Penatalaksanaan Holistik dengan Pendekatan Dokter Keluarga pada Wanita Usia 42 Tahun dengan Asma Persisten Sedang

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Abstrak

Asma merupakan penyakit heterogen yang ditandai dengan peradangan kronik pada saluran napas serta gejala seperti mengi, sesak napas, batuk, dan rasa berat di dada yang bervariasi dalam frekuensi dan intensitas. Penelitian ini bertujuan untuk menggambarkan penatalaksanaan holistik pada pasien asma persisten sedang melalui pendekatan dokter keluarga. Metode yang digunakan adalah laporan kasus deskriptif dengan pengumpulan data primer melalui autoanamnesis, pemeriksaan fisik, dan kunjungan rumah, serta data sekunder dari rekam medis pasien di Puskesmas Panjang. Pasien Ny. LM, usia 42 tahun, didiagnosis asma persisten sedang dengan keluhan sesak napas berulang yang dipicu oleh debu, asap, aktivitas berat, dan stres. Penatalaksanaan dilakukan secara komprehensif meliputi terapi farmakologis berupa bronkodilator, inhaler kombinasi kortikosteroid dan agonis beta kerja panjang, serta antihistamin. Intervensi nonfarmakologis meliputi edukasi pasien, penggunaan media poster, latihan senam asma, serta pengendalian faktor pencetus. Pendekatan juga melibatkan keluarga dalam mendukung kepatuhan terapi, pengawasan pengobatan, dan perbaikan lingkungan rumah. Evaluasi menunjukkan perbaikan gejala klinis dengan penurunan frekuensi serangan, peningkatan pemahaman pasien yang diukur melalui perbandingan nilai pre-test dan post-test, serta peningkatan dukungan keluarga. Pendekatan dokter keluarga memungkinkan identifikasi faktor risiko secara menyeluruh sehingga intervensi lebih tepat sasaran. Penatalaksanaan holistik ini efektif dalam meningkatkan kualitas hidup pasien, mengontrol gejala, dan mencegah kekambuhan secara berkelanjutan.

Kata Kunci: Asma, kedokteran keluarga, penatalaksanaan holistik

Holistic Management with Family Doctor Approach in a 42-Year-Old Woman with Moderate Persistant Asthma

Abstract

Asthma is a heterogeneous disease characterized by chronic airway inflammation and symptoms such as wheezing, shortness of breath, cough, and chest tightness that vary in frequency and intensity. This study aims to describe holistic management of a patient with moderate persistent asthma using a family doctor approach. This study used a descriptive case report design. Primary data were obtained through autoanamnesis, physical examination, and home visits, while secondary data were collected from medical records at the Panjang Public Health Center. The patient, Mrs. LM, 42 years old, was diagnosed with moderate persistent asthma with recurrent episodes of dyspnea triggered by dust, smoke, physical activity, and stress. Comprehensive management included pharmacological therapy consisting of bronchodilators, combination inhaled corticosteroids with long-acting beta-agonists, and antihistamines. Non-pharmacological interventions included patient education, the use of poster media, asthma exercise training, and trigger avoidance strategies. The family was actively involved to improve treatment adherence, supervise medication use, and support environmental control at home. Evaluation showed clinical improvement with reduced frequency of asthma attacks, increased patient knowledge based on pre-test and post-test comparisons, and improved family support. The family doctor approach enables comprehensive identification of internal and external risk factors, allowing targeted interventions. Holistic management proved effective in improving quality of life, controlling symptoms, and preventing recurrence in a sustainable manner.

Key Words: Asthma, family medicine, holistic management.

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Introduction

Asthma is a chronic inflammatory disease of the airways characterized by recurrent symptoms such as shortness of breath, wheezing, coughing, and chest tightness. These symptoms can vary in intensity and frequency, often triggered by factors such as allergens, physical activity, or changes in the weather. Asthma is a heterogeneous condition that requires long-term management to achieve optimal control.[1,2]

Currently, asthma still shows a high prevalence. According to data from the Global Initiative for Asthma (GINA) in 2022, the incidence of asthma from various countries is 1-18% and it is estimated that 300 million people in the world suffer from asthma (Global Initiative For Asthma, 2022). Based on WHO data, it is estimated that 300 million people worldwide suffer from asthma and in 2025 the number of asthma patients is estimated to reach 400 million. This number could be greater considering that asthma is an underdiagnosed disease.[3]

