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HOLISTIC MANAGEMENT OF MRS. D 68 YEARS OLD WITH HYPERCHOLESTEROLEMIA AND HYPERURICEMIA THROUGH MEDICAL APPROACH FAMILY

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ABSTRACT
Factors such as age, gender, family history, unhealthy lifestyle, lack of physical activity can be associated with cardiovascular risk and impact on hypercholesterolemia. Application of family doctor services based on evidence-based medicine to patients by identifying risk factors, clinical problems, and patient management based on a patient problem solving framework with a patient centered and family approach. This is a case report study. Data were obtained from physical examination, and medical records. The assessment was based on a holistic diagnosis from the beginning, process, and end of the study both quantitatively and qualitatively. Mrs. D, 68 years old, came to Health Center with complaints of toe joint pain and neck pain. Patients are worried that their complaints can interfere their activities. Non-medical and medical interventions were carried out on patients and their families with education regarding the patient's illness during three home visits. The evaluation results obtained were that patient complaints decreased and knowledge of patients and their families regarding hyperuricemia and hypercholesterolemia increased. Holistic and comprehensive management of the patient's problems, Mrs. D has been carried out by providing counseling to increase the knowledge of the patient and patient's family.

Keywords: hypercholesterolemia; hyperurecemia; medical approach family

INTRODUCTION
Hypercholesterolemia is a lipid disorder in the blood. This can be caused by several factors, namely age, gender, family, unhealthy lifestyle, and lack of physical activity, such as alcohol consumption, smoking, excessive cholesterol foods, and poor lifestyle have been associated with increased cardiovascular risk and have a direct or indirect impact on hypercholesterolemia. Based on data from WHO (Kemenkes RI, 2018). According to the results of the 2018 Riskesdas data, the Indonesian population has a proportion of total cholesterol levels in the borderline (200-239mg/dL) and high (≥240mg/dL) categories based on gender with a percentage of women at 24% and 9.9%; men at 18.3% and 5.4%. The proportion of the Indonesian population that was obese by sex was 12.1% in men and 15.1% in women. The proportion of the population with insufficient physical activity by gender was 36.4% in men and 30.7% in women (Riskesdas, 2018).

Hyperuricemia is a condition when serum uric acid levels are >7.0mg/dl in men and >6mg/dl in women. Hyperuricemia can result from excess uric acid, deficient uric acid excretion or a combination of both. The balance between uric acid production and its excretion in the kidneys determines serum uric acid levels. The prevalence of hyperurecemia ranges from 1-4% worldwide (Jameson et al., 2015). Indonesia, the prevalence of hyperurecemia is reported to be greater in women than men based on Riskesdas in 2018. The prevalence of women was 8.46% and men were 6.13% (Riskesdas, 2018). In 2018, the prevalence of joint disease in Lampung Province was 7.6% and ranked 12th in Indonesia. Based on the 2018 Bandar Lampung City Health Profile, the prevalence of gouty arthritis was 5.07% with a total of 2,773 cases. The incidence of hypercholesterolemia, hyperurecemia is related to risk factors

due to lifestyle changes so that the causative factors can be modified. Giving statin drugs, CCBs which are the first line alone cannot achieve the target of reducing cholesterol levels and high blood pressure. Therefore, appropriate management must be balanced with lifestyle interventions, such as diet therapy, smoking cessation and weight loss (Riskesdas, 2019).

A low-fat diet and eating foods containing fiber are highly recommended for people with high cholesterol levels. Family medicine services are integrated with a broad approach and include several principles, namely general continuous, family oriented care, and community oriented. This principle can be applied to the management of hypercholesterolemia and requires continuous multidisciplinary care of complications for the long term to improve the quality of life of patients (Utami, 2020). The purpose of this writing is to explore both internal and external risk factors along with the clinical issues identified in patients. Additionally, it aims to implement a comprehensive family doctor approach tailored to these problems by utilizing Evidence-Based Medicine. This approach emphasizes care that is centered on the patient, grounded in the family context, and oriented toward the broader community.

