

## ANTENATAL MIDWIFERY CARE FOR Mrs. "F" GIP0A0 WITH CHRONIC ENERGY DEFICIENCY AT BUNGI HEALTH CENTER

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### A B S T R A C T

**Background:** Chronic Energy Deficiency (CED) in pregnancy begins with the risk of CED and is characterized by low energy reserves, as measured by Upper Arm Circumference (LILA) below 23.5 cm. **Objective:** To provide midwifery care to Mrs. "F" (GIP1A0) who experiences chronic energy deficiency at Bungi Health Center, BauBau City. **Subject:** The subject of this research is a pregnant woman, namely Mrs. "F" who experiences Chronic Energy Deficiency problems. **Method:** This research uses a case study approach with Varney's 7 step management and SOAP. **Results:** Subjective data shows Mrs. F, 23 years old, 20 weeks 5 days pregnant, complained of lack of appetite and tired quickly when doing activities. **Objective data** shows LILA measurements: 20.5 cm, body weight (BB): 43 kg, and blood pressure (BP): 110/0 mmHg. **Analysis** shows Mrs. F experiences chronic energy deficiency. **Management** is carried out in collaboration with nutrition officers to provide Supplementary Food (PMT) to pregnant women with KEK. **Conclusion:** After being given PMT, Mrs. F increased from 43 kg to 44.5 kg, and LILA from 20.5 cm to 21.3 cm. **Suggestion:** Health professionals are expected to maximize the implementation of comprehensive midwifery care to provide more effective services and improve the quality of midwifery services.

## INTRODUCTION

Pregnancy is a crucial period for the health of the baby, starting from the fetal phase and onwards, also affecting the health of the mother. Malnutrition during pregnancy can cause problems in the development of the baby's brain, which affects intelligence, and increases the risk of giving birth to a baby with a low birth weight, which is below 2500 grams. In addition, the mother is also at risk of complications during the labor process. (Adriati and Chloranyta 2022)

Chronic energy deficiency (CED) can cause various risks and complications for the mother, such as bleeding, anemia, and inappropriate weight gain, as well as increasing the possibility of infection. In addition, CED also affects the labor process, potentially causing premature labor, difficulty and long duration of labor, postpartum hemorrhage, and increasing the risk of the need for surgery. On the other hand, CED has an impact on fetal growth and development, which can result in miscarriage, stillbirth, neonatal death, low birth weight (LBW), anemia in infants, congenital defects, and inhibit fetal brain development. (Indriyani and Anggraini 2024)

Based on the 2018 Basic Health Research (Riskesdas), the prevalence of chronic energy deficiency (CED) risk in pregnant women is still quite high, reaching 17.3% (Ministry of Health of the Republic of Indonesia, 2021a). This high figure encourages the determination of reducing the percentage of pregnant women experiencing CED as one of the Strategic Targets of the Ministry of Health for the period 2020-2024 in the Ministry of Health's 2020 Strategic Plan. Over the next five years, it is hoped that the prevalence of CED in pregnant women in Indonesia can decrease to 16%. To determine whether a pregnant woman is experiencing CED, one way that can be done is to measure the Upper Arm Circumference (LiLA). If the LiLA measurement is less than 23.5 cm, then the mother is at risk of CED, and the baby born is likely to have low birth weight (LBW).

According to the Southeast Sulawesi Provincial Health Profile Data, the number of pregnant women experiencing chronic energy deficiency (CED) and babies with low birth weight (LBW) shows fluctuations. In 2020, there were 10,031 cases of CED pregnant women (11.3%) and 1,294 cases of LBW babies (2.12%). In 2021, cases of CED pregnant women increased to 2,119, while cases of LBW babies reached 1,572 (1.51%). Then, in 2022, there were 2,089 CED pregnant women (3.5%) and 1,865 cases of LBW babies (3.7%) (Annisaa and Rofika 2024).

The main causes of chronic energy deficiency (CED) include parity, age, family income, and body mass index (BMI). One of the factors that is thought to cause CED and anemia in pregnant women is teenage pregnancy. At this age, psychologically and physically, women are usually not ready to conceive and care for a baby. This can have a negative impact on the mother and baby, where the baby is at risk of being born with low birth weight (LBW) or experiencing stunting, while the mother can experience malnutrition such as anemia and CED. Pregnancy in adolescence brings various complex problems, including physical, psychological, economic, and social aspects. This study aims to identify the dominant factors that can cause CED in pregnant women. One of the efforts made to overcome malnutrition is through the provision of nutritional supplements, which aims to meet nutritional needs that are not met from daily food consumption. This is important to prevent health and nutritional problems in vulnerable groups. One of the supplement programs implemented by the government is the Provision of Additional Food (PMT) for pregnant women (Elsera, Murtana et al. 2021).

