

## The approach of family medicine in the management of patient with Recurrent Nummular Eczema Relapse

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### ABSTRACT

At the Legok Health Center, the total number of dermatitis cases was 14 in August 2022. Mr. A is one of the patients who suffered from recurrent nummular eczema. He was the reason for conducting the visit. Diagnosis and management were carried out using a family medicine approach. Primary data was obtained through anamnesis, physical examination, and home visits. Secondary data was sourced from patient medical records at the Legok Health Center. Mr. A is 18 years old and has complained of a red sore on the left calf since one month ago. On physical examination, plaques were found in the left femur region and brachii sinistra et antebrachia dextra, localized distribution, colored erythema to hyperpigmentation, lenticular to numeric sizes, arranged in multiples with a circadian configuration, and well demarcated. The patient's internal factors are the lack of knowledge about the disease, the behavior that was often injured, stress, and loneliness. External factors included a lack of family knowledge about the patient's illness, the absence of regular visits from nearby health workers, and inadequate home ventilation. As the family approach was taken, there have been improvements in patient complaints, with the number of wounds complained by patients starting to thin out. The family medicine approach was carried out as a whole for individuals and families by applying the medical, behavioral, and social sciences principles. Individual management is an intervention in clinical aspects and a solution to environmental problems affecting personal health.

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## INTRODUCTION

Family medicine is a form of comprehensive primary health care to the family by emphasizing on four main aspects, namely improvement of the health degree (promotive), preventive, treatment (curative), and rehabilitative (American Academy of Family Physician (AAFP), 2019; Silvia et al., 2022). In family medicine, services are provided by viewing patients and their families as a unit and providing services that are not limited by age, gender, organ disorders or certain diseases, but

as a whole to individuals and families by applying the principles of medical, behavioral, and social sciences (American Academy of Family Physician (AAFP), 2019; Grierson & Vanstone, 2021; Hashim, 2022). Family doctors are responsible for providing personal, integrated, and sustainable health services (Göktaş, 2022; Murad et al., 2022; Ohta et al., 2022; Ratanzi & Gaede, 2020).

The skin is protective and continuously exposed to environmental factors in the form of physical, chemical, and biologic. Therefore, if there is damage that exceeds the tolerance capacity of healing power, a disease will occur, often referred to as dermatitis (Zania *et al.*, 2018). Dermatitis is an inflammation of the skin as the response to the influence of constitutional factors, irritants, allergens, heat, stress, infections, and others (Ernyasih, 2021). The term dermatitis is also often referred to as eczema (Muller et al., 2021; Politiek et al., 2020; Simonsen et al., 2021). Nummular eczema which is also called discoid eczema is a chronic inflammatory skin disease characterized by multiple pruritus, coin-shaped, eczema lesions involving the extremities and less often on the torso (Schonmann et al., 2020; Sivyver et al., 2022). Until today, the etiopatogenesis of nummular eczema is still unknown for certain.

The prevalence of dermatitis in the world showed 14,8 % in 2015 (Global Burden Disease, 2015). Based on *Riskesdas* 2018, the national prevalence of dermatitis was 6,78% (*Riskesdas Indonesia*, 2018). Meanwhile, data from the Hospital Information System in 2010-2011, dermatitis as a whole is included in the 10 largest rankings of outpatient diseases (Apriliani, *et al.*, 2022). Then, based on data from the Banten Provincial Health Profile in 2019, dermatitis is a disease that is still commonly found in Banten Province with a number of 7,5% (Banten, 2019). Based on the data of outpatient visits, ten cases was the most diseases with categories of all age groups at Public Health Centers in Tangerang City in 2015-2016, dermatitis was ranked 6<sup>th</sup> (six) with a prevalence of 2,79% in 2015 and it was 5<sup>th</sup> (five) at 5,44% in 2016 (Ernyasih, 2021).

At the Legok Health Center, the number of new dermatitis cases accounted for 10 new cases in July 2022, and 14 new cases in August 2022. The patient with the initials Mr. A who is 18 years old is one of the patients at the Legok Health Center who suffers from a recurrent nummular eczema since one month ago. Recurrent lesions of nummular eczema in Mr. A are the reason for conducting the visit. The visits were carried out to avoid secondary complications that can decrease the patient's quality of life.

## RESEARCH METHOD

This research is a case study. Place for taking cases at Legok Health Center. Source of data from primary and secondary data. The sources used secondary data from journals and books (Y. B. Lee, E. J. Byun, 2019). The data collection method was through collecting data from articles related (Mudavanhu, 2017). Conducted analysis of the problem through the approach of family medicine on Mr. A, who is 18 years old with a clinical diagnosis of nummular eczema. This patient approach used the Mandala of health by reviewing various aspects.

