ANTENATAL MIDWIFERY CARE FOR MRS. "H" GIP0A0 WITH CHRONIC ENERGY DEFICIENCY AT SORAWOLIO HEALTH CENTER

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A B S T R A C T

Background: Chronic Energy Deficiency (SEZ) is when a person has a low nutritional status as a result of consuming insufficient amounts of macro-energy-rich foods. Since the needs of pregnant women are usually increased, the exchange of almost all substances is very active during the third trimester. Therefore, food consumption must increase, especially the consumption of foods that contain the energy necessary to meet the needs of the mother and fetus, thus lowering energy expenditure that causes hunger, and is also known as SEZs. Objective: To be able to provide obstetric care to pregnant women to Mrs." H" GIP0A0 with chronic energy shortage problem at the Sorawolio Health Center. Subject: The subject in this study is a pregnant woman, namely Mrs. "H" with the problem of Chronic Energy Deficiency Method: This study uses a case study approach with 7-step variation and SOAP management. Results: Subjective data obtained on Mrs. H, 26 years old, 27 weeks pregnant, complained of lack of appetite and easily felt tired when doing homework. Objective data were obtained, through the measurements of LiLA: 20.7 cm, BB: 44 kg, and BP measurement: 120/80 mmHg. The analysis obtained was Mrs. H, 26 years old GIP0A0 with chronic energy deficiency. The management carried out is the provision of supplementary food (PMT) and encouraging mothers to consume moringa leaf vegetables. Conclusion: After the administration of PMT and the combination of clear vegetables with moringa leaves, there was an increase in initial BB from 44 kg to 46 kg and LILA from 20.7 cm to 22 cm.

INTRODUCTION

KEK occurs when a woman has persistent nutritional deficits that result in health problems that make it difficult for her to receive the nutrients she needs.(Paladan, 2022). KEK has a very dangerous effect on pregnant women because it can harm their fetuses. Babies who are born prematurely or with LBW are more susceptible to respiratory problems, infections, and even death. Along with these growth and development problems, babies will also face a higher risk of anemia and brain development problems. Pregnant women who suffer from anemia may have an increased risk of premature delivery, low birth weight, and maternal and infant death, all of which can have a negative impact on the health of the mother and her fetus. (Putri et al., 2023)

It is estimated that the percentage of KEK in pregnant women in Indonesia will decrease to 16% in five years. The size of the upper arm circumference (LILA) of pregnant women can be used to determine whether she has KEK or not. A decrease in the upper arm circumference indicates a decrease in muscle and tissue, which can be used as a parameter to determine the risk of KEK in pregnant women, this provides information about the condition of the muscle tissue of the fat layer under the skin.(Kurdanti et al., 2020). Basic Health Research (Riskesdas) reported that the prevalence of KEK risk in pregnant women was 17.3% (Ministry of Health of the Republic of Indonesia, 2021a). According to routine report data in 2020, it showed that 4,656,382 pregnant women from 34 provinces in Indonesia had a LiLA size of less than 23.5 cm. This means that the mother is estimated to have KEK and is estimated to experience LBW. KEK pregnant women in Indonesia reached 9.7% of the population, indicating that this achievement has exceeded the target.(Heryunanto et al., 2022)

When a pregnant woman experiences KEK, she will suffer from a long-term lack of nutritional intake, causing health problems and not meeting her pregnancy nutritional needs. (Ibu et al., 2023). Nutritional status is a health status that is the result of a balance between nutrient needs and input. (Alam & ., 2023). Several factors cause nutritional deficits in pregnant women, inconsistent diet, and inadequate food intake. Pregnant women's nutrition is also caused by low levels of education and economic problems, so that mothers cannot meet their nutritional needs. Income is also a factor causing KEK. family, number of family members, pregnancy check-ups, parity, nutrition, and infectious diseases In addition, changes in the consumption patterns of pregnant women and the

mother's weight (BB) before pregnancy can contribute to a decrease in appetite that The mother's weight before pregnancy on average shows a lower BB than normal. (Sukmawati et al., 2023)

To avoid the risk of KEK before pregnancy (WUS), both the catin and the pregnant woman must have good nutritional conditions, for example with a LILA of not less than 23.5 cm. Some of the criteria for KEK mothers are anemia, weight below BMI, and height below 145 cm. Maintaining a healthy weight, exercising regularly, eating a variety of foods, and practicing clean living can all contribute to a balanced diet that provides nutrients in the right types and amounts to meet the body's demands. This can help prevent KEK. (Marlinda, 2023). Sufficient exercise that puts a load on the heart and lungs has the effect of increasing the function of the immune system or physical fitness. (Samrida et al., 2022)

