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The implementation of family medicine approach of patients with hypertension, neurodermatitis, and obesity

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ABSTRACT

Diagnosis and management are carried out using a family medicine approach. Primary data were obtained through history, physical examination, supporting examinations and home visits. Secondary data from patient medical records from the Legok Health Center. Mrs. I, 44 years old with complaints of headache and itching in the left lower leg, blood pressure examination found 224/130 mmHg and BMI 31.16 kg/m². The patient's internal factors are genetic factors, lack of knowledge about the disease, as well as behavior and daily habits. External factors include lack of family support and knowledge about the disease, economic factors, transportation limitation, and beliefs and culture. By using the family medicine approach, it was found that blood pressure decreased by 170/90 mmHg, complaints of headaches, itching and skin lesions on the left lower leg improved and losing weight about 2 kg in 4 weeks. Complex clinical problems require holistic and comprehensive management through a family medicine approach. Individual management is not only an intervention on clinical aspects but also solutions to problems in environmental aspects that affect an individual's health.

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INTRODUCTION

Family medicine is a part of primary health care that provides comprehensive services and focuses on the family unit. Doctors are not limited to age, gender, organ abnormalities, or specific medical conditions, but study the principles of biomedical, behavioral, and social sciences for individuals and family. Types of health services include promotion, *prevention*, treatment, and rehabilitation. General practitioner services involve basic level screeners, middle-level specialists, referral hospitals, and general practitioners as payers, all working together under regulations and legislation (Anggraini et al., 2015)

Hypertension be wrong one disease not Infectious that become problem health important at entire world. Diagnosis Hypertension get Enforced when Pressure Blood Systolic (TDS) ≥ 140 mmHg and/or Pressure Blood Diastolic (TDS) ≥ 90 mmHg on Measurement at clinic or facilities service health (Perhimpunan Dokter Hipertensi Indonesia, 2021). Downloadmassage WHO, number event

Hypertension at year 2021 Estimated as large as 1,28 Billion people in entire world where some big community stay in the country Earn low and intermediate (World Health Organization, 2021). One in five patients with hypertension can control their blood pressure, so it can be concluded that about 80% of the population with hypertension is at risk of complications including heart attacks, stroke, heart rhythm disturbances and kidney damage. The occurrence of complications from hypertension accounts for 9.4 million deaths annually worldwide (WHO, 2015). Based on data from (Riset Kesehatan Dasar (Riskesdas), 2019) in 2018, the prevalence of hypertension based on diagnosis or taking antihypertensive drugs in Indonesia was 8.84% (Sukmawati E et al., 2018). Hypertension increases the risk of the occurrence of cardiovascular disease and direct or indirect organ damage. Structural or functional changes of arterial blood vessels and/or organs that are supplied due to an increase in blood pressure are called *hypertension-mediated organ damage* (HMOD). The organs associated with this change are the brain, heart, kidneys, central arteries as well as peripheral arteries and eyes (Osmar & Pérez, 2020). Mortality increased 2 fold with each increase in blood pressure 20/10 mmHg (Sukmawati, 2017; Susalit et al, 2004).

Circumscriprial neurodermatitis or what is often referred to as chronic liken simplex (LSK) is one of the skin diseases characterized by chronic skin thickening (likening) caused by chronic likenification caused by various stimuli that will make the sensation of itching. The highest incidence of occurrence of this disease is at the age of 35 to 50 years. Retrospective research in Taiwan, found an LSK incidence of 17.8 per 10,000 human years. In Indonesian studies, the incidence of LSK in the period 2009-2011 was 0.14%. (Susan, 2012; Juarez & Kwatra, 2021). Patients complain of itching that arises when they are not busy at night and can interfere with sleep. The sufferer feels more comfortable when scratched namun disappears after the wound arises due to replaced pain. Initially a single lesion is in the form of erythematous plaques with a slight edematous which over time the edema and erythema disappear and the lesion will squashed and thicken into likenification and excretion (Susan, 2012). Patients have a higher level of psychological disorders and lesions can occur secondary infections or in some cases can develop into carcinoma squamous cells (An et al., 2013).

