

DOI:

10.22301/IJHMCR.2528-3189.930

Article can be accessed online on:
<http://www.ijhmcr.com>

ORIGINAL ARTICLE

**INTERNATIONAL JOURNAL
OF HEALTH MEDICINE AND
CURRENT RESEARCH**

THE INFLUENCE OF CONSUMPTION LAOR (POLYCHAETA) AGAINST KIDNEY FUNCTION (CREATININ UREUM AND LEVELS) IN MEN AND WOMEN AGE PRODUCTIVE IN THE VILLAGES OF NORTH HALMAHERA

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ARTICLE INFO

Article History:

Received 28th March, 2018
Received in revised form
24th April, 2018
Accepted 31th Mei, 2018
Published online 30th June, 2018

Key words:

Laor, Ureum And Kreatinin.

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ABSTRACT

Kidney is an organ that is very important to remove the results of body metabolism that is not used and drugs. Age between 18 to 45 years, often associated with fertile period or productive age. Ureum is one of the products of solving protein in the body that is synthesized in the liver and 95% discharged by the kidney and the remaining 5% in the feces. Normally the blood urea level is 7.25 mg in 100 milliliters of blood. Kreatinin in plasma is the normal metabolism of keratin phosphate in muscle. Most keratin (94%) is found in muscle tissue. Laor is a polychaeta organism that rises to the surface of the ocean to breed. The Laor that is consumed by the Moluccas is actually a posterior Polychaeta organism that contains eggs and sperm. The purpose of this research is to know the influence of Laor (Polychaeta) Consumption on Decrease of Ureum and Creatinine Level in Men and Women of Productive Age. This research uses True Experimental Design design Pre-test design pattern and post test control group sample taken using sample random sampling number of samples as many as 10 respondents. Data analysis technique using paired t test with significant 0,05. The results of research for t arithmetic ureum experimental

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Citation: Charles Bertje Turangan^{1,2*}, Maklion B. Mansa², Santje Pangkey^{1,2}, Farelyn Sahuleka^{1,2}, 2018 "The Influence Of Consumption Laor (Polychaeta) Against Kidney Function (Creatinin Ureum And Levels) In Men And Women Age Productive In The Villages Of Wari-Ino Sub District Of Tobelo North Halmahera Regency", *International Journal of Health Medicine and Current Research*, 3, (02), 930-934.

group = 5.807 and the value of $P = 0.004$ and the results t arithmetic for creatinine group of experiments = 4.271 and p value = 0.013 while the results t arithmetic for control group ureum = -389 value $p = 0,71$ and t count for the creatinine control group = 1,000 p value = 0.74. From this study it can be concluded that, by consuming laor can reduce the levels of urea and creatinine is expected to the public to use or utilize hebal medicine as a treatment of levels of urea and creatinine.

INTRODUCTION

Kidney is an organ that is very important to remove the results of body metabolism that is not used and drugs. The kidneys have the ability to monitor the amount of body fluids, the concentrations of electrolytes such as sodium and potassium, and the acid-base balance of the body. The kidneys filter out waste products from body metabolism, such as urea from protein metabolism and gout 1.

Age between 18 to 45 years, often associated with fertile period or productive age. At this age women and men should pay more attention to the condition of his body in order to always be in good condition and fit to avoid various diseases, especially for the preparation of old age will be like a disease that often becomes a world problem against women after menopause known as Osteoporosis 2.

According to WHO records in 2013 more than two billion people in the world of childbearing age are dumping kidney function. Based on the pervalence of adult productive age population (> 18 years) prevelensi showed that 56% of people with kidney disease are productive population under age 55 years 3.

Pervalence Productive age in men in Indonesia with the amount of 128.23 million or 50.25% with prevelensi productive age in women amounted to 126.95 million or 49.75%. The total number of men and women of reproductive age in the year 2015 is 255.18 million people 4.

Basic Health Research Results (Riskesmas). In 2013, Indonesia showed 4.99.8 thousand Indonesians suffered kidney failure and 1,499,400 inhabitants suffered from kidney stones at productive age. Prevalence of kidney function in productive age of North Moluccas 0.2% 5.

Ureum is one of the products of solving protein in the body that is synthesized in the liver and 95% discharged by the kidney and the remaining 5% in the feces. Kreatinin in plasma is the normal metabolism of keratin phosphate in muscle. Most keratin (94%) is

found in muscle tissue Therefore, urea and creatinine tests are always used to look at kidney function in patients suspected of having impaired renal organs.