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Data from the Bungli Health Center, Baubau City shows that between January and March 2024, there were 12 pregnant women who experienced Chronic Energy Deficiency out of a total of 50 pregnant women who checked their pregnancies (ANC Register Book of the Bungli Health Center, Baubau City, 2024).

## **METHODOLOGY**

In writing this final assignment report, the approach used is a case study. This method is applied in midwifery management, which functions as a problem-solving process to organize thoughts and actions based on scientific theories, findings, and skills logically, in order to make decisions that focus on clients. Case studies allow for in-depth analysis of a particular object by studying it as a case. The author uses the SOAP format for documentation, which helps to reveal a case or incident by referring to theories that are relevant to real conditions.

Subjective data includes information obtained from anamnesis or interviews with Mrs. F. While objective data includes the results of physical examinations and supporting examinations that are the basis for providing care. Analysis reflects the identification made based on the results of subjective and objective data that have been collected. Management refers to the action plan that will be implemented both now and in the future.

## **RESULTS AND DISCUSSION**

### **Subjective Data**

Mrs. F, a 23-year-old woman who was pregnant for the first time (G1P0A0), visited the Bungli Health Center on March 5, 2024 at 09:00 WITA. She complained of lack of appetite. During her pregnancy, the mother felt worried and anxious because her weight had dropped drastically; her pre-pregnancy weight was 50 kg, while currently it is only 43 kg. The mother admitted to consuming vegetables, a little animal food, fruits, and rice, but in very small portions and only eating twice a day.

During pregnancy, the mother felt strong fetal movements in the lower right abdomen and did not experience severe pain in the abdomen. She had no history of trauma during this pregnancy, and had no history of asthma, heart disease, diabetes, or other infectious diseases. The mother had also never taken medication without a doctor's or midwife's prescription during pregnancy and had never used contraception before.

### **Objective Data**

Based on the results of the physical examination, the patient's consciousness was in a state of composmentis and her general condition looked good. Weight during pregnancy was recorded at 43 kg with a height of 157 cm, so that the body mass index (BMI) was 17.07 (underweight). Upper Arm Circumference (MUAC) was 20.5 cm, blood pressure 110/80 mmHg, pulse 90x/minute, respiratory rate 20x/minute, and body temperature 36.5°C. The condition of the head and hair was clean, without hypersensitivity or hair loss. The face did not show edema, both conjunctivae of the eyes looked normal without polyps or secretions. The nose was symmetrical and there were no polyps, the ears

were also symmetrical and free from secretions. The mouth and teeth were clean, with slightly dry lips and no caries. There was no enlargement of the thyroid gland, lymph nodes, or jugular veins in the neck. The breasts looked symmetrical, with prominent nipples and no tenderness.

On abdominal examination, the height of the uterine fundus (TFU) was found to be 20 cm and the abdominal circumference was 80 cm. During the examination, the position of the fetal back was felt to the right of the mother's abdomen (PUKA), with the head felt hard, round, and bouncy. The gestational age was recorded as 20 weeks 5 days. On auscultation, a fetal heart rate was heard with a frequency of 145 x / minute, indicating that the fetus was in an intrauterine state, single, and alive. Supporting examinations showed a hemoglobin level of 11 grams, and negative results for syphilis, HIV, malaria, and HBsAg.

### **Analysis**

Mrs.. F, 23 years old, G1P0A0, 20 weeks 5 days pregnant with Chronic Energy Deficiency (CED).

### **Management**

Mothers are given initial education on the problem of Chronic Energy Deficiency (CED) through collaboration with nutrition officers. Mothers are advised to consume Supplementary Food Provision (PMT) in the form of 1 box (4 boxes or 28 packs) of biscuits, which must be consumed 1 pack or 3 pieces per day, and finished within 1 month to meet calorie and nutritional needs. Mothers are also advised to increase their daily food portions to twice the usual amount. In addition, mothers are advised to consume foods rich in iron, such as green vegetables and sources of animal protein (milk, meat, and eggs).

## **DISCUSSION**

### **Subjective Data**

Mrs. F underwent a pregnancy check-up on March 12, 2024 at the Bungi Health Center, complaining of poor appetite and the Last Menstrual Period (HPHT) on October 12, 2023. Currently, her gestational age is 20 weeks and 5 days. To calculate gestational age, the Neagle formula can be used, namely by adding 7 days to the first day of the last menstrual period (HPHT), and adding 9 months for HPHT that falls between January and March. Meanwhile, for HPHT that falls between April and December, the date is added by 7 days and the month is subtracted by 3. Based on this formula, if HPHT is October 12, 2023, then on March 5, 2024, the gestational age is recorded as 20 weeks and 5 days.(Abid, Sharma et al. 2022)

