

## ANTENATAL MIDWIFERY CARE IN NY. "A" G4P0A0 WITH CHORIONIC ENERGY DEFICIENCY (CED) IN SORAWOLIO HEALTH CENTER

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### ARTICLE INFORMATION

Received: 17 September 2024

Revised : 24 September 2024

Accepted: 25 October 2024

DOI:

### KEYWORDS

Antenatal Care (ANC), Pregnancy, Chronic Energy Deficiency (KEK)

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### A B S T R A C T

**Background:** Chronic Energy Deficiency (CED), a condition of malnutrition where the mother suffers from long-term food deficiency resulting in health disorders, is one of the main contributing factors. CED is caused by various factors including economic problems, lack of nutritional knowledge, insufficient food production, having too many children, and an imbalance between energy intake and expenditure. **Objective:** can carry out antenatal midwifery care for people with chronic energy deficiency (KEK) Ny. A G4P3A0 at Puskesmas Sorawolio kota Baubau in 2024. **Subject:** The subject of this research was 1 person, namely mother A who suffered from CED. **Methods:** This study employs the 7 Steps of Varney and SOAP. **Results:** This case study reveals the gaps or alignments between theory and practice in Antenatal Care (ANC) Midwifery Services. The research results show that Mrs. A, G4P3A0 with CED at Sorawolio Public Health Center in Baubau City was confirmed through measurements of Mid-Upper Arm Circumference (MUAC) of 22.3 cm, weight, and blood pressure. **Conclusion:** Ante Natal midwifery care for Ny. A has been carried out according to midwifery service standards.

## INTRODUCTION

One of the main causes of malnutrition is chronic energy deficiency (KEK). A baby may experience relative, absolute, or more serious health problems if they are caused by continued (chronic) fasting. The Indonesian Ministry of Health's Macro Nutrition Improvement Program states that slow-growing (chronic) foodborne pathogens are the source of the foodborne disease phenomenon known as Chronic Energy Deficiency. Health dangers that can befall young women include iron deficiency and its effect on anemia, calcium deficiency and its effect on osteoporosis, as well as malnutrition and its effect on disrupting the adolescent growth and development process. (Fakhriyah et al., 2021). Anemia that occurs in children can have very bad consequences if treatment is delayed. These include miscarriage, premature or delayed birth, uterine atony, and hemorrhage, shock, and death associated with anemia. (Mutia, 2023).

The cause of CED is that the body lacks one or more types of nutrients needed. Some factors that may contribute to malnutrition in the body include: excessive amounts of nutrients consumed, unless given or combined. The food consumed can also be used to wrap and apply to the body. The main cause is an imbalance between energy supply and demand. The term KEK, also known as chronic energy deficiency, is another name for protein energy deficiency (KEP) which is used to treat women who are easily anxious and weak due to chronic energy deficiency. KEK in young women is characterized by hair length (LILA) which is around 23.5 cm. In general, this is due to the fact that young women tend to eat more frequently due to the need to reduce body fat. The woman who secretly lost weight (Fakhriyah et al., 2021).

Fetal health can seriously endanger CED in pregnant women. Young children with light bodies or prematurely have a higher risk of experiencing health problems such as diarrhea, infection, and even death. Additionally, patients newly diagnosed with the disease are more likely to experience growth and developmental problems, including growth-related problems. Not only that, CED in pregnant parents can also increase the risk of anemia. Anemia in pregnant babies can have a negative impact on their health and that of their offspring by increasing the risk of premature birth, early childhood death, and maternal and newborn depression. (Putri et al., 2023).

Nutrition is the main key for the body to function optimally, converting food into energy and nutrients needed to maintain health. Without adequate nutrition, the body can have difficulty growing,

developing and maintaining tissue. However, during pregnancy, demand for nutrition increases sharply. Mothers not only need nutrition for themselves, but also for the baby who is developing in their womb. Just imagine, during this time, calorie needs can increase to 300 per day. Malnutrition in pregnant women can cause serious problems such as chronic energy deficiency (CED). Therefore, it is important for pregnant women to ensure adequate nutritional intake for the health of themselves and the baby they are carrying (Wilda Welis, S.P., 2020).