According to data from the Ministry of Health of the Republic of Indonesia (Kemenkes) in 2020, the prevalence of asthma in Indonesia reached 4.5% of the total population, or around 12 million people. Based on data from the Indonesian Health Survey (SKI) in 2023, the prevalence of asthma in Indonesia reached 1.6%, the DI Yogyakarta province was the highest province with an asthma incidence rate of 3.5% and the lowest was the province of North Sumatra reaching 0.5%, while the incidence of asthma in Lampung reached 1.4%.[4]

Uncontrolled asthma can cause various complications such as acute respiratory failure, decreased quality of life, absence from work or school, and a large financial burden for the family. In addition, severe asthma attacks (status asthmaticus) can lead to hospitalization or even death if not treated properly. However, the success of asthma treatment is not only determined by pharmacological therapy but also requires lifestyle modification, stress management, and control of environmental factors that trigger asthma attacks. Therefore, a holistic approach is needed with a family doctor approach including patient-centered, family-approach and community-oriented to encourage changes in patient behavior so that management goals are achieved.[5]

A holistic approach through the family is very important in treating asthma because the family is the main supporter of the patient in everyday life. This approach includes physical, emotional, social, and environmental aspects. Through family support, patients can more easily manage stress that triggers asthma attacks, comply with medication and control schedules, and keep the home environment free from asthma triggers. In addition, a holistic approach also encourages family empowerment to understand asthma as a chronic disease that requires long-term treatment. Thus, the patient's quality of life can be significantly improved, the risk of complications can be reduced, and the socio-economic burden on the family can be minimized.[6,]

Case Presentation

Patient Mrs. LM, a 42-year-old woman came to the outpatient clinic of Panjang Health Center on Tuesday, December 17, 2024 with complaints of shortness of breath. Shortness of breath is felt repeatedly 2-3 times a week. Shortness of breath is accompanied by a heavy chest and a "ngik..ngik.." breathing sound. The patient admitted that shortness of breath hampers activities and interferes with sleep. Complaints of shortness of breath usually arise when the patient is cleaning the house, exposed to smoke, tired from a lot of activity, and stressed. Shortness of breath is said to decrease when the patient rests and takes relievers. The patient also complained of frequent sneezing and feeling a stuffy and runny nose when exposed to dust and smoke. These complaints are usually accompanied by a cough with phlegm that comes and goes. However, phlegm is difficult to remove. Complaints of fever, weight loss, and night sweats were denied by the patient. The patient also denied complaints of chest pain.

The patient is known to have a history of asthma since the age of 14, usually occurs when the weather is cold and exposed to dust, the complaint did not arise for a long time and

only reappeared when the patient became an adult. The complaint of shortness of breath experienced has been felt for approximately 10 years. Initially, this complaint of shortness of breath rarely occurred in a year, only 2-3 times or did not arise at all and could improve on its own. However, when the shortness of breath was felt to be getting worse, the family took the patient to the hospital for steam and then the complaint of shortness of breath improved. Since 1 year ago, the complaint of shortness of breath was felt to be more frequent and severe, in a month the complaint of shortness of breath occurred 3 to 4 times and even appeared every week, the complaint of shortness of breath felt also did not improve so that the patient had to undergo treatment at the hospital several times. The patient was then advised to start regular check-ups with a doctor even though the complaint of shortness of breath was not felt.

The patient has allergies to dust and smoke, no allergies to drugs or food. A history of asthma is present in the family, namely the patient's mother. The patient's older sibling often sneezes and has a stuffy nose when exposed to cold air in the morning and dust. The patient's residential environment is around a factory area and is often passed by large vehicles, the patient's neighbors also often burn garbage around the patient's home environment. The patient works as a housewife. Every day the patient goes to take her child to school on foot, outside of that the patient is more active at home.

Patient is the last child of 5 siblings, both of the patient's parents have passed away. The patient has been married for 17 years. Currently, the patient lives with her husband (Mr. E) and her three children who are still in school, namely An. E, An. H, and An. M (Figure 1). All important decisions regarding the family are taken based on discussions between Mr. E and Mrs. L with the consent of the patient's husband as the head of the family, for children have not been involved in decision making. The treatment pattern for the patient's family is if they have complaints that do not improve and interfere with activities, immediately check themselves at the Panjang Health Center.

The patient's family's monthly income of around Rp2,500,000-4,000,000 is obtained from the patient's husband's job, which is used to meet the living needs of 5 family members. The family's material needs are quite well met up to the level of secondary needs. The family sometimes saves if all primary needs have been met for unexpected expenses.

Family function is assessed using the family APGAR score, namely Adaptation 2, Partnership 1, Growth 2, Affection 1, Resolve 1. Thus, this family function is good because it has a total value of 7 (value 7-10, good family function). The pathological function of the family can be assessed using the SCREEM Score, with a result of 27, it can be concluded that Mrs. L's family function has adequate resources.