Pregnant women may show indications (KEK) such as weight does not increase regularly in the second and third trimesters, HB levels of less than 11g% in the first and third trimesters, and Lila less than 23.5 cm. Pregnant women who consume nutritious foods are advised to add 0.5 kg per week during the second and third trimesters. (Ismai et al., 2021)

However, the optimal weight is modified to take into account the rate of weight gain during the second and third trimesters. The Ministry of Health of the Republic of Indonesia (2015) stated that if the pre-pregnancy BMI is normal (18.5-24.9 kg/m2), the average weekly weight gain rate is 0.45 kg, with a maximum weight gain of 10.8 kg. 2,090 kcal of energy, 78.37 g of protein, 69.67 g of fat, and 287.38 g of carbohydrates are needed during the first trimester; 2,414 kcal of energy, 90.52 g of protein, 80.46 g of fat, and 331.92 g of carbohydrates are needed for the second and third trimesters. according to the results of the calculation of needs based on AKG (2019). (Panjaitan et al., 2022)

According to the theory, pregnancy with chronic energy deficiency can cause anemia, bleeding, failure of the mother to gain weight normally, infection, and indirect effects of pregnancy. KEK in pregnant women can cause intrauterine growth retardation, intrauterine fetal death, birth defects, anemia, and low birth weight. In addition to causing difficult and prolonged labor, premature labor can increase the number of cesarean sections. (Utami et al., 2020) .Data from the Sorawolio Health Center recorded two cases of pregnant women with KEK between January-March 2024. This finding indicates the need for appropriate intervention or treatment to reduce the risk of complications that may occur. Therefore, the author is interested in providing midwifery care to Mrs. H by raising the title "Antenatal Midwifery Care for Mrs. "H" with Chronic Energy Deficiency at the Sorawolio Health Center, Baubau City"

METHODOLOGY

This final project report is compiled using a case study approach method to produce descriptive data. This technique was chosen for use in midwifery management. This is a way of solving problems based on scientific theory, research findings, and abilities. It serves as a tool to organize ideas and actions logically or to make decisions related to health. In-depth and detailed studies of a particular problem can be carried out by researchers using the case study method. When reviewing cases or events based on the application of theory in a practical context, the author uses the SOAP documentation approach.

Subjective data reflects documentation that includes information from the health history and the results of the interview with Mrs. A. Objective data reflects documentation obtained from the results of the client's physical examination and diagnostic tests, which are the focus of data to support the provision of care. Analysis reflects the identification process obtained from the results of subjective and objective data. Management reflects documentation of the planning of actions to be taken now and in the future.

RESULTS AND DISCUSSION

Subjective Data

On January 20, 2024, Mrs. “H” (G1P0A0), aged 26, came to the Sorawolio Health Center. The mother came to the Sorawolio Health Center with complaints that doing housework made her tired and often lost her appetite.

During pregnancy, the patient experienced strong fetal movements in the lower right abdomen, and the mother did not experience severe abdominal pain. The patient had never suffered from regenerative diseases before. The mother ate rice, vegetables, and side dishes two or three times a day before pregnancy, but during pregnancy, the mother only ate twice a day.

Objective Data

The results of the physical examination showed that blood pressure was 12/80 mmHg, pulse 80 times/minute, temperature 36.5°C, and P 22 times/minute. There was no anemia, and there was no swelling in the joints, thyroid, or lymph nodes. During auscultation, the fetal heartbeat was heard, the areola was hyperpigmented, the jugular vein was not enlarged, and both breasts appeared symmetrical, the uterine fundus was 27 centimeters high during abdominal examination, the gluteal fundus was palpable, left dorsal, radial presentation, and the fetal heartbeat was heard. One viable intrauterine fetus with supporting examinations with a frequency of 135 times per minute showed hemoglobin 11 grams, non-reactive syphilis, non-reactive HIV, non-reactive malaria, and non-reactive HBSaG.

Analysis

Mrs.. H aged 26 years GI02A0 27 weeks pregnant with chronic energy deficiency.