According to Rukiah in Wulandari, (2021) the World Health Organization (WHO, 2015) stated that the prevalence of pregnancies with CED globally is 35-75%. Where, the highest incidence rate is in the third trimester of pregnancy. WHO (2015) also noted that 40% of maternal deaths in developing countries are related to CED with the highest prevalence being mothers with Chronic Energy Deficiency (CED) which can cause their nutritional status to decline. According to the Indonesian Ministry of Health (2018) in Mansoben (2021) In Indonesia, Chronic Energy Deficiency (KEK) is an indicator of the Ministry of Health's focus and commitment, because the indicator for the proportion of pregnant women with IBD is targeted every year based on the Directorate General of Public Health in 2017. In at the end of 2019, the risk of pregnant women suffering from IBD rose to 18.2%, down 1.5%. Based on upper arm circumference <23.5 cm, 17.3% of all parts of the body of pregnant women. Based on the Health Profile of Southeast Sulawesi Province, it can be seen that the number of KEK babies born in the province varies. In 2020, the number of CED babies born in the province was 10,031 (11.3%), while the number of CED babies born in the province was 1,294 (2.12%). In 2022, there will be 2,119 cases in KEK parents and 1,572 cases (1.51%) in children. In 2023, there will be 2,089 cases in KEK parents (3.5%). (Southeast Sulawesi Provincial Health Service, 2022). In addition, data on mothers who experienced CED obtained from the Baubau City Health Service in 2019 showed that of the 3516 mothers who reported experiencing pregnancy, 475 or 16.28% of mothers experienced chronic energy deficiency (KEK) (Sorawolio Health Center, 2023).

Research conducted by Hariyani, (2021) in Bakri, (2021) stated that the effect of giving additional food to pregnant women on the weight gain of KEK pregnant women. The results of this study showed that there was no difference in weight gain between the intervention and control groups before and after giving additional food biscuits. Apart from this research, there was also research conducted by Megananda and Nuryanti in Aulia, (2022) which stated that there was an effect providing additional food to restore the physical changes of KEK mothers, the physical changes in question are changes in body weight and LILA (upper arm circumference). Providing additional food for 10 weeks or a maximum of 90 days can increase the weight and LILA of pregnant women by up to 10-20%.

Based on the results of a survey conducted from January to March 2024 at the Sorawolio Community Health Center, Baubau City, after LILA measurements were carried out there were 4 mothers who were diagnosed with chronic energy deficiency (KEK). said the mothers. During pregnancy, it is not enough to consume high-calorie foods such as rice, potatoes, and low-protein foods such as eggs, fish, meat, and iron supplements, which can make the body healthy for those who feel low on energy and weak. An initial diagnosis has been made on Mrs. "A" G4P3A0 This problem was discovered based on objective data which showed the mother's arm circumference was 22.3 cm, which is an indicator of CED at 34 weeks 3 days of gestation. Based on this description, the author is interested in conducting a case study called "Antenatal Care Midwifery Care for Mrs. "A G4P3A0 with Chronic Energy Shortage (KEK) at the Sorawolio Community Health Center, Baubau City at the Sorawolio Community Health Center in 2024."

## **METHODOLOGY**

This report method uses a case study with a descriptive approach using Varney's 7 steps and the SOAP intervention method. This case study illustrates the impact of pregnancy checks on pregnant women who experienced kinetic energy shock (KEK) at the Sorawolio Community Health Center. The study design used in this research is in line with research designs that include subjective and objective evaluation, identification of potential diagnostic problems, development of urgent needs, intervention planning, and SOAP format evaluation.

### **Research Location and Time**

The research location for care was carried out at the Sorawolio Community Health Center which is located in Baubau City starting from January 11 2023 to March 8 2024.

## **Research Subjects and Objects**

The research subject was a pregnant woman who experienced chronic energy deficiency (KEK), with the code "Mrs A", which is G4P3A0 at the Sorawolio Community Health Center, Baubau City in 2024.

