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Screening Of Acid Translators On Lansia In The Puskesmas Stabat Kabupaten Langkat

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ABSTRACT
Gout is a metabolic disease characterized by the buildup of uric acid that causes pain in the joints, very often found in the upper legs, ankles and middle legs. Gout is a disease called gout which is associated with a genetic effect on purine metabolism and can cause inflammation due to deposits of uric acid crystals in the joints of the fingers.This type of research is descriptive, that is, it provides an overview of uric acid levels in the elderly who seek treatment at the Stabat Public Health Center, Langkat Regency and is carried out from Oktober to November 2022. The population is all elderly patients who seek treatment at the Stabat Health Center, and the sample of this study was 60 people. The method of data collection is by using primary data obtained directly from the results of measurements of uric acid levels and then presented in tabular form to determine normal and abnormal conditions.The results showed that from a sample of 60 elderly people, uric acid levels increased by 40 people (67 %), while normal glucose levels were 20 people (33 %) and to improve the health of the elderly it is necessary to avoid consuming excessive food. containing high uric acid, perform regular physical activity and check blood uric acid levels regularly.

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INTRODUCTION

Urticaria is a disease of the joints that is associated with the body's metabolism. According to data from the World Health Organization (WHO) on (Arsa, 2021), the prevalence of uric acid disease is 34.2% worldwide. The prevalence of urolithiasis in the United States is 26.3% of the population. The increased prevalence of uric acid disease is not only in the developed countries, but also in the developing countries of Indonesia (Riskesdas, 2018).The prevalence is based on age characteristics, high prevalence at the age of ≥ 75 years 54,8%. Women are 8.46% more affected than men, which is 6.13%. The total number of Uric acid affected in North Sumatra is about 1.800,000 people out of 12.333.978 people in North sumatra. A gastrointestinal disease is also called a gout disease. Gout is a metabolic disease characterized by the accumulation of uric acid that causes joint pain according to Moreau, David (Suntara, 2022)). Gout was a group of heterogeneous conditions associated with genetic defects in purine metabolism or hyperuricemia according to Brunner & Suddarth (J. I. Health et al., 2021).

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Gout is an inflammation caused by the presence of varic acid crystals in joints and fingers according to depkes, 1992 (Fitriani, 2021). Uric acid is the final result of purine metabolism in the body. Excess uric acid will not be stored and metabolized entirely by the body, resulting in an increase in uroic acid levels in the blood called hyperurisemia. A person is said to be elderly if he is over 60 years old. Lansia is often faced with health problems due to the occurrence of physical regression, weakness in the organs so that there are various diseases such as increased uric acid levels that lead to the onset of diseases like kidney stones, gout, and rheumatism according to Rina Julianti (Kadar et al., 2022). Typically affected by urolithiasis are older men, whereas in women it is found until menopause. The course of the disease usually starts with one attack or a person has a history of having checked uric acid levels of more than 7 mg/dl, and the longer it takes increases. Uric acid is often suffered by men because men do not have levels of estrogen hormone that helps uric excretion through the urine (Sueni et al., 2021). Gout is a disease that affects the elderly, especially men. This disease often causes disorders in one joint, for example most often in one of the base of the thumb, although it can attack more than one. The disease often attacks the elderly and rarely occurs in people under the age of 60 with an average age of 65-75 years, and increasingly occurs with age. (Dungga, 2022). Lansia is the age of sixty years and over, also called the period of biological degeneration accompanied by various suffering from various diseases that accompany the aging process. Normally, they've experienced various declines and reduced physical, as well as physiological abilities. According to scientific calculations, a decrease in physiological abilities in old age leads to at this age being freed from heavy and high-risk duties and responsibilities.

At an older age, physical endurance has declined, making it vulnerable to attacks of various diseases. As you get older, your physical endurance is weakening and deteriorating, and your body's ability to withstand attacks of disease is diminished by the emergence of health problems. Because fertilization is a process of accumulating changes – changes in cells and tissues with age, thus increasing the risk of disease and death. (Agung Gede Bilwa Bhavendra & Nyoman Gede Wardana, 2021). As you get older, you're increasingly at risk of developing a gastrointestinal disease. Women are more susceptible to uric acid than men, with a 60% risk factor this is because when women menopause hormone estrogen has a decrease so that in the body only a few estrogen hormone that helps the excretion of uric acids through the urine, then the elimination of urine acid levels is uncontrolled (Rahayu et al., 2021). The factors that cause gastrointestinal disease are dietary patterns, fatigue factors and others. Diagnosis of urolithiasis can be established based on characteristic symptoms and found high levels of uric acid in the blood. It's proven in research (Nuraini Endah, 2021).