Management

By advising pregnant women to eat additional foods during pregnancy to meet their calorie and nutritional needs. In addition, advising mothers to eat moringa leaf vegetables because moringa leaves have many good nutrients, rich in protein, and iron. The protein content is 23.37% per 100 grams of flour, making it a good alternative protein food. Nutritional anemia is caused by many factors, one of which is iron. The iron and protein content of moringa leaves is expected to help pregnant women who experience KEK. Moringa leaves contain many nutrients so that they have four times the amount of vitamin A than carrots, seven times the amount of vitamin C than oranges, four glasses of milk calcium, and three times the potassium content of bananas. Therefore, moringa leaves are very suitable to be added to food to increase its nutritional value

DISCUSSION

Subjective Data

Mrs. H had a health and fetal condition check, where she came on January 20, 2024. She complained of feeling tired when doing housework and lack of appetite. A person with Chronic Energy Deficiency (CED) has a low nutritional status due to consuming insufficient amounts of macro-energy-rich foods. Because the needs of pregnant women usually increase, the exchange of almost all substances is very active during the third trimester. Therefore, food consumption must increase, especially the consumption of foods containing the energy needed to meet the needs of the mother and fetus, thereby reducing energy expenditure that causes hunger, also known as CED. (Yulianti Triwahyuningsih & Nur Prayugi, 2018)

This is the mother's first pregnancy and she has never had a miscarriage. During her pregnancy, she has never experienced severe abdominal pain. She has no history of infectious diseases, diabetes, asthma, heart disease, or other previous diseases. In addition, she has never taken medication during pregnancy without a doctor's or midwife's prescription. This mother does not have any significant illnesses, has never been hospitalized or treated at a health center.

Objective Data

The results of the vital signs examination showed a body temperature of 36.5°C, a pulse rate of 80 times per minute, breathing 22 times per minute, and blood pressure of 120/80 mmHg. In situations where pregnant women have chronic energy deficiency, complications often occur for the mother, such as babies born prematurely or with LBW are more susceptible to respiratory problems, infections, and even death. Along with these growth and development problems, babies will also face a higher risk of anemia and brain development problems. Pregnant women who suffer from anemia may have an increased risk of premature labor, low birth weight, and maternal and infant mortality.

Physical examination performed on the patient included blood pressure 12/80 mmHg, Pulse 80 times/minute, Temperature 36.5°C, and P 22 times/minute and LILA: 20.5 cm. indicating normal scalp and hair conditions, without edema on the face, red conjunctiva but without jaundice on the sclera, no polyps or secretions in the nose, ears clean from secretions, moist lip mucosa, No anemia, and no swelling in the joints, thyroid, or lymph nodes. During auscultation, the fetal heartbeat was heard, the areola was hyperpigmented, the jugular vein was not enlarged, and both breasts looked symmetrical, the uterine fundus was 27 centimeters high during abdominal examination, the gluteal fundus was palpable, left dorsal, radial presentation, and the fetal heartbeat was heard with a frequency of 135 times per minute, indicating hemoglobin 11 grams. Based on the results of the

examination on Mrs. H, all conditions were declared normal except for the mother's lila 20.5 cm. It is stated that the mother does not experience KEK, for example with a LILA of not less than 23.5 cm (Marlinda, 2023)

Analysis

Based on the evaluation results of the subjective and objective data evaluation results indicate a diagnosis of Chronic Energy Deficiency. The patient complained of feeling tired easily when doing housework and lack of appetite, while physical examination showed compost mentis consciousness, good general condition, blood pressure 120/80 mmHg, respiratory rate 22 times per minute, pulse 80 times per minute, body temperature 36°5C and lila 20.5 cm.

This is consistent with the theory that KEK is defined as a maternal LILA of less than 23.5 cm. KEK pregnant women are at risk of giving birth to babies with low birth weight (LBW) or experiencing maternal death immediately during labor. (Bemj et al., 2022). When a pregnant woman experiences KEK, she will suffer from a long-term lack of nutritional intake, causing health problems and not meeting her pregnancy nutritional needs. (Ibu et al., 2023)

Based on the description above, the diagnosis for this case is Mrs. "H" aged 26 years GIP0A0, with chronic energy deficiency.

Management

Based on the results of the subjective and objective data assessment and the analysis that has been made, the management carried out in this case is still the authority of the midwife to carry out the management/actions, namely:

Give FE tablets (1x1), Vitamin B complex (3x1), and Kalk (1x1). To increase hemoglobin levels, increase fetal nutrient intake, and prevent anemia are the goals of giving blood or iron tablets. While Vit.B complex helps in the body's energy production, Kalk is specifically to meet the calcium needs of pregnant women.

