can cause several complications for both the mother and fetus, during the early trimester it can cause spontaneous abortion. The risk to the fetus in early pregnancy will result in congenital abnormalities (neural tube defects, spina bifida, congenital heart disease, omphalocele). Therefore, in cases of pregnancy with obesity, you must receive quality antenatal care that is integrated with other health service programs in an effort to prevent complications in pregnancy.

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