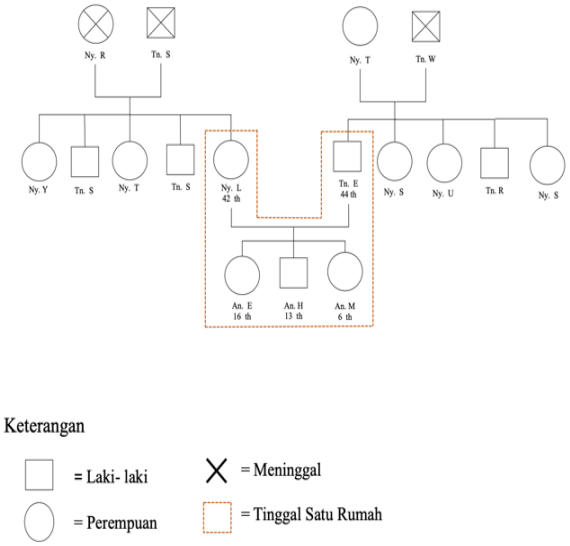

Figure 1. Mrs. L's Family Genogram

The patient lives with her husband and three children in a private house in a fairly densely populated area close to a factory area and is often passed by large vehicles. Based on the interview results, the patient's house measures 51 m^2 (6 m x 8.5 m), consists of 1 room that functions as a living room and family room, 2 bedrooms, 1 bathroom and 1 room that functions as a kitchen and dining room. The patient's house has walls of cemented and painted bricks, all floors are tiled, and the living room and kitchen have an asbestos roof without a ceiling. Lighting is by sunlight (windows with ventilation are in every room except the bathroom) during the day and electric lights at night. The cleanliness of the

room is quite clean and every item is neatly arranged in its place.

On physical examination, the patient's vital signs and general status were within normal limits. On local lung examination, wheezing was found in both lung fields. In the supporting examination, namely a chest X-ray, the impression was obtained slightly increased pulmonary bronchovascular markings. Spirometry examination found the impression of severe asthma. Based on anamnesis and physical examination, an initial holistic diagnosis was obtained in this patient, namely:

1. Personal Aspects
   - Reason for visit: The patient wants to have regular check-ups and take medication every month for recurring shortness of breath (ICPC 2-R02: Shortness of breath)
   - Concern: complaints of shortness of breath that often arise and worsen, and interfere with daily activities (ICPC 2-R27: fear of respiratory disease).
   - Perception: shortness of breath usually occurs when exposed to dust, smoke, fatigue, and triggered by stress. Complaints improve with the use of medication. The disease requires long-term and routine treatment (ICPC 2-Z11: compliance/being ill problem).
   - Expectation: The patient's complaints improve and do not occur frequently so they do not interfere with daily activities (ICPC 2-Z28: limited function or disability)
2. Clinical Aspects
   Allergic predominant asthma and Persistent Asthma severity Moderate (ICD X: J45.0 and J45.4; Wheezing (ICD X: R06.2, ICPC 2: R03)
3. Internal Risk Aspects
   - Family history of asthma, namely the patient's mother and sibling have a history of allergies to dust (ICD 10-Z84.89)
   - Lack of patient knowledge regarding the definition of asthma, causes and triggers of recurrent asthma, asthma symptoms, controlled asthma, prevention of asthma exacerbations and the importance of clean and healthy living behavior (ICPC 2-Z07: education problem)
   - Patients often do not avoid asthma triggers and rarely wear masks when cleaning the house and doing activities outside the home (ICPC 2-Z21: behavior problem parent/family)
   - Poor patient lifestyle such as patients do not exercise regularly (ICPC 2-Z21: behavior problem parent/family)
   - Previous curative treatment behavior and untimely control (ICD 10-Z76.8: person encountering health service in other specified circumstances)
4. External Risk Ascpects
   - Lack of family understanding regarding the definition of asthma suffered by the patient, the causative factors-triggers of recurrent asthma attacks, asthma symptoms, controlled asthma and the importance of clean and healthy living behavior and how to treat asthma (ICD X-Z55.9)
   - Families who are still not very involved in patient treatment, such as helping to remind patients to avoid triggers, take medication, and have regular check-ups
   - Neighbors in the patient's residential environment often burn garbage
   - The patient's residential environment is around a factory and is often passed by large vehicles, potentially causing air to contain a lot of dust (ICD 10-Z77.9)
   - The patient's daily life as a housewife and husband who is often not at home, makes most of the work and household problems done by themselves
   - Lack of socialization and education regarding asthma
5. Functional Degree
   Functional level 2 (two), namely being able to carry out daily work inside and outside the home (patients begin to reduce heavy activities)