METHOD

This study analysis is a case report. Primary data were obtained through anamnesis and physical examination at the Puskesmas as well as further anamnesis and examination during home visits to complete family data, psychosocial and environmental data. Secondary data were obtained from the patient's medical record at the Gedong Tataan Health Center. Assessment was conducted based on the diagnosis from the beginning, process, and end of the study quantitatively and qualitatively.The respondent in this study is Mrs. D, a 68-year-old woman diagnosed with hypercholesterolemia and hyperuricemia. She was selected as the subject due to her ongoing struggles with both conditions, which are commonly associated with aging and lifestyle factors. Mrs. D lives with her family and has a history of irregular dietary habits and low physical activity, which contribute to her current health issues. Through a holistic management approach, this study aims to address not only the medical aspects of her conditions but also the psychosocial, behavioral, and environmental factors influencing her health. The goal is to improve her overall well-being by implementing a family doctor approach that is patient-centered, evidence-based, and community-oriented.

RESULT

CASE ILLUSTRATION

Mrs. D, aged 68 years, came to Puskesmas Gedong Tataan for a health check because the patient complained of right toe joint pain accompanied by a heavy nape since 1 day ago. Pain in the toe joints is felt to arise suddenly, more painful during activity and improves with rest. Complaints of pain can appear throughout the day and feel lost and arising. Complaints of pain in the joints > 1 hour in the morning are denied. The presence of swelling, heat and redness when the pain occurs is denied, the lump between the joints is denied. Nape pain is felt until the neck feels sore. Bending pain does not increase in severity and decreases with rest. There are no complaints of double vision, or flashes. Complaints like this have been felt before but the complaints disappeared. The patient had tried to go to the health center and was found to have a high cholesterol level 1 year ago and the patient was given medication. The patient came to the health center because he thought the complaints were due to the patient's high cholesterol. Previous history of diabetes and high blood pressure was denied. Family history of diabetes, cholesterol was denied. And hypertension was denied.

The patient has a habit of eating rice 1-2 times a day. The food consumed is quite varied. In one meal, the patient takes two bowls of rice, side dishes and some vegetables. However, the patient is not sure to eat rice in one day, usually the patient often snacks The patient admitted

that he really liked squid and shrimp. The patient also often consumes fried foods and somay. The food eaten is mostly processed by frying and flavored with coconut milk. The patient's activities are mostly spent relaxing at home, cleaning the house and taking care of the chickens. If the patient is bored, the patient is usually at home watching TV. The patient rarely exercises, smoking, drinking, and taking drugs are denied. The patient is of Javanese ethnicity. The patient's relationship with family members and the surrounding environment is good. The patient's family is a harmonious family but rarely get together due to their respective activities. Efforts to maintain the health of the patient and his family are still lacking because the pattern of treatment is only when there are complaints and only health checks when there are complaints. The patient said that so far, if he is sick, the patient goes to the Gedong Tataan Health Center which is approximately 2 kilometers from his house and usually the patient goes by motorbike accompanied by his son.

Physical Examination
General condition appeared mildly ill, compos mentis consciousness, blood pressure 135/85 mmHg, temperature 36.60C, pulse frequency 90x/min, respiratory frequency 18x/min, SpO2 99%, body weight 50 kg, height 158 cm, BMI 20.8 kg/m2 (normal).

Generalized Status
Hair, eyes, ears, nose, and throat are within normal limits. Neck examination within normal limits, lung and heart examination normochest inspection, ictus cordis not visible; palpation no tenderness, symmetrical chest wall expansion; sonorous percussion in both lung fields, heart borders not dilated; auscultation vesicular, heart sounds I and II normal. Abdominal examination inspection of flat abdomen; auscultation of intestinal noise 7 times per minute; percussion of tympanic throughout the abdominal field; palpation of tenderness and enlargement of the hepatic and spleen is absent. Examination of the superior and inferior extremities (dextra and sinistra) revealed warm palpable acral, CRT <2s, no edema, and no signs of joint inflammation. Neurologic status was within normal limits.

