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The Effect of Dietary Gout Education on Dietary Gout Adherence in the Elderly at Pulo Sepang Village

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Abstrak

Asam urat adalah kondisi peradangan sendi yang paling umum di seluruh dunia. Risiko kejadian asam urat meningkat seiring bertambahnya usia sehingga penyakit ini banyak ditemukan pada populasi lansia. Tindakan pencegahan terhadap memburuknya asam urat memerlukan pengetahuan dan informasi yang tepat tentang pola makan pasien asam urat. Penelitian ini bertujuan untuk mengetahui pengaruh pendidikan diit asam urat terhadap kepatuhan diit asam urat. Desain penelitian menggunakan pendekatan pra-eksperimental dengan desain *one-group pre-post-test*. Sampel berjumlah 36 responden dengan teknik *total sampling*. Intervensi yang diberikan adalah edukasi diit asam urat yang diberikan kepada pasien asam urat. Instrumen yang digunakan adalah kuesioner kepatuhan diet asam urat yang terdiri dari 24 pernyataan. Pertama, diukur sebelum responden diberikan edukasi tentang diit asam urat. Kedua, diukur pada saat pelaksanaan (setelah responden mendapat edukasi pada bulan sebelumnya). Data dianalisis menggunakan Uji *Wilcoxon*. Hasil penelitian menunjukkan terdapat perbedaan yang signifikan kepatuhan diit asam urat pada lansia di Desa Pulo Sepang sebelum dan sesudah diberikan intervensi (p-value = 0,000; α<0,05). Pengetahuan yang baik tentang diit asam urat dapat meningkatkan kepatuhan penderita asam urat dalam menjalani diit asam urat. Edukasi mengenai pola makan asam urat merupakan salah satu cara untuk meningkatkan pengetahuan pasien mengenai makanan yang sebaiknya dikurangi atau bahkan dihindari dalam kehidupan sehari-hari.

Kata Kunci: *Diit Asam Urat, Kepatuhan Diit Asam Urat, Asam Urat*

Abstract

Gout is the most common inflammatory joint condition throughout the world. The risk of gout incidents increases with age so this disease is often found in the elderly population. Preventive measures for worsening gouty arthritis require proper knowledge and information about diet for gout arthritis patients. This study aimed to determine the effect of diet education on gout. The research design used a pre-experimental approach with a one-group pre-post-test design. The sample was 36 respondents with a total sampling technique. The intervention provided was gout diet education given to gout patients. The instrument used a gout diet compliance questionnaire which consisted of 24 statements. First, it was measured before respondents were given education about the gout diet. Second, it was measured during the implementation (after respondents received education in the previous month). Data were analyzed using the Wilcoxon Test. The results showed that there was a significant difference in gout dietary adherence in the elderly at Pulo Sepang Village before and after being given the intervention (p-value = 0.000; α <0.05). Good knowledge about gout dietary can increase the adherence of patients with gout with gout dietary. Education about gout dietary is a way to increase patient knowledge about foods that should be reduced or even avoided in their daily lives.
Keywords: *Gout Dietary, Dietary Gout Adherence, Gout*

INTRODUCTION

Gout is the most common inflammatory joint condition throughout the world. The risk of gout incidents increases with age so this disease is often found in the elderly population (Dehlin, Jacobsson, and Roddy 2020). Gout is a condition caused by the deposition of monosodium urate crystals in articular and non-articular structures. High serum uric acid concentration is a risk factor for gout. Hyperuricemia or a condition where the blood urate concentration exceeds the saturation threshold), i.e. serum urate is higher or equal to 0.42 mmol/L (7 mg/dL). Gout appears as episodes of painful arthritis or intermittent gout flares. This occurs due to an innate immune response to the deposition of monosodium urate crystals. The incidence of gout based on population-based studies in North America and Europe is reported to range between 0.6 and 2.9 per 1000 people per year. The prevalence of gout ranges from 0.68% to 3.90% in adults. The prevalence of gout has increased steadily in the 20th century. The increase is due to changes in the age structure of the population and an increase in the incidence of metabolic syndrome and related pathologies (Dalbeth et al. 2021; Fields 2019).

The most important factor in the development of gout is the occurrence of hyperuricemia. There is a relationship between serum uric acid concentration and the risk of gout. Several factors contribute to hyperuricemia, including chronic kidney failure, diuretic drugs, cyclosporine, and metabolic syndrome. Apart from that, dietary factors

include 1) Consumption of alcoholic beverages; 2) Consume two or more sweet drinks (drinks with fructose sugar) a day; 3) Excessive consumption of meat and seafood; 4) Excessive consumption of vegetables that contain lots of purines (Singh and Gaffo 2020). A diet for gout patients can be done by reducing or even avoiding food intake that can cause hyperuricemia and foods that contain high levels of purine. Knowledge about the gout diet can be increased by providing education or health education about the gout diet (Wetik and Lumintang 2022).