Based on the research, it will be thoroughly investigated on the factors that cause the uric acid levels to be high in the Puskesmas district of Langkat. Puskesmas Stabat District of Langkat is one of the puskesma located in the district of Stabat. Consisting of 2 villages and 4 Kelurahan, the population of Stabat District in 2019 amounted to 8.15 people (Juliana, 2020). The highest number of cases of gastrointestinal disease in Puskesmas Stabat for all age groups in the district of Stabat with the number of the cases as much as 1400 cases, For the year 2020 of the street treatment or visits to Pushesmas as 89.796 with the numbers of

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cases suffering from the urethritis of 1500 cases and for the year 2021 of the road treatment to Puskesmas stabat of 80.900 people, but the cases of the disease increased by 2000 cases, which means the complaints of pain in the patients are increasing, it is due to dietary patterns and lack of care at all ages uncontrolled. Therefore, the author will discredit the factors that cause high cases of high uric acid in all age groups, but the focus is on the elderly. Based on the description that has been described above then the author is interested in doing research "Image of Uric Acid Levels on Lancia in Puskesmas Stabat district of Langkat.

METHODS

This research is a quasi-experimental study to examine uric acid levels in the elderly The research design used was a one group pre-post-test design, this was done by providing treatment to the intervention group before and after postpartum exercise. (Bhishma Murthi, 2016). The equipment used in this study is a set of Auto Check GCU, which consists of: auto click and lancet, blood uric acid chip, blood uric acid strip, alcohol cotton, gloves. Regensia: 70% Alcohol Strips, Gout Strips, Gout Chips. The material used in the examination was capillary blood from the elderly who were treated at the Stabat Health Center, Langkat Regency. Elderly patients bring a letter from the doctor for a gout examination to the laboratory. Blood samples were taken from the blood of elderly patients who were treated using a lancet device. Then check uric acid levels with the Auto Check tool and record the results of the examination. Data analysis is carried out by tabulation and presented in the form of tables and then discussed based on existing literature, so that a conclusion can be reached.

RESULTS AND DISCUSSION

Insert the battery and turn on the appliance. Set the hour, date and year on the appliance. Take a yellow chip and put it in the tool to test. If the screen appears "Error" , it means that the device is damaged. If it appears "OK", the appliance is ready to use. Insert the blood uric acid chip and uric acid strip first. The number/code screen corresponds to the bottle strip. After that, an image of drops of blood and flickering appeared. Insert the needle into the lancing / pen-shaped shooting device and arrange it into the needle. Determine the location of the needle insertion and clean the fingertips of the 3rd or 4th fingertips, clean with a tissue alcohol, let it dry. The part to be pierced is held to keep it from moving and to reduce pain. The fingertips are pierced with a sterile lancet in a perpendicular direction to the skin fingerprint. Then the blood is touched with a strip. Tap on the line where the arrow is. Blood will seep up to the end of the strip and beep . Wait for the reading tool for a few seconds to appear the results on the layer. Normal value of male uric acid: 3.5-7.2 mg/dl. Women: 2.6-6.0 mg/dl.

Based on research conducted for 1 month from October to November 2022 on 60 samples at the examination of uric acid levels in the elderly at the Stabat Health Center laboratory in Langkat Regency, the results of the patient's elevated uric acid levels in the blood were obtained as follows:

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NO	Sample Code	Gender	Age (Year)	Kader As It Remains (MG/DL)	Information
1	001AN	Woman	63	7,3	Elevate
2	002AD	Woman	65	8,0	Elevate
3	003AA	Law Law	60	7,0	Elevate
4	004AC	Law Law	67	9,3	Elevate
5	005AW	Law Law	70	10,0	Elevate
6	006AS	Woman	71	15,2	Elevate
7	007AT	Woman	70	11,2	Elevate
8	008AS	Woman	65	7,8	Elevate
9	009AB	Law Law	67	7,2	Elevate
10	010AN	Law Law	68	12,0	Elevate
11	011AS	Woman	60	8,0	Elevate
12	012AS	Woman	60	11,0	Elevate
13	013AS	Woman	62	7,5	Elevate
14	014AB	Law Law	69	8,7	Elevate
15	015AR	Law Law	70	9,3	Elevate
16	016AP	Law Law	68	10,2	Elevate
17	017AS	Woman	65	7,0	Elevate
18	018AM	Woman	70	8,6	Elevate
19	019AR	Woman	69	8,4	Elevate
20	020AR	Law Law	61	7,6	Elevate
21	021AA	Law Law	60	9,9	Elevate
22	022AS	Law Law	68	10,0	Elevate
23	023AS	Law Law	70	9,6	Elevate
24	024AS	Law Law	63	8,8	Elevate
25	025AE	Woman	62	7,0	Elevate
26	026AB	Woman	61	9,9	Elevate
27	027AC	Woman	60	8,6	Elevate
28	028AD	Woman	70	9,0	Elevate
29	029AE	Woman	62	7,0	Elevate
30	030AB	Woman	61	9,9	Elevate
31	031AC	Woman	60	8,6	Elevate
32	032AD	Woman	70	9,0	Elevate
33	033AE	Woman	62	7,0	Elevate
34	034AB	Woman	61	9,9	Elevate
35	035AC	Woman	60	8,6	Elevate
36	036AD	Woman	70	9,0	Elevate
37	037AR	Law Law	61	7,6	Elevate
38	038AA	Law Law	60	9,9	Elevate
39	039AS	Law Law	68	10,0	Elevate
40	040AS	Law Law	70	9,6	Elevate

Source : Results of Gout Examination at the Stabat Health Center for the October 2022 period

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Based on the results described in Table 1 above, it can be explained that the uric acid level is elevated in 17 men where the average uric acid level is above 7.0. Furthermore, for gout sufferers, there were 23 women with an average uric acid level above 7.0 with an average age of 60 years and above. This means that the elderly have a high risk of urinary tract ulcers because of the triggering factor, namely diet, as well as a lack of exercise and knowledge about diet for the elderly, this is in line with research conducted by (J. I. Kesehatan et al., 2021). Furthermore, the results of the examination of normal uric acid levels in the elderly are as follows,

Table 2 Results of Normal Uric Acid Level Examination in the Elderly at the Stabat Health Center, Langkat Regency

NO	Sample Code	Gender	Age (Year)	Kader As It Remains (MG/DL)	Information
1	001AN	Woman	63	5,0	Normal
2	002AD	Woman	65	4,7	Normal
3	003AA	Law Law	60	6,5	Normal
4	004AC	Law Law	67	6,0	Normal
5	005AW	Law Law	70	6,9	Normal
6	006AS	Woman	71	5,3	Normal
7	007AT	Woman	70	5,4	Normal
8	008AS	Woman	65	4,9	Normal
9	009AB	Law Law	67	7,0	Normal
10	010AN	Law Law	68	6,8	Normal
11	011AS	Woman	60	4,6	Normal
12	012AS	Woman	60	5,4	Normal
13	013AS	Woman	62	4,1	Normal
14	014AB	Law Law	69	6,7	Normal
15	015AR	Law Law	70	6,9	Normal
16	016AP	Law Law	68	6,9	Normal
17	017AS	Woman	65	5,0	Normal
18	018AM	Woman	70	5,6	Normal
19	019AR	Woman	69	4,0	Normal
20	020AR	Law Law	61	6,4	Normal

Based on the results described in Table 2 above, it can be explained that the normal uric acid level in 9 men where the average uric acid level is above 6.0 but still below the normal value of 3.5-7.2 mg/dl for men. Furthermore, for normal gout sufferers in women, the average uric acid level is above 4.0 which is close to the upper limit value of 5.7 which if a healthy diet and lifestyle are not implemented, it will have an impact on the possibility of increasing uric acid due to the declining metabolism of the elderly (Ramli et al., 2020). The number of women with normal uric acid levels was 11 people. The percentage of the results of the examination of elevated and normal urate levels is presented in the following diagram 1,