## RESULTS AND DISCUSSION

An 18-year-old male patient came to the Legok Health Center complaining of a red wound on the left calf one month ago. He often felt itching in the red sores in the calves since one month ago. These complaints cause discomfort so that the patient scratches the itchy area. The itch was felt continuously but was aggravated when he was doing many works and when he woke up in the morning. The patient admitted that the red wound started with a mosquito bite that felt itchy about two months ago, which became a wound caused by scratching. The patient admitted that the complaint had been cured with drugs purchased from the clinic. However, the complaints of sores and itching were again felt one month ago at the same location. Other complaints were also felt in the left upper arm and right forearm, which began with mosquito bites one week ago. The patient has been treated at the Legok Health Center, but the complaints he has experienced have not been

resolved. It was currently the second visit of patients to the Legok Health Center. Since the complaint first appeared, Mr. A has been more often alone because he considers his complaint something shameful.

Mr. A is an 18-year-old man, and he is an only child. Mr. A's father and mother married in 2003, and the patient was born a year later. The patient's father passed away in 2006 when he was two years old. The patient's mother remarried in 2007 after one year, the patient's father passed away. The patient has a younger step-sister who was born in 2009.

Mr. A's source of income comes only from the stepfather's income. The family's economic condition is classified as a middle and lower financial community because the income is below the Regencies Minimum Wage of Tangerang Regency.

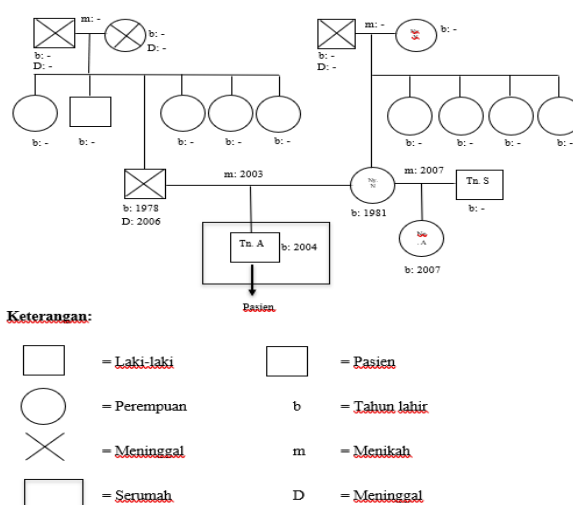


Figure 1. Genogram of Mr. A's family

Usually the patient ate three large meals, one snack with sufficient portions, and eat regulary. The patient usually cook themselves. For breakfast, lunch, and dinner, the patient consumes two cups of rice with varied side dishes, such as chicken, fish, meat, tofu, tempeh, and eggs. The patient consumes fruits in the afternoon, such as bananas, papayas, oranges, and others. He also consumes snacks, such as sweet wet cakes and pastries bought in the market. The patient said that he likes to consume instant noodles. Patients drink a sufficient amount of water, approximately 7-8 glasses per day. During the day, the patient often consumes one cup of coffee to avoid being sleepy for activities. Patients claim that side dishes consumed by patients and families are usually cooked in various ways, such as fried, stir-fried, or stewed like soup.

Mr. A's residential house is a privately owned house with a land area of 200 m<sup>2</sup> and a building area of 80 m<sup>2</sup>. Mr. A's house is ± 1.5 km from Legok Health Center and can be reached by foot or bike. The total permanent ventilation of Mr. A's house is not ideal at 0.4% or 10% of the building area. The total incidental ventilation of Mr. A's house is not suitable at 3.76% or 10% of the building area. Functionally, incidental ventilation of the patient's home is still not functioning correctly because windows and doors are rarely opened daily. The artificial and natural lighting of Mr. A's house is good. The source of clean water comes from an electric pump next to Mr. A's house with a pipe drilled 13 meters deep. Based on the results of observations and confessions, the water is odorless, tasteless, and colorless. Mr. A's household wastes are collected in plastic bags placed in the kitchen room and then burned in the yard next to the house. The trash from the bathroom and kitchen is removed through pipes to the septic tank behind the house. The distance between the septic tank and the source of clean water is 7 m. Sewage disposal through a septic tank is 7 meters away from the source of clean water.

On dermatological examination, plaques were obtained in the femoral region of sinistra, *brachii sinistra et antebrachia dextra*, distribution of localisata, colored erythema to hyperpigmentation with lenticular to nummular sizes, totaling multiple with a circumferential, and firmly delimited configuration.

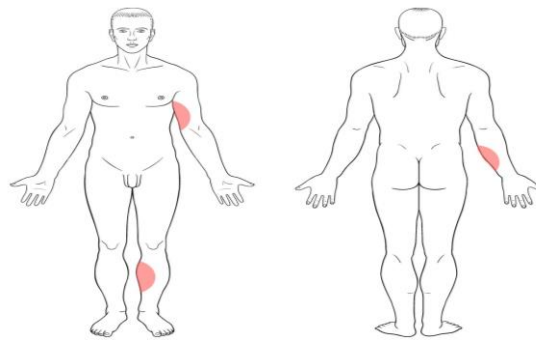


Figure 2. Mr. A's Distribution of the Lesion



Figure 3. Mr. A's Lesion

Holistic Diagnosis in the patient is in the form of: a) Personal Aspects: Itching in some parts of the body, there are some reddish wounds on the body and enlarged and raised wounds on the left calf due to scratching. b) Clinic Aspects: Working Diagnosis: Nummular eczema. c) Internal Aspects: Mr. A's minimum knowledge of nummular eczema, Mr. A often scratches the itchy part of the wound, causing the wound to become enlarged, Mr. A sometimes feels stressed because he has yet to get a job, Mr. A stayed at home by himself. d) External Aspects: Mr. A's family needs to gain knowledge of the disease, there are no periodic visits from health workers and cadres of the Legok Health Center, the ventilation of Mr. A's house could have been better and needs to be fixed. e) Functional Aspects: Able to perform daily tasks without a hitch (Functional scale: 5)