Preventive measures for worsening gouty arthritis require proper knowledge and information about diet for gouty arthritis patients. Good knowledge about the uric acid diet can increase patient compliance in managing the uric acid diet so that uric acid levels are controlled. Gout diet compliance is the level of behavior of gout patients who are directed towards orders or instructions given in the form of limiting or avoiding foods that can trigger an increase in uric acid levels. Dietary gout adherence or what can also be called a low-purine diet is one way to prevent an increase in uric acid levels and minimize the intake of food menus that contain high levels of purine (Wetik and Lumintang 2022). This study aimed to determine the effect of diet education on gout.

RESEARCH METHOD

The research design used a pre-experimental approach with a one-group pre-post-test design. The sample was 36 respondents with a total sampling technique. The intervention provided was gout diet education given to gout patients at Pulo Sepang Village, Lawe Alas District, Southeast Aceh Regency. The instrument used a gout diet compliance questionnaire which consisted of 24 statements. The instrument's assessment criteria included: 1) No adherence (score: 0-24); 2) Less adherence (score: 25-48); 3) Adherence (score: 49-72). Data collection was carried out twice. First, it was measured before respondents were given education about the gout diet. Second, it was measured during the implementation (after respondents received education in the previous month). Data were analyzed using the Wilcoxon Test.

RESULTS AND DISCUSSION

Univariate Analysis

Table 1 Respondents's Characteristics

Variable	Mean	Median	SD	Min-Max	95% CI Lower-Upper
Age*	63.26	64.50	7.82	48-79	60.54-65.99

Variable		n	%
Gender	Man	8	23.5
	Women	26	76.5
Educational Level	Illiterate	2	5.9
	Elementary School	16	47.1
	Junior High School	3	8.8
	Senior High School	12	35.3
	College	1	2.9
Employment	Unemployed	20	58.8
	Farmer	4	11.8
	Private Employed	5	14.7
	Self-Employed	5	14.7

*Normally Distributed Data

The research results in Table 1 show that the average age of elderly people was 63.26 years with a standard deviation of 7.82 years. The gender prevalence of the elderly was mostly female, 26 respondents (76.5%). The prevalence of education level of most elementary schools was 16 respondents (47.1%). The majority of elderly people's employment were unemployed, with as many as 20 respondents (58.8%).

Bivariate Analysis

Table 2 Differences in Gout Dietary Adherence Before and After Being Given Gout Dietary Education

Variable		n	%	P-value
Gout Dietary Adherence (Pre-Test)	No Adherence	15	44.1	0.000*
	Less Adherence	19	55.9	
	Adherence	0	0.0	
Gout Dietary Adherence (Post-Test)	No Adherence	0	0.0	
	Less Adherence	13	38.2	
	Adherence	21	61.8	

*significant at $\alpha < 0.05$

The research results based on Table 2 showed that the prevalence of gout dietary adherence before the intervention was mostly less adherence as many as 19 respondents (55.9%), while the prevalence of gout dietary adherence after being given the intervention was mostly adherent with 21 respondents (61.8%). Further analysis showed that there was a significant difference in gout dietary adherence in the elderly at Pulo Sepang Village before and after being given the intervention (p-value = 0.000; α <0.05).

DISCUSSION

The results of the study showed that there was a significant difference in adherence to the gout diet before and after being given gout diet education to the elderly at Pulo Sepang Village (p-value = 0.000; α <0.05). This research is in line with research by Wetik and Lumintang (2022), showing that there is a significant difference in adherence to the gout diet between before and after being given education (p-value = 0.03; α <0.05). Arfita (2023), research results show that there is a significant relationship between the level of knowledge of a low-purine diet and patient compliance with a low-purine diet (p-value = 0.000; α <0.05).

Good knowledge about the uric acid diet can increase patient compliance in managing the uric acid diet so that uric acid levels are controlled (Triana 2016). Gout diet compliance is the level of behavior of gout patients who are directed towards orders or instructions given in the form of limiting or avoiding foods that can trigger an increase in uric acid levels. The results of Aupia (2021) research on gout sufferers who were given health education about gout and the gout diet had a significantly different level of compliance compared to those before the education was given (p-value = 0.000; α <0.05). Apart from knowledge, there is another factor that can influence a person's compliance in maintaining a healthy and safe gout diet, namely age. Elderly patients with comorbidities or a history of other diseases are more likely to maintain their diet to avoid the danger of complications related to the health problems they are experiencing (Aupia 2021; Sutiono and Hatmanti 2018).

Dietary gout adherence or what can also be called a low-purine diet is one way to prevent an increase in uric acid levels and minimize the intake of food menus that contains high levels of purine (Abhishek and Doherty 2018; Wetik and Lumintang 2022). Dietary gout adherence can be done by making inexpensive and safe nutritional lifestyle changes. Education that can be given is to reduce or avoid foods that contain high purines. Patients who do not go on a gout diet are sometimes not because they cannot stop themselves from eating these foods, but because they do not know that these foods can contain high levels of purine and can increase uric acid levels (Nielsen et al. 2018; Roman 2022).

CONCLUSION

Good knowledge about gout dietary can increase the adherence of patients with gout with gout dietary. Education about gout dietary is a way to increase patient knowledge about foods that should be reduced or even avoided in their daily lives.

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