## **Data Collection Technique**

Data collection using instruments is a tool to obtain information directly from the field. The data collection process in research varies depending on the type of research chosen. In this report, data collection techniques include observation, interviews, document collection and physical examination. (Sahir, 2022).

## **Data Analysis**

In data analysis, the author applies the principles of Verney's 7 step approach as well as SOAP principles. The researchers collected data in this case study directly in the field using observation, interviews, physical examination and documentation methods. During the data collection process, we carried out direct observations at the research location of the determined target customers, as well as conducting direct interviews with them.

## **RESULTS & DISCUSSION**

### **Subjective Data**

Mrs. A and her husband Mr. A, respectively 39 years old/ 40 years old. On 06 February 2024, an analysis was carried out on Mrs "A", she said she wanted to check her pregnancy with complaints of getting tired easily when doing household work and often reduced appetite. The fetus moves strongly in the lower right side of the abdomen. Fetal movements begin to be felt at 18 weeks of gestation. Every day within 24 hours the fetus moves 10-17 times.

The examination results also showed that the mother was pregnant with her fourth child and had never had a miscarriage. The mother is happy and happy with her pregnancy, this is indicated by the family's enthusiasm in preparing all the mother's needs during her pregnancy. For example, the family is very supportive and provides positive support to the mother and they have prepared for their baby's needs.

### **Objective Data**

The results of the physical examination showed that the mother's blood pressure was 86/80 mmHg, pulse rate 80 beats per minute, body temperature 36.5°C, and pulse rate 20 beats per minute. lymph nodes, the mother's conjunctiva is not anemic and there is no thyroid swelling, there is not a single jugular vein. Breast symmetry appears symmetrical with hyperpigmented areolae. Abdominal pectoris showed a uterine fundus (TFU) diameter of approximately 28 cm, palpable gluteal fundus, left dorsal, and radial presentation. The fetal heartbeat can be heard on auscultation at a frequency of 150 beats per minute. The results of supporting examinations showed hemoglobin 9.8 gr%, non-reactive syphilis, non-reactive HIV, non-reactive malaria and non-reactive HBsAg. The mother's upper arm circumference (LILA) is 22.3 cm, which indicates that the mother is experiencing Chronic Energy Deficiency (CED).

### **Analysis**

Mrs. A (G4P3A0), Gestation 35 weeks 4 days, single fetus, intrauterine life, left back, head presentation, convergent, good fetal condition and mother with chronic energy deficiency.

### **Management**

The first visit was carried out at 10.00 WITA on February 6 2023. The steps taken were: obtain the patient's consent before starting the examination; carry out a TTV examination which includes measuring the patient's blood pressure, pulse, body temperature and breathing pattern. Tell the mother that she has a chronic energy deficit based on the results of the examination which also includes measurements of height, weight and LiLA. Carrying out Leopold and DJJ examinations, providing information and counseling to mothers regarding: Encouraging mothers to get enough sleep, at least one hour during the day and seven to eight hours at night; and encourage mothers to routinely improve their diet during pregnancy, such as including foods high in protein and carbohydrates and sufficient vitamins and minerals. Tell the mother about the ten warning signs of pregnancy, which

include: seizures, high fever, decreased fetal movement, swelling of the face and limbs, severe abdominal pain, persistent headache, visual disturbances, decreased fetal movement, and premature rupture of membranes. Next, give FE pills (1x1), calcium (1x1), and vitamin B complex (3x1). Calcium is an essential mineral for bone development, muscle contraction, and enzyme and hormone metabolism. collaborated with nutritionists to offer PMT, or complementary foods for breast milk, in the form of biscuits. Mothers should be encouraged to prepare Moringa leaves to eat. Encourage the mother to see the mother at the specified time or more than once if the mother is pregnant, and to check her pregnancy frequently. Immediately go to the community health center in your area to do a pregnancy test if you see any early warning signs of pregnancy.