Pregnant women (KEK) must receive (PMT) and counseling (Yogyakarta City Health Office, 2015). Counseling for pregnant women must help them implement a routine of eating together with their families; their eating patterns must be varied, their main food portions must be full, rich in protein and calories. (Ismai et al., 2021)

By advising pregnant women to eat additional foods during pregnancy to meet their calorie and nutritional needs. In addition, advising mothers to eat moringa leaf vegetables because moringa leaves have many good nutrients, rich in protein, and iron. The protein content is 23.37% per 100 grams of flour, making it a good alternative protein food. Nutritional anemia is caused by many factors, one of which is iron. The iron and protein content of moringa leaves is expected to help pregnant women who experience KEK. Moringa leaves contain many nutrients so that they have four times the amount of vitamin A than carrots, seven times the amount of vitamin C than oranges, four glasses of milk calcium, and three times the potassium content of bananas. Therefore, moringa leaves are very suitable to be added to food to increase its nutritional value (Rufaindah et al., 2023)

There are many nutrients in moringa leaves, including various macro and micro nutrients, as well as active ingredients that function as antioxidants. Contains essential nutrients such as iron (Fe) 28.2 mg, calcium (ca. 2003.0 mg), and vitamin A 16.3 mg. It also contains protein, vitamin A, vitamin C, vitamin D, vitamin E, K, and vitamin B (thiamine, riboflavin, niacin, pantothenic acid, biotin, vitamin B6, vitamin B12, and folate). also contains many essential nutrients that help the body absorb iron, such as vitamin C (220 mg/100 grams of fresh leaf material), according to Usastiawa (2019). Moringa leaf extract contains vitamin C which helps the body absorb iron. There are hundreds of medicines that use moringa leaves as the main ingredient, both for prevention and treatment. The moringa plant (Moringa oleifera) has many benefits in all parts of the plant, including the leaves, stems, roots, and seeds. Moringa has properties that are beneficial for health and overcome malnutrition due to its high nutritional content (Rufaindah et al., 2023)

The weight of pregnant women with CED can increase by providing balanced supplementary food (PMT). Nutritional intake of less than 25% protein and providing 300-800 kcal of additional food every day can increase fetal growth and the size of the baby born. (Iskandar et al., 2022)

CONCLUSION

Based on the results of the assessment through anamnesis, physical examination, established diagnosis and planning according to needs, as well as discussions regarding the suitability between the theory and reality that have been described, the author can conclude that:

Based on anamnesis, subjective information was obtained from the patient, a 26-year-old mother with HPHT on August 4, 2023. The gestational age is now 39 weeks. With complaints of often feeling tired when doing housework and lack of appetite.

Objective data based on the results of the examination that has been done found that blood pressure 12/80 mmHg, Pulse 80 times / minute, Temperature 36.5 ° C, and P 22 times / minute and LILA: 20.5 cm. indicating normal scalp and hair conditions, without edema on the face, red conjunctiva but without jaundice on the sclera, no polyps or secretions in the nose, ears clean from secretions, moist lip mucosa, no anemia, and no swelling in the joints, thyroid, or lymph nodes, hyperpigmented areola, jugular veins are not enlarged, and both breasts appear symmetrical. During auscultation, the fetal heartbeat is heard.

Based on the subjective and objective data that has been obtained, the analysis of Mrs. H, 26 years old, was confirmed as having GIP0A0 with chronic energy deficiency.

Management is to provide FE tablets (1x1), Vitamin B complex (3x1), and Kalk (1x1). To increase hemoglobin levels, increase fetal nutrient intake, and prevent anemia is the purpose of giving blood or iron tablets. While Vit.B complex helps in the body's energy production, Kalk is specifically to meet the calcium needs of pregnant women.

Health service centers are expected to maintain health services that are in accordance with SOPs and theories, so that they can improve the quality and trust of health service users, especially midwifery services regarding counseling on nutrition for pregnant women. Clients and families are able to understand the danger signs in pregnancy. The profession of midwife is expected to further improve the quality of care in accordance with theories that continue to develop but remain based on their authority as midwives that have been determined so that the care provided is in accordance with midwifery service standards and is beneficial for clients.

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REFERENCES

Alam, H. S., & . A. (2023). Pemberdayaan Kader Posyandu dalam Penggunaan Media Putar Antropometri Status Gizi Usia 0-59 Bulan. *Jurnal Pengabdian Kepada Masyarakat*, 71–77. https://doi.org/10.30999/jpkm.v13i3.2933

Bemj, B. E. J., Kek, K., Ibu, P., & Care, A. (2022). *Bunda edu-midwifery journal (bemj)*. *5*(2), 94–100.