The management given to this patient is in the form of non-pharmacological and pharmacological management. The pharmacological management given to the patient is the administration of 2.5% Hydrocortisone ointment applied to the area where the wounds are located and used three times a day and cetirizine 1x10 mg, which is taken if complaints of itching appear.

Non-pharmacological management, such as 1) explaining to Mr. A about the disease Nummular eczema, including the definition, causes, symptoms, management, prevention, and complications; 2) explaining to Mr. A that the felt itching is a symptom of nummular eczema; 3) suggesting Mr. A avoid factors that aggravate itch complaints; 4) explaining to Mr. A to cut the nails to keep the nails clean; 5) explaining to Mr. A how to use the drug and educate to regularly use the ointment given and take medicine, 6) explaining and educating to not to scratch the itchy area so that the wound does not get bigger or worse, 7) explaining to Mr. A to avoid factors that aggravate his illness, 8) suggesting to Mr. A to add permanent and incidental ventilation to better house air circulation, and 9) providing education to health workers in the Legok Health Center work area to more routinely carry out health promotion.

Approaches to patient nummular eczema were in the form of pharmacological and non-pharmacological management. The management of nummular eczema may vary depending on the

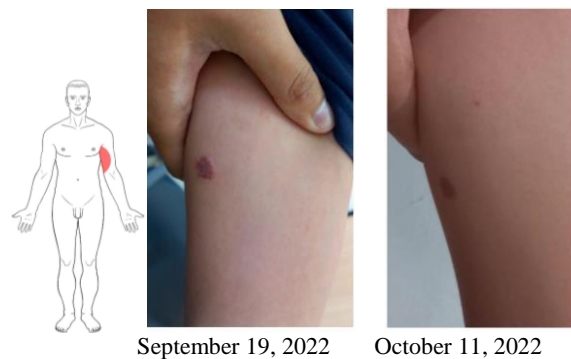
severity. Causative factors need to be identified so that they can be avoided. The patient should avoid excessive soap use, extreme temperatures, and the use of woolen materials or other materials that can irritate. The use of emollients or moisturizers is recommended when the skin is dry. If the lesion is still exudative, it must be compressed using a calicus permanganas solution (Menaldi, *et al.*, 2011).

Topical corticosteroids are the first-line drugs in the therapy of nummular eczema. The corticosteroids used are topical corticosteroids of medium to strong potential. When refractory lesions to corticosteroids of moderate potency, it is necessary to use strong topical corticosteroids. The use of topical calcineurin inhibitors, such as tacrolimus and pimecrolimus, and tar preparations is also effective. Systemic corticosteroids are used when cases are severe and refractory to treatment. Topical use of corticosteroids is also not recommended over a long period of time (Kang, *et al.*, 2019).

Oral antihistamines can be used as sedatives and reduce complaints of itching, especially at night. In cases of extensive nummular eczema where the topical therapy is not possible, narrowband UVB light therapy can be considered. Narrowband UVB therapy is given two to three times a week, irritated slowly until the desired clinical response is found (Scheinfeld & Rudikoff, 2014).

The results of the patient's intervention were obtained by Mr. A's nummular eczema disease, which was improved. The itchy complaints have disappeared and he has not scratched the part of the body that has wounds and the wounds are getting better. The patient uses Hydrocortisone 2.5% ointment three times a day regularly on the wounds area until the complaints by the patient has been repaired and the wound thickens starting thinning. Figure 4 shows the results of the patient's nummular eczema intervention.





**Figure 4.** Intervention Results

Atopic dermatitis is a chronic skin disorder with high prevalence, especially in the Nordic countries. Effective maintenance therapy during symptom-free episodes may prolong the time to eczema relapse according to a previously published clinical trial. The research results show barrier-strengthening moisturizer is cost-effective as maintenance therapy for patients with atopic dermatitis compared with a moisturizer with no active ingredients (Norrlid et al., 2016).

## CONCLUSION

The family medicine approach uses the Mandala of health paradigm based on a comprehensive and holistic approach. The internal and external factors are obtained as the cause recurrence of nummular eczema lesions in Mr. A. This case indicates an improvement in complaints of the patient in the form of wounds that have improved and thickened wounds that have started to thin out. This shows that family medicine services can enhance the quality of life and health of patients. Limitations of this study is the limited time for providing family medicine approach care. It is better for further research to carry out family approach care for a long time until the patient recovers and can carry out maximum monitoring.

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