Laor (Polychaeta) is one of the typical biota of Moluccas waters. In March or April, on a full moon night or a few days later, the biota is swarming, an event when marine worms of a certain type are clustered in abundance around the waters of the water for external marriage.

Polychaeta contains high quality protein and amino acids and unsaturated fatty acids. Protein content of Polychaeta is 56.29% and fat is 11.32%, while for fatty acid content includes iococapentanoic acid (EPA), docosahexanoic acid (DHA), arachodonic acid (ARA), stearic acid (SA), linoleic acid (LA), and linoleic acid (LNA) 6.

According to Muhammad wahib hasyim in the study of extra sea cucumbers marine protein content EPA aka iokosapentanoat 25.69% and DHA docosahexanoic acid 3.69% this content can activate the balance of the enzyme along with the protein to form a balance of hormones and glandular system that can overcome the production of blood cells red prevents blood anemia in kidneys to shrink, blood circulation, relieve pain (natural illness suppression) on the backs of kidney patients to reduce and decrease stabilize urea and creatinine in patients with kidney fungisi.

Based on the work area of tobelo district, North Halmahera Regency, in 2017 in June / July covering 12 villages. Each village, wari, wari-ino, Gura, Mkcmm, Gosoma kakara pulo, Kumo, Gamsungi, Rawajaya.

METHODS

This design is a True Experimental Design design that has high accuracy by involving control and intervention groups. This study intends to analyze the influence of Laor Consumption (Polychaeta) on Kidney Function (Ureum and Creatinine) in Men and Women of Productive Age in Wari-Ino Village of Kec.Tobelo of North Halmahera Regency. The intervention group in this study will be conducted laboratory tests on patients who consumed laor. Before and after intervention, laboratory tests (urea and creatinine) were measured. While the control group is not given laor consumption which is the standard action performed 17.

The research design is described as follows:

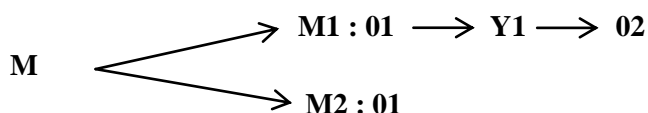


Figure 4.1. Pretest design pattern and posttest control group.

Information :

- M** : Research respondents **01**
: Pre test
- M1** : Intervention group respondents **02**
: Post test
- M2** : Responden kelompok control
- Y1** : Intervention in the treatment group

Place and time of research

This research was conducted in Wari-Ino Village, Tobelo Sub-district, North Halmahera Regency. The location of this research is chosen because it can be reached easily. In addition it has a number of respondents who meet the requirements of inclusion and there has been no research on laor consumption as an intervention in renal function of urea and creatinine levels. Implementation of the study is planned for 3 months 2 weeks.

Population

Population is the entire subject or object with certain characteristics to be studied, not just the object or subject that is studied alone but all the characteristics or properties of the subject or object. Population is said as a collection of people, individuals or objects to be examined its properties or characteristics¹⁷.

The population in this study is the kidney function on urea and creatinine levels in Wari-Ino Village of districts Tobelo of North Halmahera Regency. The population in this study in Wari-Ino amounted to 10 people with kidney function on urea and creatinine levels.

Sample

This research sampling technique used is by using non probability sampling method by using saturated sampling that is technique of taking this sample by taking all member of population become sample. This method is done when the number of population is small, as if the sample is less than 30 samples then the member of the population is taken entirely to be the research sample. Another term saturated sample is the census, where all members of the population are sample¹⁷.

RESULTS

This research was conducted in July 2017 Wari-Ino Village of districts. Tobelo of North Halmahera Regency. This research uses True Experimental Design which has high accuracy by involving control group and intervention. This study intends to analyze the influence of Laor Consumption (Polychaeta) on Kidney Function (Ureum and Creatinine) in Men and Women of Productive Age in Wari-Ino Village of Kec.Tobelo of North Halmahera Regency.

Average Ureum and Creatinine Levels in Men and Women of Earning Age Before Laor Consumption. Laor is one food that has several compounds such as epa, dha and palamitic acid that can decrease the levels of urea and creatinine in men and women of childbearing age. It can be seen in Table 5.1 that high levels of urea and creatinine in men and women of childbearing age before taking a laor are with mean urea levels of 53 mg / dl and creatinine 1.7 before laor consumption. The high levels of urea and creatinine are influenced by several factors, namely the decrease in creatinine clearance and decreased filtration rate in renal failure, the release of creatinine from muscles in large quantities such as crush injury and rhabdomyolysis and the influence of drugs such as some types of antibiotics (trimethoprim), probenesid and H-2 blockers.