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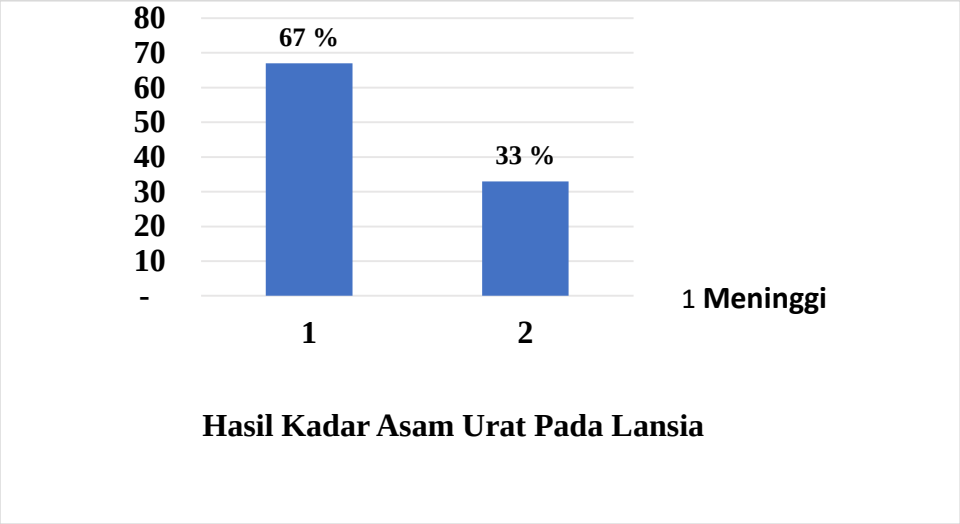

Figure 1 Percentage of Uric Acid Levels Elevated and Normal in the Elderly

Based on the data in Figure 1, the normal uric acid level in the elderly is 33% (20 people) and the elevated uric acid level is 67% (40 people). Furthermore, based on Table 1, it can be seen that the percentage of uric acid levels that increase in men and also the percentage of uric acid levels that increase in women can be seen in the following diagram 2,

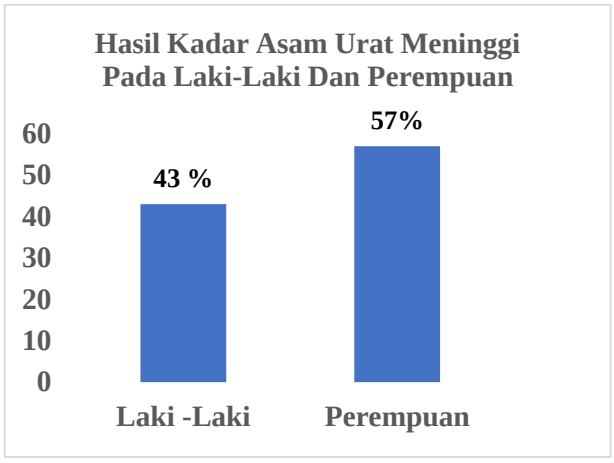

Figure 2 Percentage of elevated uric acid levels in elderly men and women

Based on Figure 2 above, the percentage of elevated uric acid levels in elderly men was 43% (17 people) while for elevated uric acid in elderly women was 57% (23 people) from 40 samples with elevated uric acid. Furthermore, from the 60 samples examined, there were results of normal uric acid levels of 33% (20 people) and elevated uric acid by 67% (40 people). The calculation of the percentage of elevated and normal uric acid levels is presented as follows,

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1. Percentage of Uric Acid Levels Increased:
   Rumus:

$$\text{Persentasi} = \frac{\text{Jumlah Yang meningkat}}{\text{Jumlah Sampel}} \text{ x } 100\%$$

$$Persentasi = \frac{40}{60} x\ 100\% = 67\%$$

2. Percentage of Normal Uric Acid Levels
   Rumus:

$$\text{Persentasi} = \frac{\text{Jumlah Yang Normal}}{\text{Jumlah Sampel}} x\ 100\%$$

$$Persentasi = \frac{20}{60} x\ 100\% = 33\%$$

3. Percentage of Uric Acid Increase in Men
   Formula:

$$Persentasi = \frac{\text{Jumlah Asam Urat Meninggi Laki-Laki}}{\text{Jumlah Sampel Yang Meninggi}} x\ 100\%$$