Localized status
Colli
I: symmetrical, hyperemic (-), lump (-)
P: tenderness (-), mass (-)
Pedis
I: edema (-), deformity (-), callus (-), redness (-)
P: palpable heat (-), tenderness (-), crepitation (-)
P: tap pain (-)

Laboratory examination
Uric Acid: 7.3 mg/dl Cholestrol: 250 mg/dl

Family Data
The patient is the 3rd of 5 children, the patient's father and mother are currently deceased, 4 of the patient's siblings live separately with the patient, some live in the same area and some live outside the city. The patient's husband is currently deceased, the patient's husband is the 2nd of 3 children. The patient has 3 children, the first child is 40 years old, the second is 32 years old, and the third is 27 years old. Currently, the patient lives with her third child while her two children live outside the area. The patient's family form is a nuclear family. All family problems are discussed and decided by the patient as the head of the family. The patient's psychology in the family seemed quite good. The relationship between family members was quite good. The family always took the time to get together in the evening. The patient's

family always worships at home. The family supports treatment if a family member is sick, but the family still lacks cooperation to create a good diet. Treatment behavior still prioritizes curative, namely checking themselves to health services when there are complaints that interfere with daily activities. Puskesmas Gedong Tataan is ± 2 km from the patient's house. The patient's medical expenses are obtained from BPJS.

Genogram

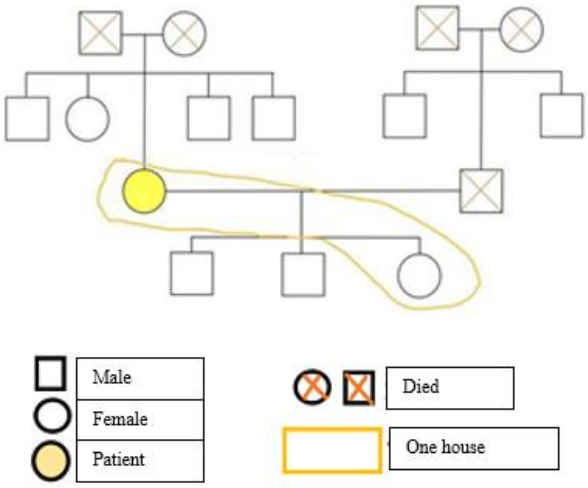
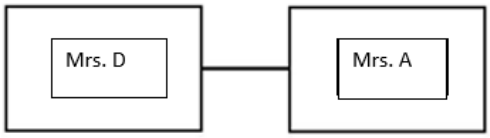


Figure 1. Genogram of Mrs. D's Family



Close relationship
Figure 2. Family Mapping

Family APGAR Score

Table 1.
Family APGAR Score

	APGAR	Score
Adaptation	I feel satisfied that I can ask my family for help when I face problems	2
Partnership	I am satisfied with the way my family discusses things with me and shares problems with me.	2
Growth	I am satisfied that my family accepts and supports my wishes to start new activities or goals in my life.	2
Affection	I am satisfied with the way my family expresses affection and responds to my feelings, such as anger, sadness and love.	1
Resolve	I am satisfied with the way my family and I share our time together.	2
	Total	9

Total Family Apgar Score is 9 (score 8-10, good family functioning)

Family Lifecycle
According to the Duvall cycle, Mrs. D's family life cycle is in stage VI, the stage of a family with adult children.

Family SCREEM
Pathological functions in the family can be assessed using the SCREEM Score, with a result of 25, it can be concluded that Mrs. D's family function has adequate resources.

Home Environment Data
The patient lives in a permanent self-owned house with the number of people living as many as 2 people consisting of the patient and 1 child. The patient's house is 15x10 m2. There are 2 bedrooms, 1 living room, one family room, one kitchen, one dining room, 1 toilet. There is a place for washing clothes and a drying room outside the kitchen door. The walls are walled, the floor is not tiled, the kitchen is inside the house. Enough sunlight enters the house, there are vents and windows in each room. The house is electrified, the water source is from a well, the kitchen facilities use a gas stove, drinking water needs come from well water.

INITIAL HOLISTIC DIAGNOSTIC
1. Personal Aspect
- Reason for arrival: Complaints of pain in the joints of the toes accompanied by a heavy nape so that the neck feels sore and also pain.
- Concerns: The patient is worried that the complaints will worsen and can hinder daily activities.
- Perception: Pain in the toe joints accompanied by a heavy head and nape disturbs the patient in carrying out his daily activities. The patient thought that his complaints were due to high cholesterol.
- Expectations: Complaints are reduced and disappear so that patients can do their usual activities.