Previous studies have found that EPA compound with bladder (3.866), whereas in compound DHA with content (2,458) found in sea taripang Previous studies have the same compounds in the compounds EPA, DHA, Paimitic Acid which can lower the levels of urea and creatinine there there is an EPA, DHA, Paimitic Acid compound similar to Halmahera or. However, the content of compounds in the laor is greater than the compound on the fruit globe.

One of the substances that are beneficial to cardiovascular health is omega-3 fatty acids. Fulfillment can be obtained from some food and beverage products sold on the market such as yogurt, cheese, infant formula and chicken eggs tend to choose products containing omega-3 fatty acids supplement omega-3 EPA and DHA can increase Hb levels, and improve the status nutrition.

The urea concentration increases with the flow of tubular fluid into the thin segment of henle ansa. The thick segments of henle ansa, distal tubules and colligent tubules are all relatively impermeable to ureum. Ureum is one of the products of solving protein in the body that is synthesized in the liver and 95% discharged by the kidney and the remaining 5% in the feces. Normally the blood urea level is 7.25 mg in 100 milliliters of blood.

Creatinine in plasma is the normal metabolism of keratin phosphate in muscle. Most keratin (94%) is found in muscle tissue. In men the metabolic rate is 20 25 mg / kgBW / day while in women 15 mg / kg / day.

The Effect of Laor Consumption on Intervention Groups

This can be demonstrated by the result of bivariate analysis on uream and creatinine level of the intervention group with t test, which obtained value $p = 0,004$, $p = 0,001$ which means $< \text{value } \alpha 0,05$ or t value on ureum (4,793) and creatinine (4,217) then this shows that the null hypothesis (HO) is rejected and the alternative Hypothesis (Ha) is accepted that there is a significant relationship on respondents who consume laor. Because t arithmetic lies in the Ho area is rejected, it can be seen that the levels of urea and creatinine are different or not the same significantly.

Levels of urea and creatinine of respondents after taking a laor can avoid risk factors for kidney function, which by regulating diet and lifestyle, because it is very influential in decreasing levels of urea and creatinine. Therefore, men and women of childbearing age in this village must be aware of the importance of maintaining health, checking and controlling routinely to the nearest health services such as puskesmas. It can be concluded that before and after relatively different laor consumption or laor effect on the decrease of urea and creatinine levels.

The Effect of Laor Consumption on Control Groups

This can be demonstrated by the result of bivariate analysis on uream and creatinine level of the intervention group with t test, which obtained p value = 0,004, $p = 0,001$ meaning $< \text{value of } \alpha 0,05$ or t value on ureum (4,793) and creatinine (4,217) then this shows that the null hypothesis (HO) is rejected and the alternative Hypothesis (Ha) is accepted that there is a significant relationship on respondents who consume laor. Because t arithmetic lies in the Ho area is rejected, it can be seen that levels of urea and creatinine are different or not equal significantly.

DISCUSSION

1. Average Uream and Creatinine Levels in Men and Women of Earning Age Before Laor Consumption. Laor is one food that has several compounds such as epa, dha and palamitic acid that can decrease the levels of urea and creatinine in men and women of childbearing

age. It can be seen in Table 5.1 that high levels of urea and creatinine in men and women of childbearing age before taking a laor are with mean urea levels of 53 mg / dl and creatinine 1.7 before laor consumption. The high levels of urea and creatinine are influenced by several factors, namely the decrease in creatinine clearance and decreased filtration rate in renal failure, the release of creatinine from muscles in large quantities such as crush injury and rhabdomyolysis and the influence of drugs such as some types of antibiotics (trimethoprim), probenesid and H-2 blockers.

2. Levels of urea and creatinine of respondents after taking a laor can avoid risk factors for kidney function, which by regulating diet and lifestyle, because it is very influential in decreasing levels of urea and creatinine. Therefore, men and women of childbearing age in this village should be aware of the importance of maintaining health, checking and controlling routinely to the nearest health services such as puskesmas Influence.

CONCLUSION

Based on the results of research and discussion can be put forward that concluded as follows:

1. Based on statistic "Test Pared t test there is significant influence on intervention group with value $p = 0,004$ for ureum and $p = 0,013$ for creatinine level. Then Ha accepted and Ho rejected because it is smaller than the value of α is 0.05.
2. Based on the comparison between the value of t arithmetic and t table using two-sided test. t arithmetic output in intervention group ureum level 5,807 and creatinine 4,271 with value of t table 2,776 because t value count bigger than t value table hence Ho rejected and Ha accepted.
3. Absence of influence of ureal and creatinine levels in the control group.

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