**Table 1.** Past Pregnancy History

Children	Year	Age	Penolong	Circumstances	Jk	Types of Childbirth	weight	breast-feed
1	2012	Aterm	midwife	Good	♀	normal	2,7 kg	± 2 years
2	2017	Aterm	midwife	Good	♀	normal	2,4 kg	± 6 month
3	2020	Aterm	midwife	Good	♀	normal	2,4 kg	± 2 years

Source: primary data, 2024

## DISCUSSION

### Subjective Data

From the analysis data collection carried out on Mrs. "A" complains of getting tired easily when doing household work and frequent loss of appetite. Fatigue is a common discomfort experienced during pregnancy and can lead to severe labor pain and postpartum depression (Mortazavi & Borzoe, 2019). This is the fourth pregnancy and the mother has never had a miscarriage. At this time the mother feels strong fetal movement. This fetal movement began to be felt from 18 weeks of gestation until now. Fetal movements 10-17 times a day are felt in the lower right side of the abdomen. There is no severe pain from the movement of the fetus. According to Delaram M. et al, monitoring fetal movements is a simple, cheap and low-tech method. The method used is to count the baby's movements every day. The normal number of baby movements is around three to five times an hour, if the results are not satisfactory then they must be checked with an ultrasound (Yani et al., 2021).

The mother said she was happy and happy with her pregnancy, this was indicated by the family's enthusiasm in preparing all the mother's needs during her pregnancy. For example, the family is very supportive and provides positive support to the mother and they have prepared for their baby's needs. This is in line with Saroson's research that husband's support is the presence, willingness and care of people who can be relied on, respect and love, in this case the husband provides support to the mother so as to create an atmosphere of happiness at the birth of the baby (Yanti et al., 2021).

### Objective Data

The results of the physical examination showed that the mother's blood pressure was 90/70 mmHg, with a pulse of 80 times per minute, body temperature of 36.5°C, and breathing 20 times per minute. Checking vital signs plays an important role in the emergency department (IGD) and in the ward. This examination is useful for determining patients who are at risk of worsening. So the importance of monitoring vital signs in clinical practice (Pratiwi et al., 2023).

The mother's conjunctiva was not anemic and there was no swelling of the thyroid, lymph nodes, or junctions. There is no enlargement of the jugular veins, the breasts appear symmetrical with hyperpigmentation on the areola. Abdominal examination showed a uterine fundal height (TFU) of 28 cm, palpable gluteal fundus, left dorsal, and radial presentation. The fetal heartbeat can be heard on auscultation at a frequency of 150 beats per minute. According to Solaikah, fetal heartbeat (DJJ) is an indicator or in a gynecological examination which indicates that there is life in a mother's womb. To check the health of the fetus in the womb of a pregnant woman, the doctor carries out several examinations and the baby's heart rate can only be detected at approximately 11 weeks of age (Fajrin et al., 2021).

The results of supporting examinations showed hemoglobin of 9.8 gr%, non-reactive syphilis, non-reactive HIV, non-reactive malaria and non-reactive HBsAg. Laboratory examination is an action and procedure for special examination. Special examinations by taking samples from patients aim to determine and help diagnose the patient's disease (Suryanto, 2020).

The mother's upper arm circumference (LILA) is 22.7 cm, which indicates the mother has Chronic Energy Deficiency (CED). Women's upper arm circumference (LILA) reflects the growth and development of fat and muscle tissue which has a major impact on body fluids. This measurement is carried out to detect protein energy deficiency. For pregnant women, measuring less than 23.5 cm is called chronic energy deficiency (KEK) (Putri, Sulastri, & Lestari, 2015).

### **Analysis**

Mrs. "A" is a housewife with her 4th pregnancy, has given birth 3 times and has never had a miscarriage (G4P3A0) with a gestational age of 35 weeks 4 days. According to Sarwono in Rika et al., (2021) During an abdominal examination, the skin on the abdominal wall changes color to reddish, dull, and sometimes it will also affect the breast and thigh area. This change is called striae gravidarum. In multi para, apart from the reddish striae, shiny silver lines are often found which are the previous scars and striae.

single fetus, in pregnancy, the fetus is said to be single if the abdominal enlargement corresponds to the gestational age. On palpation, one head and one back can be felt, while on auscultation the fetal heart rate can be heard clearly, strongly and regularly in the lower left quadrant of the mother's abdomen (Rika et al., 2021).