2. Clinical Aspects
Hyperurecemia + Hypercholesterolemia (ICD X: E78, ICD X: E79)

3. Internal Risk Aspects
- Curative treatment pattern
- Infrequent exercise and light physical activity.
- Lack of desire to know what complications the disease can cause.
- Dietary patterns and eating habits are not appropriate.

4. External Risk Aspects
- Lack of family supervision and support for the patient's diet and physical activity.
- Lack of family knowledge regarding risk factors and complications of the patient's disease.

5. Functional Degree
The patient can still do daily work as before the illness so that the functional degree is 1.

INTERVENTION PLAN
The interventions given to this patient are in the form of medical and non-medicamentous according to the patient's disease. Medicinal interventions aim to reduce complaints and prevent recurrence in order to improve the patient's quality of life. Non-medicamentous interventions by providing explanations about the disease being suffered by patients using posters containing education in the form of knowledge about disease risk factors, patient diet,

and physical activity. Visits to the patient's home were carried out three times. The first visit was to complete data for the patient. The second visit was to conduct the intervention. The third visit was to evaluate the interventions that had been carried out. The interventions carried out are divided into patient center, family focused and community oriented.

Table 1.
Target Therapy Based on Initial Holistic Diagnosis

Holistic Diagnosis	Target Therapy
Hyperurecemia and hypercholesterolemia	Symptoms and reduced blood cholesterol levels controlled
Patient's perception is not yet correct about the relationship between lifestyle and disease	Patients can be more selective in choosing food and increase physical activity.
Patient's lack of knowledge about their disease	Patients can understand and care more about their disease.

Patient Centered Non-Medication

1. Educate and provide information on signs and symptoms of hyperurecemia, hypercholesterolemia.
2. Educate and provide information to patients about the complications of hyperurecemia and hypercholesterolemia.
3. Educate and explain to patients about the regulation of diet, drinking and physical activity.
4. Explain to patients the need for continuous disease control and monitoring.
5. Educate patients about the signs and symptoms of complications from hyperurecemia, hypercholesterolemia.

Medication

- Colchicine 0.5 mg 2 times a day (for 3 days)
- Allupurinol 100 mg 1 time a day (after completion of colchicine consumption for up to 1 week)
- Simvastatin 20 mg once daily

Family Focused

1. Educate and provide information using poster media to family members about hyperurecemia and hypercholesterolemia.
2. Provide education and information to the patient's family to help improve and maintain compliance with taking medication and maintaining a diet by eating low-fat, low-calorie and high-fiber foods, and drinking enough water.
3. Provide education and information to the patient's family regarding hyperurecemia, hypercholesterolemia.
4. Provide education and information about long-term complications of the patient's disease.
5. Explain to the family the need to provide support both morally and materially, as well as emotionally to the patient related to the patient's illness.

Counseling on the importance of supporting the first treatment pattern as early as possible so as not to aggravate the disease suffered by family members.

Community Oriented

1. Provide information and motivation directly to patients and families so that patients can increase physical activity through gymnastic sports activities at the health center.
2. Provide explanation and motivation to patients to follow and control their disease at the Integrated Assistance Post (Posbindu) activities.

FINAL HOLISTIC DIAGNOSTIC

1. Personal Aspect
- Reason for arrival: Complaints of pain in the joints of the toes accompanied by a heavy neck so that the neck feels sore and also the pain has decreased.
- Concerns: Concerns began to decrease with the patient's increased knowledge about the pain.
- Perception: The patient has known about the disease, namely hyperurecemia and hypercholesterolemia, where the cure must pay attention to lifestyle and eating habits that are not good for his body condition, and follow regular treatment by always routine control.
- Expectations: Complaints disappeared and the patient was able to move as usual.

2. Clinical Aspects
Hyperurecemia (ICD X: E78)

3. Internal Risk Aspect
- The patient understands the cause of the disease, which is caused by the consumption of foods high in fat and purines.
- The patient understands that exercise and light activity are beneficial to prevent recurrence of the disease.
- Patients understand the importance of taking the first treatment as early as possible so as not to aggravate the disease.
- The patient has adopted a low-fat and low-purine diet.