Obesity is an abnormal accumulation or accumulation of fat in the body that interferes with health. Based on WHO, the calculation of obesity based on BMI (Body Mass Index) ≥ 25 kg/m². There were 650 million cases of obesity worldwide in 2016. Based on data from Riskesdas in 2018, the prevalence of obesity in Indonesia based on BMI was 21.8% (Anumba & Jivraj, 2018; World Health Organization, 2000). Obesity that is not intervened properly can cause only complications, including type 2 diabetes mellitus, cardiovascular disease, cancer, osteoarthritis and system disorders breathing (D Segula, 2014).

Mrs. I's patient aged 44 years is one of the patients at the Legok Health Center who suffers from hypertension she has suffered since 3 years ago. Uncontrolled patient blood pressure accompanied by circumscriprial neurodermatitis skin disease and obesity are the reasons for the family medicine approach to patients. Visits are made to avoid the progression of the disease and the occurrence of complications involving the brain, heart, kidneys, central arteries as well as peripheral arteries and eyes. If not visited, it is feared that the patient's quality of life will decrease.

RESEARCH METHOD

This qualitative research was carried out by identifying problems using the Blum concept (Prof. Dr. Sugiyono, 2019; Sugiyono, 2017, 2018). It is a paradigm through prioritizing the problem with the non-scoring technique (Delphi) method (Sugiarto *et al.*, 2020). A fishbone diagram was used to determine the root cause of the problem. Interventions were carried out through counseling about Family Medicine Approach of Patients with Hypertension, Neurodermatitis, and Obesity

RESULTS AND DISCUSSIONS

A 44-year-old woman came in with complaints of headaches as early as 1 day before going to the Health Center. Headaches are felt throbbing all over the head especially when waking up. Headache accompanied by vomiting twice. Previously, patients have felt this way, especially when the patient's blood pressure is high. Patients also complain of itchy left lower limbs. Itching in the left leg disappears and appears especially when the patient is stressed and improves when the patient is in good health. One day before the headache, the patient quarreled with the fourth child over economic problems and the patient's high blood pressure medicine ran out and had not had time to buy. The patient is known to have hypertension since 3 years ago and has a history of stroke pada November 2020 without sequelae. The patient has taken Amlodipin 10 mg once a day, gentamicin ointment and ketoconazole ointment for his left leg but during treatment there has been no improvement which is meaningful. Patients take contraceptive birth control pills once a day for 14 years.

Family form with patrilinear, matrilocal, extended *family* members and equalitarium power. Duvall's life cycle is at the stage with adolescents and the middle age parental stage.

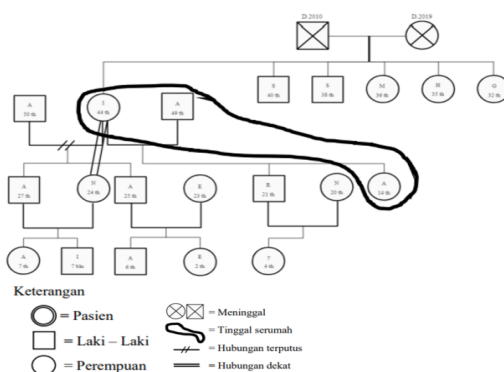


Figure 1. Genogram of Mrs. I's family

The family's source of income comes only from Mr. U.S. income. The economic situation of Mrs. I's family is classified as a middle and lower economic community because of the lower income from the UMK of Tange Rang Regency.

