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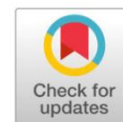


Journal Homepage: www.teknolabjournal.com
 ISSN 2580-0191(Online) | ISSN 2338 – 5634(Print)

Original Research



The need for purine examination on fisherman: Case study in Tafure of North Ternate of North Moluccas



Ketrina Konoralma , Jonas Sumampouw , Dyan R. Sukandar



Sabrina PM.Pinontoan , Samuel Tambuwun , Dionysius Sumenge 

Department of Medical Laboratory Technology Health Ministry Polytechnic of Manado, Indonesia

Abstract:

The need for purine check on Fisherman is important because when the fisherman excess consuming highly purine contained in the food in a long rime periode will cause purine metabolism disorder and can lead to purine deposition in joint tissue and sorounding, and finally will become gout arthritis. The uncontrolled of Gout Arthritis will lead to kidney stone, kidney function impaired, and end with kidney failure. Research aims was to analyzes purine effect toward body metabolism functions. Research types using is analytic research with design one sample group to analyzes purine effect toward body metabolism functions on fishermans in Tafure of North Ternate of Moluccas. Population is whole member fishermans groups in Tafure sub district with sex men as amount 55 peoples. Data analyzes use one samples t-Test, research results percentage in the form frequency distribution table with explaining and narration. Research results showed that respondents characteristic most of the attain the age of 26-45 years as much as 29 respondents (53%), had been BMI normal category as amount 46 respondents (84%). Uric acid levels normal is 32 respondents (60%), abnormal as amount 23 repondents (40%), and food consumption habitually high purine. Statistic test results using one samples t-Test showed that age mean 44.49+Std.D 11.460 $p0.000 < p0.05$, BMI mean 22.62_Std.D 2.468 $p0.000 < p0.05$ and uric acid levels mean 6.69+Std.D 1.275 $p0.000 < p0.05$. That's mean there is influencing between aged and BMI with increasing uric acid levels that food consumption high purine influencing uric acid levels on fishermans in sub district Tafure North Ternate District.

Keywords: Uric Acid Levels, Fishermans, Ternate.

INTRODUCTION

In the Covid-19 pandemic era need communities food endurance to body immune maintain with food consumption is contain nutriens is enough to body protection on exposure covid 19 virus attack. Also to with fishermans is to be in North Ternate District. Fisherman is person who living by sea results livelihood and living in vilages in beach or coast.¹

Many risk factors is caused by occured uric acid increased on blood the other gender, obese, alcohol drinking food consumption could be caused happened uric acid increased. Uric acid disease or called with gouthy arthritis happened on male, start from puberty age until to ages maximum 40-50 years, while on female, uric acid percentage happened begin after going to menopause phase. Increased incidence uric acid while in the developed country or developing country as more as highest particulary on males is age 40-50 years. Uric acid levels on males increased as going on with ages added by persons.²

Corresponding author.

E-mail address: konoketrin@gmail.com (Ketrina Konoralma)

DOI: 10.29238/teknolabjournal.v10i2.321

Received 29 September 2021; Received in revised form 21 November 2021; Accepted 31 December 2021

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In Indonesian uric acid disease 35% happened on males bellow ages 34 years.³ Gouthy Arthritis and rheumatoid arthritis be at rank third after arthroicis and rheumatoid arthritis, Rheumatic disease patients in Indonesian approximately almost 80% population with aged 40 years or more.⁴ Uric acid levels normal depend on aged and gender, according to World Health Organization (WHO) uric acid levels normal adult females i.e 2,4-6,0 mg/dl and adult males i.e. 3,0-7,0 mg/dl. When more this levels category by had been Hyperuricemia. Hyperuricemia condition very potence to leading happened gouthy arthritis attack.

North Ternate District has coast environment as tourisme object has interested with it coast tourisme. Futhermore, communities economy wheel also develop with sea fish processed products from fishermans. This research to be done in North Ternate District with consideration fisherman communities habitually pattern in beach coast which consumption fish as main menu and also as bisnis area to livelihood for families.⁵

MATERIAL AND METHOD

After aquired examination result of uric acid, then to be continued with using statistic test with one samples t-test, and furthermore research result presentage in to frequency distribution tables included explanation and narration. This research has been got approval or ethical approval information letter by Health Research Ethic Commision no.496/KEPK/IX/2019.

RESULTS AND DISCUSSION

Research results showed that from 61 fisherman peoples has been in Tafure Sub District North Ternate District who approved to participation within this research as a mount 55 respondents. Research results could be presentage in the below:

Table 1. Respondents Frequency Distribution Based On Aged, BMI, and Uric Acid Fisherman in Tafure Sub District North Ternate District

No	Variables	f	%
1	Aged Category:		
	a. Adolescence (12-25 years)	3	5
	b. Pre- Adult (26-45 years)	29	53
	c. Adult (46-55 years)	20	36
	d. Elder (>65 years)	3	5
2	BMI Category:		
	a. Normal	46	84
	b. Overweight	5	9
	c. Obese	4	7
3	Uric Acid Levels:		
	a. Normal (3,5-,7 mg/dl)	32	60
	b. Abnormal (>7 mg/dl)	23	40
Total = 55 respondents			

Based on data by table 1 showed that most of the respondents on the adults males aged group as amount 29 respondents (53%). BMI category be in the range normal limit as amount 46 respondents (84%) and uric acid levels fisherman be in normal range as amount 32 respondents (60%).

