

THE EFFECT OF FAMILY SUPPORT AND COMPLIANCE IN CONTROL OF LOW-PURINE DIET PATTERNS ON HYPERURICEMIA IN BOJONEGORO BASED ON LAWRENCE GREEN'S THEORY

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Abstract

Hyperuricemia is a condition characterized by elevated uric acid levels in the blood, which can cause joint pain and impaired activity in the elderly. Adherence to a low-purine diet and family support are important factors in preventing hyperuricemia. This study aimed to analyze the effect of family support and adherence to a low-purine diet on hyperuricemia based on Lawrence Green's theory. This study used a quantitative correlational design with a cross-sectional approach. The study sample consisted of 48 elderly people aged ≥ 60 years at the Elderly Posyandu in Tlatah Village, Purwosari District, Bojonegoro Regency, selected using a simple random sampling technique. The independent variables were family support and adherence to a low-purine diet, while the dependent variable was hyperuricemia. Data collection used questionnaires and uric acid examination observation sheets. Data analysis used a logistic regression test with a significance level of $\alpha < 0.05$. The results showed that the family support variable had a significant p value of 0.020 (< 0.05), which means there is an effect of family support on hyperuricemia in the elderly. The Exp(B) value of 0.134 indicates that elderly people with good family support have a lower chance of experiencing hyperuricemia. The low-purine diet adherence variable showed a significant p value of 0.002 (< 0.05), which means there is an effect of low-purine diet adherence on hyperuricemia in the elderly. The Exp (B) value of 0.061 indicates that elderly people who adhere to a low-purine diet have a lower risk of hyperuricemia. The conclusion of this study is that family support and adherence to a low-purine diet influence the incidence of hyperuricemia in elderly people. Good family support and adherence to a low-purine diet can help reduce the risk of hyperuricemia in elderly people.

Keywords: Family Support, Compliance, Diet, Low Purine Diet, Hyperuricemia, Elderly

INTRODUCTION

Hyperuricemia is a condition where uric acid levels in the blood exceed normal limits due to impaired purine metabolism. This condition often occurs in the elderly and can cause joint pain, swelling, and disruption of daily activities. The accumulation of monosodium urate crystals in the joints causes pain that can impair quality of life in the elderly. Hyperuricemia is a degenerative disease commonly found in the elderly.

The World Health Organization (WHO) reported in 2020 that the global prevalence of gout reached 34.2% and continues to increase annually. The 2020 Basic Health Research (Riskesdas) data shows that the prevalence of gout based on diagnoses by health workers in Indonesia is 11.9%, and based on diagnoses or symptoms is 24.7%. The highest prevalence was found in those aged ≥ 75 years and older, at 54.8%. In

Bojonegoro Regency, in 2023, the number of gout sufferers reached 4,902, and in the Purwosari area, there were 701 sufferers. A preliminary study at the Elderly Posyandu (Integrated Health Post for Elderly) in Tlatah Village showed that 28 out of 48 elderly respondents experienced hyperuricemia.

Elevated uric acid levels can be influenced by various factors such as age, gender, diet, and lifestyle. Consumption of high-purine foods such as organ meats, seafood, nuts, and certain vegetables can increase uric acid levels in the blood. Therefore, a low-purine diet is an important effort in preventing and controlling hyperuricemia. Compliance in the elderly with a low-purine diet is influenced by family support. Family support includes emotional, informational, rewarding, and instrumental support that can help the elderly regulate their diet and maintain their health. According to Lawrence Green's theory, family is a reinforcing factor that influences the formation of a person's health behavior. Lack of family support can cause the elderly to be non-compliant with a low-purine diet, thereby increasing the risk of hyperuricemia. Therefore, this study was conducted to determine the effect of family support and adherence to a low-purine diet on hyperuricemia based on Lawrence Green's theory.