In their daily life, patients eat 3 times a day with interludes as much as 2 times. Breakfast, usually patients consume white rice with fried tofu or fried tempeh. At lunchtime, patients cook fried tempeh, processed noodles, olahan various vegetables, and side dishes in the form of mackerel or chicken. The same meal the patient will eat for dinner. The patient's preferred interlude is sweet tea and coconut biscuits. In 1 month at least the patient takes instant snacks approximately 2 times. A fruit that is often consumed is salak. The patient drinks a day about 1.5-2 liters. The drinking water consumed is drinking water cooked to a boil obtained from a water pump. The house where Mrs. I's family lived was a private rumah on the inherited land from Mrs. I's father. Land area is 88.4 m² with a building area of 40 m². The walls of Mrs. I's outer and inner house are made of woven bamboo, white bricks, wallpaper and banners. The front of the house and warehouse is painted white, in the living room it is not painted but is woven bamboo. In the children's room, the walls are painted light green and the main room is unpainted and covered with banners. In the kitchen and bathroom, it is painted in turquoise green. The bathroom is made of white bricks and semen. The floor of the terrace, shed, living room, room, and kitchen is made of cement. The roof of the terrace, shed, living room, room and kitchen are bamboo lines covered with plastic in both bedrooms and warehouses. The source of clean water comes from the pumping water that lies behind Mrs. I's house with a well distance from the sewage excavation of about 14.8 m. Mrs. I's household garbage was collected on the right side of the

house, and then in the afternoon, the patient's husband burned the garbage. Sewage from bathrooms and kitchens flows with pipa towards the excavation of sewage wells located behind the house. Mrs. I used a squat latrine with a waste well excavation site located behind the house. Mrs. I's bathroom is located in the house at the back. In kamar mandi there is a latrine and bathtub in the form of a bucket. The size of the bathroom is about 1.5 m x 1.5 m with a cement floor

The physical examination obtained compos mentis awareness, blood pressure 240/130 mmHg, pulse 95x/min, regular 19x/min, and temperature 36.5°C. The weight test was obtained by 72 kg and height of 152 cm so that a BMI of 31.16 kg / m² was obtained which is classified as obesity degree 2. In the 1/3 inferior cruris sinistra lateral side, 4 cm above the lateral malleolus sinistra there is a 5x15 cm hyperpigmentation plaque leswith likenification.



Figure 2. Localist Status Mrs. I

In the supporting examination, uric acid, cholesterol, and blood sugar levels were obtained within normal limits.

Holistic Diagnosis in these patients is in the form of:

a. Personal Aspects

Complaints: throbbing headache in the whole head, itching of the left lower leg, fear that the patient will develop complications due to high blood pressure such as stroke

b. Clinic Aspects

Working Diagnosis: secondary cephalgia et causa hypertension 2 uncontrolled, Additional Diagnosis: circumsriptal neurodermatitis, obesity of the 2nd degree

c. Internal Aspects

Mrs. I's mother died of heart disease due to uncontrolled high blood pressure, Mrs. I's lack of knowledge about hypertension and its complications, Mrs. I's lack of knowledge regarding skin diseases, Mrs. I often scratched her left lower leg unnoticed, Mrs. I never exercise and physical activity is relatively light

d. External Aspects

Mrs. I's family lacks knowledge of hypertensive diseases, circumsriptal neurodermatitis and 2nd degree obesity, Mrs. I do not work and rely entirely on her husband's income so that the money for treatment is limited and often stresses patients due to economic limitations, Mrs. I had no transportation or companion capable of accompanying Mrs. I, Mrs. I cannot use contraception in the womb because the patient and the surrounding environment are afraid that the IUD can come out if it coughs and is uncomfortable when intercourse, The patient's husband is a smoker and often smokes inside and outside the house, Mrs. I's third child impregnated a female student outside nikah during high school 1st grade, since the incident, the patient often had headaches and itching in the legs, All of Mrs. I's children tend not to listen to the advice of