This is the first pregnancy for the mother, who is a primigravida, meaning she is pregnant for the first time and has never given birth or had a miscarriage. In primigravidas, muscle tone tends to be more tense because there has been no previous stretching experience. As the pregnancy progresses, primigravidas often experience the appearance of longitudinal or diagonal lines on the abdomen known as striae gravidarum. Usually, these lines are blue and are called striae livide.(Dewi, Hafisah and Mulyani 2024)

Mrs. F complained of lack of appetite and felt worried and anxious because she was afraid that her fetus would not get enough nutrition. She felt very uncomfortable with this condition. Pregnant women who experience Chronic Energy Deficiency (CED) are at higher risk of giving birth to babies with Low Birth Weight (LBW), namely babies weighing less than 2500 grams. LBW babies have the potential to experience developmental delays, decreased intellectual function, and a higher risk of death. The problem of LBW is often related to anemia in pregnant women (Hb <11 gr%) and CED, which reflects long-term malnutrition, both in terms of quantity and quality. There is a close relationship between CED, anemia, and the birth of babies with low birth weight. Pregnant women who experience CED have twice the risk of giving birth to LBW babies compared to mothers who do not experience CED(Pambudi 2023)

### **Objective Data**

The examination results showed stable vital signs, with blood pressure of 120/80 mmHg, pulse 80 times per minute, respiration 20 times per minute, temperature 36.5°C, and Upper Arm Circumference (MUAC) of 21.3 cm. A MUAC of less than 23.5 cm indicates a risk of Chronic Energy Deficiency (CED), a condition in which pregnant women experience long-term nutritional deficiencies, which can cause health problems for the mother. CED is usually caused by insufficient protein and energy intake during pregnancy, which can affect the health of the mother and fetus.

Therefore, adequate nutrition is very important, especially from the first trimester of pregnancy to the first thousand days of life.(Mijayanti, Sagita et al. 2020)

Physical examination of the patient showed that the scalp and hair were clean, without any facial edema. The conjunctiva appeared reddish, while the sclera showed no signs of jaundice. The nose and ears were also clean without secretions, the lip mucosa was moist, and the condition of the mouth and teeth was good without caries. There was no enlargement of the thyroid gland, lymph nodes, or jugular veins. The breasts appeared clean with prominent nipples and no tenderness.

On abdominal examination, no surgical scars were found. The uterine fundus height (FHH) was recorded as 22 cm, and the abdominal circumference was 83 cm. It was felt hard on the right side of the abdomen, with the fetal head feeling round and elastic. The fetal heart rate (FHR) was heard clearly, strongly, and regularly with a frequency of 150 beats per minute. The upper and lower extremities showed no signs of edema. Hemoglobin (HB) was measured at 11 gr/dl. Based on the results of the examination on Mrs. F, all conditions were declared normal, except for the mother's Upper Arm Circumference (MUAC) which was recorded as 21.3 cm. During pregnancy, the fetal heart rate is a reflection of the well-being of the fetus in the womb.(Minarti and Risnawati 2020)

Mothers who have inadequate diets are at risk of malnutrition, which can lead to poor nutritional status. If this habit continues, pregnant women are at risk of experiencing Chronic Energy Deficiency (CED). Poor diets often reflect habits before pregnancy, although nutritional needs during pregnancy increase up to three times compared to before.(Yusuf and Rate 2022).Based on the examination conducted on Mrs. F, there is no gap between theory and facts.

### **Analysis**

Based on the results of the examination, evaluation of subjective and objective data shows a diagnosis Chronic Energy Deficiency. The patient complained of lack of appetite and often felt anxious about the condition of her fetus. Meanwhile, physical examination showed that the patient was conscious, with good general condition, blood pressure 120/80 mmHg, respiratory rate 20 times per minute, pulse rate 80 times per minute, body temperature 36.5°C, and Upper Arm Circumference (MUAC) 21.3 cm.

This is in line with the theory that Chronic Energy Deficiency (CED) is defined as the mother's Upper Arm Circumference (MUAC) of less than 23.5 cm. Pregnant women who experience CED are at risk of facing various problems, such as congenital abnormalities, Low Birth Weight (LBW), anemia, intrauterine fetal death (IUFD), or fetal growth retardation (IUGR)(ZAINA MALINI 2022).

Fulfilling nutritional needs during pregnancy is very important to meet the nutritional needs of pregnant women and babies, as well as preventing chronic diseases.(Wahyuseptiana, Aje and Ayu 2024)

Based on the explanation above, the diagnosis for this case is Mrs. "F", 23 years old, G1P0A0, who is experiencing chronic energy deficiency.