4. External Risk Aspects
- Family supervision: increased and family support for the patient's diet and physical activity.
- Increased family knowledge regarding risk factors and complications of the patient's disease.

5. Functional Degree
The degree of doing 1, which is capable of activity as before illness (no difficulty).

DISCUSSION

This coaching was carried out as a form of family medicine service to Mrs. D aged 68 years with hyperuricemia and hypercholesterolemia and to her family. This coaching is carried out holistically with a total of three visits. On the first visit, August 06, 2024, an introduction was made to the patient and the patient's child and explained the purpose and objectives of the visit. After obtaining informed consent, anamnesis was taken from the patient and family regarding the patient's illness and family circumstances. The patient's disease is a disease that can be controlled with the aim of avoiding various complications. This disease is a disease that depends on lifestyle, so it is necessary to provide guidance to the family so that the family can help in managing the patient's disease. The diagnosis was made through the patient's history, physical examination, and supporting examination. From the results of the history, the patient said that the right toe joint pain was accompanied by a heavy nape since 1 day ago. Pain in the toe joints is felt to arise suddenly, is more painful during activity and improves with rest. Complaints of pain can appear throughout the day and feel intermittent. Complaints of pain in the joints for > 1 hour in the morning are denied. The presence of swelling, heat and redness when the pain occurs is denied, the lump between the joints is denied (Nisa et al., 2023).

Nape pain is felt until the neck feels sore. Bending pain does not increase in severity and decreases with rest. There are no complaints of double vision, or flashes of light. Complaints like this have been felt before but the complaints disappeared. The patient had tried to go to the health center and was found to have a high cholesterol level 1 year ago and the patient was given medication. The patient came to the health center because he thought the complaints were due to the patient's high cholesterol. Previous history of diabetes and high blood pressure was denied. The patient has a habit of eating rice 1-2 times a day. The food consumed is quite varied. In one meal, the patient takes two bowls of rice, side dishes and some vegetables. However, the patient is not sure about eating rice in one day, usually the patient often snacks Patient admitted that he really liked squid and shrimp. The patient also often consumes fried foods and somay. The food eaten is mostly processed by frying and seasoned with coconut milk. The patient's activities are mostly spent sitting at home, cleaning the house and taking care of the chickens. The patient rarely exercised, smoking, drinking alcohol, and taking drugs were denied (Nisa et al., 2023; Riskesdas, 2018).

The general condition appeared mildly ill, compos mentis consciousness, blood pressure 135/85 mmHg, temperature 36.60C, pulse frequency 90x/min, respiratory frequency 18x/min, SpO2 99%, body weight 50 kg, height 158 cm, BMI 20.8 kg/m2 (normal). Laboratory examination showed blood cholesterol level of 250 mg/dL and uric acid of 7.3 mg/dL. In the anamnesis, the patient complained of a headache that radiated to the nape of the neck and in the laboratory examination an increase in cholesterol levels was found to be 250 mg/dL, which can support the patient being diagnosed with hypercholesterolemia. Based on the literature, the desired cholesterol target is <200 mg/dl (Nurhardita & Utama, 2025).The diagnosis of hyperuricemia in patients is based on history, physical examination and support. The patient complained of pain in his fingers, but on physical examination there were no signs of inflammation in the patient's joints, this may occur because the initial attack of hyperuricemia complications in the form of acute gouty arthritis tends to subside spontaneously within 3-10 days with different duration and recurrence intervals in each patient, this is appropriate because in the patient's history said the complaints first appeared 1 month ago. When the serum uric acid level was checked, the result was 7.3 mg/dl. The risk of complications of gouty arthritis or urolithiasis by Monosodium Urate (MSU) crystal deposits increases in line with increasing serum uric acid levels (Permatasari and Muhlishoh, 2020).