Table 2. Analyzed Results Bivariate On Aged, BMI and Uric Acid Variables Fisherman in Tafure District North Ternate District.

Variables	Mean	Std Deviation	t	p-Value	95% Confidence Interval of the Difference	
					Lower	Upper
Age	44.59	11.46	28.792	0.000	41.39	47.59
BMI	23.62	2.49	70.964	0.000	6.35	7.04
Uric Acid Levels	6.69	1.27	38.927	0.000	22.95	24.28
N=55						

Samples types which using to uric acid examination on the this research using capillar blood. Uric acid blood levels examination on research samples to be done as quantitative using examination tools (Easy Touch GCU Test), because this examination not need time so long, efficiency and could used whenever and ever. This test performed with strip test methods using with capillar blood samples, uric acid measured on fishermans performed on patient condition was fasting for 10-12 hours, furthermore appear measured on the screen with value mg/dl.

Based on the research results get found highest uric acid (>7mg/dl) as amount 23 respondents (40%) and uric acid levels normal as amount 32 respondents (60%). The Highest and lowerest uric acid levels influenced by many factors like as aged, gender, high purine food consumption habitually, BMI, and kidney dysfunction. When occurred increasing uric acid blood levels, then would be caused occurred hyperuricemia. Gouthy arthritis or uric acid is frequently disease get found and distribution in whole world. Gouthy arthritis or usually called with uric acid is result end from purine catabolism (break out). Purine is one of chemical structure group formed dyoxynucleoacid (DNA). Purine group included is adenosine and guanosin. When DNA is destroyed purine would be catabolism. Prevalence uric acid patients was highest in Indonesia at be coast area population and is most highest in Manado-Minahasa ethnic as amount 29,2%⁶.

Research results showed that uric acid levels on table 2 with category normal most of on adults aged (26-45 years) i.e. as amount 45%, whereas uric acid category was highest most of on elder group (46-65 years) as amount 27%. Uric acid diseases or usually called with gouthy arthritis as a diseases who attack old elder group especially males gender. This disease frequently caused disorders on one cartilage examples most frequently on one thumb base, although could be attack more of one cartilage. This disease frequent attack old elder and rarely get found on person who aged old below 60 years with means most many on aged 65-75 years, and more and more frequently get found with aged added⁷.

Old elder groups appear cells degeneration caused by aging process who could be resulted on organ weakness, physical retardation, appear of many more diseases like as uric acid levels increased who could be lead happened disease as kidney stone, gout, and rheumatic⁸. Uric acid called to gouth arthritis included a degenerative disease who cartilage attack, and most frequent get found in communities included experienced by old elder⁹.

Research results based on BMI category on table 1, dominantly respondents on normal category as amount 84%, whereas on overweight category 9% and obese as amount 7%. Most of respondents with normal BMI category caused by heavy physical activity to be performed by fishermans everyday when shipping so avoided from risk factors obese. This research

suitable by research results by Fiktor I. Boleu in¹⁰, who revealed that hyperuricemia prevalence (with more body weight) on ethnics in Halmahera very highest category. Most respondents with BMI in the overweight and obese category possessed uric acid levels was highest enough. Frequently overweight related to uric acid levels and as one of risk factor occurred gout on asymptomatic hyperuricemia. It is relationship with hyperuricemia incidence which appropriate with overweight more severe. BMI more much then as more and more body weight heavy, so more much highest permeate plasma uric acid in to artilage space¹⁰.

Purine food consumption highest habitually and excessive consumption could be caused uric acid levels increased, where purine amount in to body would be get through normal range. Foods and highest purine resources e.g. meat, fish and fooding and vegetables, like as peanuts, asparagus, cabbage flower, spinach and mushrooms¹⁰. Fooding resources contain highest purine between 0,5-0,75 mg/dl purine was consumption¹¹. Based on research result as uric acid levels with normal dan highest category wholes 100 percent possessed purine high consumption habitually. It is caused uric acid is not only caused by purine high food consumption, but other many risk factors like as aged, and physically activity.

Based on research results to be done that uric acid levels on fishermans had been increased although not all had been uric acid increased. Purine highest consumption influenced uric acid increased suitable with addition aged old and addition body weight catcher fish in Tafuret North Ternate District.

CONCLUSION

Uric acid levels on catcher fishermans had been increased although not all had been uric acid increased. Purine highest consumption influenced uric acid increased suitable with addition aged old and addition body weight catcher fish in Tafuret North Ternate District.

AUTHORS' CONTRIBUTIONS

All authors contributed equally to this work.

ACKNOWLEDGEMENT

The authors would like to thank the Human Genetic Department of Medical Laboratory Technology Health Ministry Polytechnic of Manado, Indonesia and to all of my supervisor.

FOUNDING INFORMATION

The funding of this research was from Department of Medical Laboratory Technology Health Ministry Polytechnic of Manado, Indonesia.

DATA AVAILABILITY STATEMENT

The utilized data to contribute to this investigation are available from the corresponding author on reasonable request.

DISCLOSURE STATEMENT

The views and opinions expressed in this article are those of the authors and do not necessarily reflect the official policy or position of any affiliated agency of the authors. The data is the result of the author's research and has never been published in other journals.

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