Heryunanto, D., Putri, S., Izzah, R., Ariyani, Y., & Kharin Herbawani, C. (2022). Gambaran Kondisi Kekurangan Energi Kronis Pada Ibu Hamil Di Indonesia, Faktor Penyebabnya, Serta Dampaknya. *PREPOTIF : Jurnal Kesehatan Masyarakat*, *6*(2), 1792–1805. https://doi.org/10.31004/prepotif.v6i2.4627

Ibu, P., Di, H., Safira, C. W., Natasya, J. N., Rezeki, N. A., & Sulmi, H. J. (2023). *Multidisciplinary Science Faktor Penyebab Kekurangan Energi Kronik*. *1*(4), 828–838.

Iskandar, I., Rachmawati, R., Ichsan, I., & Khazanah, W. (2022). Perbaikan gizi pada ibu hamil kekurangan energi kronis (KEK) melalui pendampingan pemberian makanan tambahan di wilayah kerja Puskesmas Lampisang Aceh Besar. *Jurnal PADE: Pengabdian & Edukasi*, *4*(1), 34. https://doi.org/10.30867/pade.v4i1.900

Ismai, H., Marlina, L., & Sumarni. (2021). Asuhan Kebidanan Pada Ibu Hamil Dengan Kekurangan Energi Kronik (Kek) Di Puskesmas Rajapolah. *Journal of Midwifery Information (JoMI)*, *1*(2), 178–183.

Kurdanti, W., Khasana, T. M., & Wayansari, L. (2020). Lingkar lengan atas, indeks massa tubuh, dan tinggi fundus ibu hamil sebagai prediktor berat badan lahir. *Jurnal Gizi Klinik Indonesia*, *16*(4), 168. https://doi.org/10.22146/ijcn.49314

Marlinda, L. (2023). Hubungan Peran Tenaga Kesehatan, Pengetahuan Dan Status Ekonomi Terhadap Perilaku Pencegahan Kek Pada Catin Di Upt Puskesmas Bojonegara Tahun 2022. *SENTRI: Jurnal Riset Ilmiah*, *2*(6), 1917–1929. https://doi.org/10.55681/sentri.v2i6.979

Paladan, S. (2022). Analisis Faktor Risiko Yang Memengaruhi Kejadian Kurang Energi Kronis Pada Ibu Hamil di Wilayah Kerja Puskesmas Wotu Kabupaten Luwu Timur. *Jurnal Data Kesehatan Indonesia*, *1*(1), 1–8.

Panjaitan, H. C., Sineri, D. I., Puteri, H. S., Febriyadin, F., & Pujihastuti, E. S. (2022). Edukasi Gizi Dan Penyusunan Menu Pemulihan untuk Peningkatan Pengetahuan Ibu Hamil KEK. *Jurnal Pengabdian Masyarakat*, *2*(3), 465–487. ejournal.uksw.edu/jms

Putri, A. A., Salsabila, S., Gizi, J., Kedokteran, F., Sultan, U., & Tirtayasa, A. (2023). Dampak Penyakit KEK Pada Ibu Hamil. *Student Scientific Creativity Journal (SSCJ)*, *1*(3), 7. https://doi.org/10.55606/sscj-amik.v1i3.1525

Rufaindah, E., Patemah, & Amalia, W. (2023). Pengaruh Brownies Kelor terhadap Kadar Hb Ibu Hamil di Desa Pandanmulyo Kecamatan Tajinan. *Jurnal Pendidikan Tambusai*, *7*(2), 8648–8652.

Samrida, W. O. N. J., Minarti, M., & Syarif, S. I. P. (2022). Strengthening the Role of Women in Preventive against Covid-19 Efforts in Kampung Tenun, Topa Village, Baubau. *Jurnal Pengabdian Bidan Nasuha*, *2*(2), 30–35. https://doi.org/10.33860/jpbn.v2i2.1113

Sukmawati, sukmawati, Sari, E. N., & Pitri, D. (2023). Hubungan Pengetahuan Ibu Hamil tentang Gizi Kehamilan dengan Kejadian Kurang Energi Kronik (KEK) pada Kehamilan di Wilayah Kerja Puskesmas Sitiung 1 Tahun 2022. *Jurnal Pendidikan Tambusai*, *7*(1), 224–229.

Utami, K. U., Setyawat, I., & Ariendha, D. S. R. (2020). Kekurangan Energi Kronis Pada Ibu Hamil Trimester I Berdasarkan Usia Dan Graviditas. *Kesehatan Primer Vol*, *5*(1), 18–25. http://jurnal.poltekeskupang.ac.id/index.php/jkp%0AP

Yulianti Triwahyuningsih, R., & Nur Prayugi, A. (2018). Energi Kronik (Kek) Pada Ibu Hamil. *Jurnal Kebidanan*, *8*(November), 2620–4894.