Mrs. I that makes Mrs. I feel sad, Limited availability of drugs in the management of hypertension and circumsriptal neurodermatitis

e. Functional Aspects

There are few obstacles in carryingout daily tasks (Functional scale: 4

The management given to this patient is in the form of non-pharmacological and pharmacological management. Non-pharmacological management in the form of explaining hypertension, the importance of taking regulated medications and controlling blood pressure, as well as complications that can occur if pressure uncontrolled blood, application of the DASH diet with recommendations to limit salt intake, low-fat diet, increase fruit and vegetable intake, explaining about avoiding cigarette smoke as well as the smoke of burning garbage near his home, explaining the effects of hormonal birth control and suggesting by replacing hormonal birth control with non-hormonal birth control such as wearing condoms or AKDR or the method of surgery, motivating Mrs. I to come regularly to the Health Center to check blood pressure and obtain medicine so that Mrs. I's blood pressure remains controlled, explain about circumsriptal neurodermatitis disease and the importance of breaking the scratching itch cycle, explaining about the trigger of itching in the form of an endogenous (psychological) originator and exogenous originators (weather, allergens and food), recommend carrying out skin barrier repair treatments by maintaining skin moisture through the use of bath soap with baby soap, advocating to keep nails short to prevent irritation when scratching, advocating to avoid cycles itching with the use of a cold water compress, recommend performing stimulus control techniques such as keeping hands busy, opening and closing hand grips or holding objects such as rubber balls when performing light activities such as watching TV in diverting scratching behavior, educating Mrs. I on u.s. obesit and the impact of obesity on Mrs. I's health, advocating weight loss body to achieve the ideal weight gradually, with a goal of 0.5-1 kg per week by limiting calories and increasing physical activity, advocating to increase aactivity physical by limiting calories and increasing physical activity, advocating to increase physical activity with aerobic exercise for 90-150 minutes and/or dynamic resistance training such as jogging and/or isometric resistance exercises such as RTI pushing immobile objects 3x /week or making it a habit to travel on foot such as go shopping to the market, provide education about the effect of psychological stress on the patient's health condition, especially hypertension and circumsriptal neurodermatitis, provide education to Mrs. I's family on hypertension, circumsriptal neurodermatitis and obesity, explained to the family the role of companions in the treatment process at the facility health, told Mrs. I's husband about the dangers of smoking to oneself and the health of the family.

Pharmacological management in the form of amlodipine 10 mg 1x1, captopril 25 mg 3x1, HCT 25 mg 1x1, ibuprofen 400 mg 2x1, vitamin B complex 1x1, cetirizine 1x10 mg, salep hydrocortisone 3x a day, salicyl powder if necessary. A patient approach with the concept of family medicine was carried out on Mrs. I who was 44 years old with a clinical diagnosis of uncontrolled 2nd degree hypertension, circumsriptal neurodermatitis, dan obesity degree II. This patient approach uses the *Mandala of health* by reviewing from various aspects. This patient has uncontrolled blood pressure and itching in the left lower leg since approximately 3 years and the patient's and family's knowledge is still lacking towards the disease he was experiencing. Family management also needs to be done to evaluate, intervene and perform holistic and comprehensive diagnostics (Hancock, 1985). Enforcement of the diagnosis of hypertension, neurodermatitis and obesity is carried out with anamnesis and physical torture (inaSH, 2021; Susan, 2012; World Health Organization, 2000).

The hypertension approach that is carried out includes medicamentous and holistic approaches. The medicamentous approach is carried out based on guidelines from the Indonesian Hypertension Doctors Association in 2021, where the patient's blood pressure of 240/130 is

included in the 2nd degree of hypertension with the essential target of reduction is at least 20/10 mmHg, ideally <140/90 mmHg. It is expected that the optimal target for the age of <65 years, <130/80 mmHg, jika tolerable (ideally >120/70 mmHg). Initiation of treatment using a combination of two drugs, including RAS blockers in the form of ACE-I or ARB with CCB or diuretics. The combination of three drugs consisting of RAS blockers (ACE-I or ARB), CCB and diuretics is carried out if blood pressure is not controlled with two drug combinations (Perhimpunan Dokter Hipertensi Indonesia, 2021). The first visit at the patient's home obtained blood pressure of 240/130 and the management of hypertension was carried out with the use of captopril s ublingual 25 mg because studies showed sublingual captopril 25 mg can lower the pressure within 30 minutes. Sublingual captopril is effective and safe for lowering blood pressure in patients with emergency hypertension (Angeli et al., 1991; Sukmawati, 2018).