The interventions given to this patient are divided into patient-centered, family-approached, and community-based. **Patient-centered interventions** include:

Non-Medicine

1. Education about asthma includes definition, asthma symptoms, triggers for recurrent asthma attacks, controlled asthma, prevention of asthma exacerbations and the importance of clean and healthy living behavior, and how to handle asthma attacks
2. Education to patients to avoid asthma triggers and to wear masks when cleaning the house and doing activities outside the home
3. Education to patients to exercise regularly with physical activities that are suitable for asthma sufferers such as asthma exercises through showing asthma exercise videos.
4. Education to patients about taking medication regularly and having regular check-ups with the doctor, and ensuring that the amount of medication is sufficient until the next check-up.
5. Education to patients about managing stress experienced by patients.

Medicine

1. Seretide Diskus 50/500 mcg inhalation 2 dd puff 1
2. Salbutamol 2 mg 3 dd tab 1 prn
3. Cetirizine 10 mg 1 dd tab 1

Family Focused

1. Education to the patient's family about the patient's asthma including the definition, symptoms of asthma, factors that trigger recurrent asthma attacks, controlled asthma, prevention of asthma exacerbations and the importance of a clean and healthy lifestyle, and how to handle asthma attacks
2. Education to the family to always remind the patient to avoid triggers and to wear a mask when cleaning the house and doing activities outside the home
3. The family reminds and accompanies the patient in doing physical activities such as asthma exercises
4. Education and motivation regarding the need for attention from all family members to improve the patient's illness because the illness requires long-term treatment, ensuring that the patient takes medication according to the doctor's prescription, and regular check-ups with health services, helping to check the amount of medication to ensure that the medication does not run out before the next check-up.
5. Involving the patient's family members in processing household workloads, and stress management..

Community Oriented

1. Implement health promotion by providing education related to asthma and triggers for asthma because this disease can recur. Collaborate with a lung specialist to conduct supporting examinations and further management
2. Educate neighbors around the patient's residence to maintain environmental cleanliness and not burn garbage
3. Educate patients to join an asthma sufferer group via WhatsApp to get education related to asthma and participate in asthma exercises.

Discussion

A case study was conducted on a 42-year-old female patient diagnosed with moderate persistent asthma. Chronic respiratory disease suffered by the patient is influenced by genetic factors, host factors, and various triggers that can cause long-term risks if not properly controlled, which is the reason for family counseling.

Patient counseling begins with anamnesis and physical examination at the first meeting at the Panjang Health Center outpatient service. Patient Mrs. LM, a 42-year-old woman came to the Panjang Health Center outpatient clinic on Tuesday, December 17, 2024 with complaints of shortness of breath. Shortness of breath is felt repeatedly 2-3 times a week. Shortness of breath accompanied by a heavy chest and a "wheezing" breath sound. The patient admitted that shortness of breath hampers activities and interferes with sleep.

Complaints of shortness of breath usually arise when the patient is cleaning the house, exposed to smoke, tired from a lot of activity, and stressed. Shortness of breath is said to decrease when the patient rests and takes relievers. The patient also complained of frequent sneezing and feeling a stuffy and runny nose when exposed to dust and smoke. This complaint is usually accompanied by a cough with phlegm that comes and goes. However, the phlegm is difficult to remove.

This is in accordance with the definition and characteristics of asthma diagnosis according to the Global Initiatives for Asthma (2024), namely asthma is a heterogeneous disease characterized by chronic inflammation of the airways. This disease is diagnosed based on a history of respiratory symptoms such as wheezing, shortness of breath, chest tightness and coughing that vary in time and intensity, accompanied by limitations in expiratory airflow. 5 The expiratory phase in asthma patients becomes longer where the normal inspiration and expiration ratio is 1: 2, but in asthma it lengthens to 1: 3 or 1: 4. Under normal conditions, the bronchioles will constrict (narrow) during expiration so that in asthma it will result in bronchospasm, thickened airways, and increased mucus secretion which will play a role in the emergence of asthma symptoms.[2,8]

Based on the results of anamnesis and analysis using the asthma control test from GINA 2024, the patient's history of asthma is included in the category of uncontrolled asthma because in the last 4 weeks asthma attacks can occur 2-3 times a week and the use of SABA as a reliever also sometimes reaches 3 times a week and there are activities that are disrupted due to asthma conditions.