The fetus is alive. The presence of fetal movement and fetal heart rate (FHR) is a sign that the fetus is alive. A fetus that is in good health, the heart sounds are regular and the frequency is between 120-160 times per minute. Apart from that, signs of a live fetus can also be seen from fetal movements which are felt strongly by the mother once per hour or more than 10 times per day and uterine enlargement indicating the fetus is alive and growing (Rika et al., 2021). Intrauterine, the part of the uterus where the fetus can grow and develop is the uterine cavity, where this cavity is a large space for the fetus to survive until term without experiencing severe abdominal pain. This place is in the uterine corpus which is called an intrauterine pregnancy (Rahayu, 2018). Left back, on Leopold II palpation, the left back of the fetus is indicated by feeling the hard, flat and elongated part of the fetus like a board on the left side of the mother's stomach and the smallest part of the fetus can be felt on the right side of the stomach (Hafid, 2021). In cephalic presentation, the lowest part of the fetus feels hard, round and bouncy, indicating that the fetal presentation is cephalic (Natalia, 2019).

Divergent, according to Sarwono in Rika et al., (2021) When palpating Leopold IV, if both hands converge, this indicates that the head has not yet entered the PAP. The condition of the fetus is good and the condition of the mother is with chronic energy deficiency. Pregnant women experiencing Chronic Energy Deficiency (CED) give an Upper Arm Sign (LILA) of less than 23.5 cm. Apart from that, pregnant women get tired easily. Apart from that, mothers usually experience signs of anemia with Hb < 11 gr%, fatigue, tiredness, lethargy, weakness, weakness, pale lips, shortness of breath, increased heart rate, difficulty defecating, lust, eating less (Yulianti. NN, 2018).

### **Management**

The 2nd visit was on February 14 2024, time: 15:00 WITA with the following actions, asking permission from the patient before carrying out the examination. Informed consent is approval for medical action, which means that the patient agrees to the plan of medical action that will be carried out on him after the patient receives information regarding the medical action that he will receive. This definition is regulated in the Regulation of the Minister of Health of the Republic of Indonesia No. 585/Menkes/Per/IX/1989 concerning Medical Approval. Also in Article 45 of Law Number 29 of 2004 concerning Medical Practices, it is stipulated that every medical or dental procedure carried out by a doctor or dentist on a patient must obtain approval (Rezki Pebrina et al., 2022).

Carry out TTV checks such as blood pressure, pulse, temperature and breathing, convey the results of the examination that has been carried out to the mother and family. According to Aziz Alimul Hidayat, measuring vital signs is one method that can be used to detect changes in the body's systems. Vital signs consist of body temperature, pulse, respiratory rate and blood pressure. Vital signs have a very important value for body function. There are various changes in vital signs, for example body temperature, which can indicate metabolic conditions in the body; the pulse is able to show changes in the cardiovascular system; respiratory frequency can indicate respiratory function; and

blood pressure can assess the ability of the cardiovascular system which can be linked to the pulse. Vital signs can change if the body is under heavy activity or is sick, so the changes that occur are an indicator of a disturbance in the body's system (Rivki et al., 2022)

Take measurements of height, weight and LiLA. LiLA is anthropometry which can describe the nutritional status of pregnant women and to determine the risk of (KEK) or malnutrition. With LiLA there is less risk of giving birth to low birth weight babies, because the nutrition consumed by pregnant women as a measure is Upper Arm Circumference so pregnant women who have LiLA are less at risk of having LBW babies. This is in line with research conducted by Kamariyah N, Musyrofah in 2016 which stated that there was a relationship between the Upper Arm Circumference (LiLA) of pregnant women and the incidence of Low Birth Weight of Babies (BBLR) (Rika et al., 2021).