$$Persentasi = \frac{17}{40} x\ 100\% = 43\%$$

4. Percentage of Uric Acid Increase in Women
   Formula:

$$\text{Persentasi} = \frac{\text{Jumlah Kadar Asam Urat Meninggi Pada Perempuan}}{\text{Jumlah Sampel Asam Urat Meninggi}}$$

$$Persentasi = \frac{23}{40} x\ 100\% = 57\%$$

5. Percentage of Normal Uric Acid Levels in Women
   Formula:

$$\text{Persentasi} = \frac{\text{Jumlah Yang Normal}}{\text{Jumlah Sampel}} x\ 100\%$$

$$Persentasi = \frac{11}{20} x\ 100\% = 55\%$$

6. Percentage of Normal Uric Acid Levels in Men
   Formula:

$$\text{Persentasi} = \frac{\text{Jumlah Yang Normal}}{\text{Jumlah Sampel}} x\ 100\%$$

$$Persentasi = \frac{09}{20} x\ 100\% = 45\%$$

After examining uric acid levels in the elderly at the Stabat Health Center, Langkat Regency, on 60 samples, 40 samples (67%) were obtained. Furthermore, the normal uric acid levels from 60 samples were 20 samples (33%). Based on gender, the elevated uric acid levels

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in the male elderly were 17 samples (43%), while the elevated uric acid levels in the female elderly were 23 samples (57%). Gout is the substance of the final product and metabolism of purine in the body (Lisa Hidayati, 2022). Based on investigations, 90% of uric acid is the result of katabolism purines that are assisted by the enzymes guanase and xanthine oxidase. Excessive uric acid will not be stored and fully metabolized by the body, so there will be an increase in acid levels in the blood which is called hyperuricemia. Gout is also a by-product of cell fragments in the blood, because the body continuously breaks down and forms new cells. Uric acid levels increase when the kidneys are unable to excrete it through feces, meaning that kidney function decreases, filter disorders make uric acid difficult to remove (Hans, 2022). As a result, the excess uric acid crystals will accumulate in the joints and tissues. This is why our joints will feel pain and swelling when this disease strikes.

The production of uric acid in the body increases and one of the causes of increased uric acid in the blood is due to consuming foods with high purine levels such as meat, offal, crab, cheese, peanuts, spinach, chickpeas, cauliflower, and broccoli. Excessive production of uric acid, while excretion is disturbed and the occurrence of hyperurism is caused by a combination of increased endogenous purine production and increased purine intake accompanied by reduced excretion of uric acid through the kidneys, which triggers an increase in uric acid in the blood, in line with research (Indonesian Rheumatology Association, 2018), (Wahyu Vidyanto, 2017). There are various ways that can be done for good prevention is to avoid gout. The first step to prevent gout, the first is to regularly check the uric acid level, and the second is to adjust the daily diet. Prioritize eating fruits every day so that the intake of vitamins and minerals needed by the body can be met, besides that fruits contain antioxidants (Ramli et al., 2020), (Nuraini Endah, 2021). Furthermore, a healthy lifestyle with adequate exercise means that exercise that is suitable for the elderly is also a factor in preventing high gout (Kinasih et al., 2021), (Santoso & Khusniyah, 2020).

CONCLUSION

Considering the ease with which uric acid levels increase in old age which causes diseases such as kidney stones, gout, and rheumatism, it is recommended: Increase physical activity by exercising regularly. Reduce the consumption of foods that contain high purines that can increase uric acid levels such as meat, offal, crab, shellfish, cheese, peanuts, spinach, chickpeas, cauliflower, and broccoli. Routinely check the uric acid level and if necessary for high uric acid levels to consume medication as recommended by the doctor. From the results of the examination of uric acid levels in the elderly at the Stabat Health Center, Langkat Regency on 60 samples, the following results were obtained, From the blood samples examined, the results of uric acid were obtained which increased as many as 40 samples (67%). From the blood samples examined, normal uric acid results were ob40 samples (43%). The elevated level of uric acid in elderly women was 23 samples out of 40 samples (57%). Of the normal blood samples, there were 20 samples, the number of elderly people who were male was 09 samples (45%). Of the normal blood samples, 20 samples were female, 11 samples (55%).tained as much as 20 (33%). The elevated level of uric acid in elderly men was 17 samples out of.

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