After determining the initial holistic diagnosis of the patient, an intervention plan was made including pharmacological and non-pharmacological management in accordance with the results of the first visit. The pharmacological management given was colchicine 2x0.5mg for three days. This treatment was chosen because the patient was in the acute phase, the choice of acute gout therapy with onset <24 hours is colchicine. The initial dose of colchicine during the acute phase is 1 mg, followed by 0.5 mg an hour later so that the total is 1.5 mg for the first day of therapy. Subsequently, the dose of colchicine can be reduced to 0.5 mg twice a day until 48 hours after the complaints are resolved (Winder et al., 2021).Follow-up pharmacological management given after passing the acute phase in the form of Allupurinol 1x100mg uric acid-lowering agent was given for 1 week and evaluated with a treatment target of uric acid < 6 mg/dL. This treatment was chosen because the patient was not in the acute phase, giving allupurinol according to the guidelines starting from the lowest dose of 100mg then can be increased gradually with a maximum dose of 800mg / day if serum uric acid levels do not decrease (Permenkes RI, 2022).

The principles of comprehensive management of hyperuricemia include:
1. Overcome acute attacks immediately with analgesic drugs, colchicine, corticosteroids;
2. Prevent recurrent attacks with analgetic drugs and low doses of colchicine;

3. Managing hyperuricemia with uric acid-lowering drugs and lifestyle modifications (drinking enough 8-10 glasses/day), maintaining ideal body weight, a healthy diet pattern low in purines) (Dewi et al., 2023).

Individuals with hyperuricemia, especially those with higher serum uric acid levels, are at risk of developing gouty arthritis. However, most people with hyperuricemia never develop gout, and prophylactic treatment is not indicated. In addition, neither structural kidney damage nor tophi can be identified before the first attack. Because treatment with specific antihyperuricemia agents requires patients to take >1 medication, more cost if patients purchase their own medications, and potential toxicity, routine treatment of asymptomatic hyperuricemia cannot be justified other than for the prevention of acute uric acid nephropathy. In addition, routine screening for asymptomatic hyperuricemia is not recommended. However, if hyperuricemia is diagnosed, the cause should be determined. Causative factors should be corrected if the condition is secondary, and associated problems such as hypercholesterolemia, hypertension, diabetes mellitus, and obesity should be treated. So the patient was only given simvastatin for one week and colchicine for three days and the intervention plan emphasized more on education of the patient and family, lifestyle modification through the media regarding the patient's illness (Nisa et al., 2023).

On the second visit, an intervention was carried out to the patient and the patient's family. The intervention provided counseling about the patient's disease using poster media. Poster media contains some material about cholesterolemia and urecemia accompanied by pictures so that it is expected to be easily understood by patients. The intervention focused on the knowledge of patients and their families about the disease, symptoms and signs, prevention and principles of balanced nutrition. Family focused role in this intervention is expected that all family members can become supervisors to patients while undergoing treatment. The patient's family is also expected to have a role in implementing healthy living behavior and applying the principles of a balanced nutritional diet. The patient's family is also expected to be responsible for the patient to deliver the patient to treatment and conduct routine health checks at least once every 3 months at health services.

Evaluation was conducted 1 week after the intervention. Evaluation activities aim to assess whether the expected targets of the intervention activities are achieved. Anamnesis was conducted again on the patient and it was found that complaints of pain in the toes and heavy nape were no longer felt. After the intervention, the patient's knowledge related to his disease was much better. The patient has started to exercise regularly with a morning walk around the house for 30 minutes. The patient also began to adjust his diet by adjusting the recommended nutritional needs by avoiding foods that are high in fat and eating foods that are high in fiber. The patient's concern about his illness has also begun to decrease. In perception, the patient has learned that the pain in the toes that he suffers is related to the high levels of cholesterol and uric acid in the patient's body. The patient hopes that his complaints can be reduced and can control his illness so that it does not get worse. The patient's cholesterol and uric acid levels after the intervention have reached the target of 165 mg/dL; 6.2 mg/dL.

CONCLUTION

Holistic management of a 68-year-old female patient with hypercholesterolemia and hyperuricemia through a family medicine approach in the Gedong Tataan Puskesmas working area shows the importance of comprehensive interventions, including bio-psycho-social and spiritual aspects of patients. This approach includes education about healthy eating patterns, increasing physical activity, routine monitoring of cholesterol and uric acid levels, and providing ongoing emotional and social support. Active involvement of family and health

professionals in the chronic disease management process has been shown to increase patient adherence to therapy and improve quality of life. The family medicine approach can be an important foundation in efforts to prevent complications and promote the health of the elderly with metabolic diseases.

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