METHOD

This study used a quantitative analytical research design with a cross-sectional approach. The study was conducted at the Elderly Posyandu in Tlatah Village, Purwosari District, Bojonegoro Regency in 2025. The study population was all elderly people at the Elderly Posyandu in Tlatah Village, Purwosari District, Bojonegoro Regency. The study sample consisted of 48 respondents aged ≥ 60 years old selected using a simple random sampling technique. The independent variables in this study were family support and adherence to a low-purine diet. The dependent variable was hyperuricemia in the elderly.

The research instrument used a family support questionnaire covering emotional, informational, reward, and instrumental dimensions. Compliance with a low-purine diet was measured using a low-purine diet compliance questionnaire. Data on hyperuricemia were obtained through uric acid level measurements using an observation sheet. Data analysis was performed using a logistic regression test with a significance level of $\alpha < 0.05$ to determine the effect of family support and compliance with a low-purine diet on hyperuricemia.

RESULTS AND DISCUSSION

Results

The results of the study showed that most respondents were in the elderly age group, with the majority being female. The majority of respondents' education level was primary, and most worked as farmers or housewives. The distribution of family support showed that most respondents received good family support. The most frequent support provided by the family was emotional support in the form of attention, motivation, and supervision of the elderly's diet. The distribution of low-purine diet compliance showed that most respondents adhered to a low-purine diet by limiting high-purine foods such as offal, seafood, and fatty foods. The results also showed that there were still elderly people who experienced hyperuricemia. Based on the results of the logistic regression test, the significance value of the family support variable was 0.020 (< 0.05), which means there is an effect of family support on hyperuricemia in the elderly. The Exp(B) value of 0.134 indicates that respondents with good family support have a lower risk of developing hyperuricemia. The low-purine diet compliance variable showed a significance value of 0.002 (< 0.05), which means there is an effect of low-purine diet compliance on hyperuricemia in the elderly. The Exp(B) value of 0.061 indicates that elderly people who adhere to a low-purine diet have a lower chance of experiencing hyperuricemia.

Discussion

The results of the study indicate that family support influences the incidence of hyperuricemia in the elderly. Good family support helps the elderly be more disciplined in maintaining their diet and following a low-purine diet. The family plays a crucial role in providing attention, motivation, supervision, and helping to provide healthy food according to the elderly's needs. Emotional support was the most dominant form of support in this study. Emotional support in the form of attention, encouragement, and family concern makes the elderly feel cared for and more motivated to maintain their health. According to Lawrence Green's theory, family is a reinforcing factor that can strengthen individual health behaviors, including adherence to a low-purine diet. This study also shows that adherence to a low-purine diet influences the incidence of hyperuricemia. Elderly who adhere to a low-purine diet have a lower risk of experiencing increased uric acid levels than those who do not. Limiting high-purine foods such as offal, seafood, spinach, kale, and melinjo can help control uric acid levels in the blood. Compliance with a low-purine diet is influenced by the level of knowledge, motivation, and family support. Elderly who receive family support tend to be more likely to adhere to a healthy diet because their family helps remind them and provides food according to health recommendations. The results of this study align with previous research, which found that family support and dietary adherence significantly influence uric acid control in people with hyperuricemia. Optimal family support can help older adults maintain a healthy lifestyle and prevent complications from hyperuricemia.

CONCLUSION

Most of the elderly at the Elderly Posyandu in Tlatah Village, Purwosari District, Bojonegoro Regency received good family support and most respondents complied with a low-purine diet. There was an effect of family support on hyperuricemia in the elderly with a p-value of 0.020 (<0.05). There was an effect of compliance with controlling a low-purine diet on hyperuricemia in the elderly with a p-value of 0.002 (<0.05). Good family support and compliance with a low-purine diet can help reduce the risk of hyperuricemia in the elderly.

Families are expected to continue providing emotional, informational, rewarding, and instrumental support to seniors to ensure they adhere to a low-purine diet. Healthcare workers are expected to increase education for seniors and their families regarding the importance of a low-purine diet in preventing hyperuricemia. Seniors are expected to maintain a healthy diet by limiting their consumption of high-purine foods and regularly checking their uric acid levels.

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