Checking Leopold and DJJ. Strong fetal movements and regular fetal heart sounds with a frequency of 120-160 x/minute indicate that the fetus is in good condition (Rika et al., 2021).

Provide understanding to mothers to get enough rest and take medication on time and avoid spicy, fatty and fried foods and eat more often but in small portions. According to Lubis in Yunitakrisdayanti (2019), Nutritional needs increase during pregnancy. Nutritional input for pregnant women greatly determines the health of her and the fetus she is carrying. Nutritional needs during pregnancy are different from the pre-pregnancy period, the nutritional needs of pregnant women increase by 15 percent, because they are needed for the growth of the uterus, breasts, blood volume, placenta, amniotic fluid and fetal growth.

Then, advise the mother to consume papaya. According to research by Putri in Bakri, (2021) CED is related to a lack of energy and protein intake, which is caused by a lack of appetite over a long period of time. Decreased appetite can be corrected by consuming herbs such as black ginger and papaya. Encourage the mother to have a repeat visit at the specified time or if there are complaints of danger signs of pregnancy, immediately have her pregnancy checked at the nearest health facility. Antenatal determines that the frequency of antenatal care visits can be monitored through new visiting services for pregnant women (K1), as well as access to health services for pregnant women according to standards at least 6 times (K6) with a distribution of 2x in the first trimester, namely 1 doctor's examination in the 1st trimester for screening, complete maternal health, including limited ultrasound, 1x in the second trimester, and 3x in the third trimester, namely 1x doctor's examination in the 3rd trimester for birth screening, including limited ultrasound (Muayah & Ani, 2021).

## CONCLUSION

Midwifery services for Mrs. "A" who experiences chronic energy deficiency is implemented using an obstetric care management approach that begins with basic data analysis. This step includes assessing the patient's condition through history taking, physical examination, laboratory examination, and collecting relevant additional information.

The diagnosis or problem made is based on the patient's subjective and objective data as well as additional supporting information. Potential problems that can arise include mild anemia and the risk of complications during labor and fetal development. Collaboration with nutrition officers was carried out to provide additional food (PMT) in the form of biscuits, as an effort to gradually overcome nutritional deficiencies.

A midwifery care plan has been prepared with the hope of overcoming existing problems so that Mrs. "A" can return to normal activities. This planning is important to reduce the possibility of complications and detect other potential problems early. Management actions include recommendations for healthy eating patterns, adequate rest, consumption of PMT biscuits, regular pregnancy monitoring, and education about the impact of chronic energy deficiency..

Evaluation of the case of Mrs. "A" has been carried out according to midwifery service standards by providing information on potential complications to the mother. Although not completely resolved, there is an increase in appetite and body endurance, indicating changes although not significant. In this research there are several limitations. The obstacles faced include limited human resources and facilities at the community health center, as well as limited time in carrying out visits and ongoing monitoring. Another obstacle is limited access to information and education for patient families, which affects the effectiveness of interventions. These limitations need to be taken into account to improve the quality of sustainable midwifery care for future pregnant women.

## ACKNOWLEDGMENT

We give thanks to the presence of Almighty God, because it is because of His abundance of mercy and grace that I was given the strength to complete the preparation of the Final Assignment Report entitled "Antenatal Care Midwifery Care for Mrs. "A" G4P3A0 Aged 39 Years with Chronic Energy Deficiency in Sorawolio Health Center in 2024."

There are many parties involved in the process of making this Final Project Report. I would like to thank Mrs. Anita, S.ST., M.Kes., as Supervisor I, and Mrs. Wa Ode Nurul Mutia S.Tr. Keb., M.Keb, as Supervisor II. It was because of their guidance that I was able to successfully complete the entire series of preparation of this report on time. On this occasion the author is very proud to express his invaluable thanks, especially to my parents, Mr (La Saaban) and my mother (Wa Jumria) because they are my foundation in completing this study seriously. I pray that health and abundant sustenance will always be with you. I also thank my patient, Mrs. "A" who was willing to be the object of my research.

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