In addition to the complaints in the patient, the anamnesis obtained data on other risk factors to support the diagnosis of asthma. The patient also had a history of allergic rhinitis. Allergic rhinitis is defined as inflammation of the nasal mucosa caused by an inflammatory process, and triggered by a history of exposure to allergens. Research conducted in the US shows that rhinitis increases the risk of developing asthma by about three times, both in atopic and nonatopic patients. 10.5% of the sample initially diagnosed with allergic rhinitis, their disease developed into asthma, compared to 3.6% of those who did not suffer from rhinitis.[9]

On physical examination, the general condition was mildly ill, consciousness E4V5M6 (compos mentis), blood pressure 126/80 mmHg, pulse rate 92x/minute, respiratory rate 22x/minute, temperature 36.7 °C, weight 48 kg, height 149 cm, and Body Mass Index 21.6 kg/m2. General status on the patient's thorax showed wheezing in both lung fields. Neurological status was within normal limits. In a stable condition without symptoms, physical examination of the patient usually did not find any abnormalities. When experiencing symptoms of coughing or shortness of breath, wheezing can be heard, either heard directly or heard with a stethoscope. In addition, it is necessary to look for other signs of allergies.[10]

Supporting examinations that can be performed include general examinations when not having an attack (spirometry, bronchodilator test, methacholine/histamine test, peak flow rate, blood gas analysis, chest X-ray, total or specific IgE levels, total serum eosinophil levels, routine blood and skin prick test) and special examinations (body box, cardiopulmonary exercise, sputum eosinophils, and exhaled NO levels (FeNO)). In asthma patients, a normal/hyperinflated thorax is found. Chest X-ray examination to rule out diseases other than asthma. A slight increase in bronchovascular patterns was found in the lungs. Based on theory, X-ray examinations in bronchial asthma are generally normal. However, this examination in bronchial asthma attacks can show lung hyperinflation in the form of increased radiolucency and widening of the intercostal cavity and a decreased diaphragm. In the peak expiratory flow examination, it decreased, with the administration of bronchodilators increasing ≥ 20% and the VEP1/KVP value < 75%, with bronchodilator administration increasing ≥ 12% and 200 ml so that it is often referred to as reversible obstructive disease.[2]

The general goal of asthma management is to improve quality of life and reduce shortness of breath. Asthma management includes pharmacological therapy consisting of

oral medications and inhaled medications. The patient has been using asthma therapy in the form of seretide diskus 50/500 mcg inhaled medication. as a controller medication and salbutamol when an asthma attack occurs. Seretide diskus is a combination of two controller/prophylaxis drugs, salmeterol, which is a long-acting β-2 agonist (LABA) and fluticasone propionate, which is a class of inhaled corticosteroids/ICs.5,15 LABAs, such as salmeterol, formoterol, and vilanterol, are used as controller drugs for asthma. They have a mechanism of action similar to short-acting β2 agonists (SABAs), namely relaxing airway smooth muscle by blocking β-adrenergic receptors. Despite having a longer half-life than SABAs, LABAs are not used as monotherapy but must be combined with inhaled corticosteroids (ICs) for effective asthma management.[11]

Allergic contact dermatitis is skin inflammation caused by antigens that cause type IV hypersensitivity reactions. DKA is an immune reaction that tends to involve the surrounding skin (spreading phenomenon) and can even be outside the affected area so that there is a complete spread. [2]

The second visit was a comprehensive intervention using poster media for patients and families explaining the patient's illness such as the definition, symptoms of asthma, factors that trigger recurrent asthma attacks, controlled asthma, prevention of asthma exacerbations and the importance of clean and healthy living behavior, and how to handle asthma attacks and asthma exercises were shown on YouTube so that patients can do asthma exercises at home.

On the third visit, a follow-up was conducted to evaluate the interventions that had been given to the patient and family. The results of the follow-up related to the patient's complaints, the patient felt that the shortness of breath had improved in the past week, the frequency of attacks was only 1 time and immediately improved with the use of inhalation drugs. Based on these results, the intervention method provided was quite effective. The intervention has increased the family's knowledge by looking at the results of the pre-test and post-test given, accompanied by several behavioral changes that occurred.

Conclusion

Risk factors that affect Mrs. L's condition include internal and external aspects. Internally, the patient has a history of allergies to dust and smoke, a lack of understanding of asthma management, and a lifestyle that does not support exacerbation prevention, such as rarely wearing a mask and not exercising regularly. Externally, the patient lives in an environment close to factories and polluted highways, as well as neighbors who often burn garbage. Heavy workloads and poor stress management are also triggering factors for attacks. Holistic and comprehensive non-drug and drug management was carried out for the patient.

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