The education provided includes lifestyle changes including, exercising to lose weight to achieve the ideal weight gradually, implementing the DASH diet by limiting salt intake, low-fat diet, increase fruit and vegetable intake, application of low salt diet, increase physical activity and avoid cigarette smoke and smoke burning existing waste near his home (I Dewi Nyoman Supariasa, 2019). Suggest changing hormonal birth control to non-hormonal birth control because the use of hormonal birth control can increase systolic blood pressure by 7-8 mmHg (Shufelt & Levee, 2020). Figure 1 shows the results of hypertension intervention in the form of a decrease in blood pressure from 240/130 mmHg to 170/90 mmHg accompanied by improvements in symptoms, namely patients do not complain of pain k epal.

Table 1 presents the results of follow-ups carried out during the home visit period and when patients visit the Legok Health Center in the form of blood pressure and management given.

Table 1. Results of Darah Pressure Intervention

No	Date	Blood pressure	Management
1.	17/9/2022	224/130	Amlodipine 10 mg 1x1 Captopril 12.5 mg 3x1
2.	23/9/2022	240/130	Hypertension urgency: Captopril 25 mg sublingual Amlodipine 10 mg 1x1 Captopril 12.5 mg 3x1
3..	26/9/2022	230/110	Amlodipine 10mg 1x1 Captopril 12.5 mg 3x1 HCT 25 mg 1x1
4.	28/9/2022	200/110	Amlodipine 10mg 1x1 Captopril 12.5 mg 3x1 HCT 25 mg 1x1
5.	30/9/2022	200/100	Amlodipine 10 mg 1x1 Captopril 25 mg 3x1 HCT 25 mg 1x1
6.	5/10/2022	180/90	Amlodipine 10 mg 1x1 Captopril 25 mg 3x1 HCT 25 mg 1x1
7.	10/10/2022	170/90	Amlodipine 10 mg 1x1 Captopril 25 mg 3 x 1 HCT 25 mg 1x1

Medicamentous and non-medicamentous approaches to circumscriprial neurodermatitis with topical steroids and administration of nonsteroidal antipruritus. Education to keep nails short to prevent scratching and using cold compresses until the ga tal sensation decreases (Susan, 2012). Use stimulus control techniques such as keeping hands busy , opening and closing hand grips or holding objects such as rubber balls to divert situations that may cause scratching behavior (Torales et al., 2016).

The results of the intervention on circumscriprial neurodermatitis were in the form of improvement of itching and improvement of skin lesions on the left lower limb of the patient attached to figure 2.



Figure 3. Neurodermatitis Conditions

The approach to degree 2 obesity is in the form of calorie restrictions according to each individual that are adjusted to habits, activities and comorbidities. It is generally recommended to reduce calories 600 kcal / day which is predicted to lose 0.5 kg in one week (Yumuk et al., 2015). Increases physical activity with moderate to moderate intensity resulting in increased expenditure of energy and muscle mass. Physical exercise must be done properly, correctly, measurably and regularly with a frequency of 3-5 times a week with a duration of at least 150 minutes / week (WHO, 2015).

CONCLUSION

The results of the intervention in 2nd degree obesity in this patient were in the form of weight loss of 2 kg for 1 month. Shortatan family medicine using the *Mandala paradigm of health* and based on a comprehensive and holistic approach in this case obtained risk factors for uncontrolled degree 2 hypertension, neurodermatitis Circumcision and Degree 2 obesity arebased on age, genetics, lifestyle factors such as low activity, passive smoking, hormonal contraceptive use and psychological stress. This case shows an improvement in the patient's condition in the form of improvement of symptoms, decrease in blood pressure, improvement of skin lesions and weight loss as well as an increase in knowledge, attitude and behavior. This shows that family medicine services can improve the quality of life and health of patients.

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