### **Management**

Based on the results of subjective and objective data assessment and analysis that has been carried out, the management applied in this case remains within the authority of the midwife, but there is collaboration with nutrition officers regarding the provision of Additional Food (PMT). Therefore, the management is carried out as follows:

Mothers are given FE tablets (1x1), Vitamin B Complex (3x1), and Calcium (1x1). FE tablets are useful for increasing nutritional intake for the fetus, preventing iron deficiency anemia, preventing bleeding during childbirth, and reducing the risk of maternal death due to bleeding during childbirth. Vitamin B Complex plays an important role in the development of the fetus' brain and nervous system, and helps reduce symptoms of morning sickness. Meanwhile, Calcium has a primary function in maintaining healthy bones and teeth. During pregnancy, calcium supports bone and tooth growth and optimizes the development of the fetus' heart, nerves, and liver. During pregnancy, it is important to consume food supplements so that nutritional needs are met.(Fauzi 2023)

The results of collaboration with nutrition officers showed that Mrs. F, who had Chronic Energy Deficiency (CED), needed to be given Additional Food (PMT) in the form of biscuits. Research by Pertiwi et al. (2020) found a relationship between the provision of PMT and an increase in the Upper Arm Circumference (MUAC) in pregnant women with CED. This study showed that the mother's total energy intake increased after being given PMT. The biscuits given contained 520

calories per 100 grams, with one piece of PMT for pregnant women containing 104 calories. In addition, every 100 grams of PMT contains 16 grams of protein, 56 grams of carbohydrates, and 25 grams of fat. PMT for pregnant women also contains 9 types of vitamins (A, B1, B2, B3, B6, B12, C, D, E) and 8 minerals (Folic Acid, Iron, Zinc, Iodine, and Phosphorus). The provision for providing PMT for pregnant women is 2 pieces per day. Efforts to improve nutrition for pregnant women who experience KEK can be done through the provision of Additional Food (PMT). Providing PMT, especially for vulnerable groups, is one of the supplementation strategies to overcome nutritional problems. In order to provide healthy food and accelerate nutritional improvement, this activity is in line with the implementation of the Healthy Living Community Movement (Germas) which also includes efforts to provide PMT (Mulyanti, Sugiharno and Bura 2023).

The government's efforts in maintaining children's health are aimed at preparing a healthy, intelligent and quality generation and reducing child mortality rates. (Ansi and Hardiyanti 2022)

A good diet is always related to balanced nutrition, which is the provision of all nutrients appropriately and in balance. Additional food for pregnant women is a type of food designed to help pregnant women restore their nutritional balance. (Cheerful and Wahyuni 2024)

## **CONCLUSION**

Based on the results of the assessment through anamnesis, physical examination, as well as the diagnosis that was determined and the plan that was prepared according to needs, there is a match between the theory and the reality that has been explained. Thus, the author can draw the conclusion that:

Based on the results of the anamnesis, subjective data was obtained from the patient, namely a 23-year-old mother with HPHT October 20, 2023, currently 21 weeks and 5 days pregnant. She complained of lack of appetite and felt anxious about the condition of her fetus.

Objective data obtained from the examination showed blood pressure of 120/80 mmHg, pulse 80 beats/minute, temperature 36.5°C, and respiration 20 times/minute. Upper arm circumference (MUAC) was recorded as 21.3 cm. The condition of the scalp and hair was normal, there was no edema on the face, the conjunctiva appeared red but without jaundice on the sclera. No polyps or secretions were found in the nose, the ears were clean from secretions, the lip mucosa was moist, there were no signs of anemia, and there was no swelling in the joints, thyroid, or lymph nodes. The areola showed hyperpigmentation, the jugular veins were not enlarged, and both breasts appeared symmetrical. During auscultation, the fetal heart rate was 150 beats/minute.

Based on the subjective and objective data obtained, the analysis for Mrs. F, 23 years old, G1P0A0, showed that she was experiencing Chronic Energy Deficiency (CED).

The management includes administering FE tablets (1x1), Vitamin B Complex (3x1), and Calcium (1x1). The benefits of FE tablets include: increasing nutrient intake for the fetus, preventing anemia due to iron deficiency, preventing bleeding during childbirth, and reducing the risk of maternal death due to bleeding. Meanwhile, Vitamin B Complex is very important to help the development of the fetus' brain and nervous system, as well as reducing symptoms of morning sickness. Calcium also has a primary function in maintaining healthy bones and teeth, and during pregnancy, calcium plays a role in supporting bone and tooth growth, as well as optimizing the development of the fetus' heart, nerves, and liver.

Health service centers are expected to continue to maintain the quality of service in accordance with applicable SOPs and theories. This is important to increase the trust of service users, especially in midwifery services related to nutritional counseling for pregnant women. Clients and families are expected to understand the danger signs during pregnancy. The midwife profession is also expected to improve the quality of care in accordance with evolving theories, while adhering to the established authority, so that the services provided meet midwifery standards and are beneficial to clients.

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