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## **THE EFFECT OF PANGI CAPSULE CONSUMPTION ON THE DECREASE IN LEUKOCYTE LEVELS IN PATIENTS WITH RESPIRATORY TRACT INFECTION IN THE WORK AREA OF PITU COMMUNITY HEALTH CENTER, CENTRAL TOBELO SUB-DISTRICT, NORTH HALMAHERA REGENCY.**

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### **ABSTRACT**

Respiratory tract infections that occur in the respiratory tract due to viral or bacterial infections. Respiratory tract infections usually often infect a person due to a decreased immune system. The North Halmahera Health Office said that Respiratory Tract Infections is a disease that has become a problem that must be addressed, where cases of Respiratory Tract Infection have always increased over the past few years, in 2017 with as many as 16,358 cases.

Meanwhile, in 2018 there were 13,266 cases. And in 2019 there were 297 cases. Based on this data, it can be concluded that in 2017 there was an increase, while in 2019 there was a decrease where there were only 279 cases. In Pangi Leaves, there are Hexadecenoic Acid compounds, Octadecanoic Acid.

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This type of research uses Quasy Experiment with Pre-Test and Post-Test designs. To determine the effect of consumption of Pangi capsules on the decrease in leukocyte levels in patients with respiratory infections in the working area of the Pitu Community Health Center, Central Tobelo sub-district, North Halmahera Regency. The results of statistical tests (SPSS) using the Square Test show that the value of  $p = 0.000$ ,  $< \text{Sig. } 0.05$ . So it can be concluded that there is an effect of pangi capsule consumption on reducing leukocyte levels in patients with Respiratory Tract Infection.

The results of research conducted in the working area of Pitu Community Health Center, Central Tobelo District, experienced a decrease in leukocyte levels after (post-test) consuming Pangi capsules.

With the existence of research, it is hoped that it can be useful for all groups, both institutions, research sites, and society.

## Introduction

According to the World Health Organization (RESPIRATORY INFECTION) is still a health problem in the world, because almost every 4 million people die as a result of being infected with Respiratory Tract Infection, 98% of the incidence of Respiratory Tract Infection in developing countries is around 2-10 times more than in developed countries, these differences are influenced by the causal factors and risk factors. 1

Ratio Respiratory Tract Infections from World Health Organization (WHO) data in 2016 were 59,417 cases, WHO estimates that cases of respiratory

infections in developing countries are between 40-80% higher than in developed countries.2

According to the data Rikesdas that Respiratory Tract Infection data in the last few years has changed where in 2013 cases of Respiratory Tract Infection in Indonesia amounted to 25.0%, this is inversely proportional to 2018. Where in 2018 there was a decrease of 9.3%. So it can be concluded that cases of Respiratory Tract Infection in Indonesia have changed in 2018. 3

The prevalence data in North Maluku province also changes, where in 2013 there was an increase of 15%. Meanwhile, in 2018 cases of Respiratory Tract Infection in North Maluku Province decreased by 5%. This shows that cases of Respiratory Tract Infection have always changed in the last few years in North Maluku. 4

North Halmahera Health Office said that the disease Respiratory Tract Infection is a disease that has become a problem that must be overcome, where cases of Respiratory Tract Infection have always increased over the past few years, in 2017 with as many as 16,358 cases. Meanwhile, in 2018 there were 13,266 cases. And in 2019 there were 297 cases. Based on these data, it can be concluded that in 2017 there was an increase, while in 2019 there was a decrease where there were only 279 cases

From the data obtained at the Pitu Puskesmas, Central Tobelo sub-district, North Halmahera Regency in 2017 there were 3,144 cases, in 2018 there were 3,107 cases, and in 2019 there were 3,288 cases. From this

data, it can be concluded that Respiratory Infections disease has increased in 2019, so that Respiratory Tract Infection is included in the top 10 diseases in Pitu Puskesmas, Central Tobelo sub-district, North Halmahera Regency.

Pangi plant is a plant that is widely used to treat disorders that occur in the skin that are usually caused by bacteria. The part of this plant that is used is the leaf. Based on previous research conducted by Arend Laurens Mapanawang, et al. The Invention of Chemical Compounds Of Herbal Medicine Containing Pyridine For Corona Virus (Covid - 19, Mers) HIV / Aids, And Hepatitis. Where it uses several ingredients from sea and land products, the ingredients used are Red starfish, Golobe, and Pangi. Where in red starfish there is an Epiridone compound that can overcome viral infections, while in golobe fruit there are compounds, Hexadecanoid Acid, Dimethylpyridine, which can overcome viral infections, while in Pangi leaves there are also compounds that are the same as Golobe, namely Hexadecanoid Acid compounds, Octadecanoid Acid, which can also treat viral and bacterial infections. 9

### Research Methods

In this research is quantitative research using Quasy Experiment research design with pre and post test. In this study, the objective of this research is to analyze the effect of pangi capsule consumption on the decrease in leukocyte levels in patients with acute respiratory infections at Pitu Puskesmas, Central Tobelo sub-district, North Halmahera Regency. There is an intervention

group in the research conducted, where the group will be given the procedure for giving Pangi Capsules.

## Results and discussion

### a. Experiment Group

**Table 4.1.5 T-Test Statistical Test Table in the Intervention Group**

No	Code	Results	Value	df	Value	T	value
<b>Conclusion</b>							
<b>Respondents count normal</b>							
<b>Pre Post T table</b>							
1	1	16.0	8.0	3	0.000	0.05	
2	1	13.40	10.0				
3	1	16.70	6,0				
4	1	13.0	10.0				

Primary data source: 2020

Based on Table 4.1.5 above, there is an effect of Pangi Capsule Consumption on Decreasing Leukocyte Levels in Respiratory Infection Patients with significant results. The SPSS statistical test results obtained a significant value =  $0.000 < 0.05$ , or the value of T count. means that it can be concluded that there is an effect of pangi capsule consumption on reducing leukocyte levels in patients with Respiratory Tract Infection

Based on the results of the statistical test, Paired Sample T-Test, it is known that the t-count value in the intervention group is 0.000. Because of the value (t-count  $0.000 < 0.05$ ), it can be concluded that there is an effect of consuming Pangi capsules (Pangium Edulle

Reinw) on the decrease in leukocyte levels in patients with respiratory infections in the working area of Pitu Community Health Center, Central Tobelo sub-district , North Halmahera Regency.

### **Conclusions and suggestions**

Based on the results of the statistical test, Paired Sample T-Test, it is known that the t-count value in the intervention group is 0.000. Because of the value (t-count  $0.000 < 0.05$ ), it can be concluded that there is an effect of consuming Pangi capsules (Pangium Edulle Reinw) on the decrease in leukocyte levels in patients with respiratory infections in the working area of Pitu Community Health Center, Central Tobelo sub-district , North Halmahera Regency.

### **Suggestion**

#### **1. For Educational Institutions**

It is hoped that through the results of this research, it is hoped that the quality of education in the learning process, both theoretical and practical, is expected so that students can increase their knowledge and insight into specific theories such as the case of Respiratory Tract Infection and how to treat both synthesis and use of herbal medicine, and can be used as additional knowledge. scientific.

#### **2. For Further Researchers**

It is hoped that researchers who are interested in researching the same can conduct research by looking at eating behavior and eating patterns. If you want to continue this research, the researcher must increase the

research time to be longer and be able to connect with several other variables.

### **References**

1. Qasim, M, and, Indra I. Relationship between knowledge and attitudes of mothers with the prevention of acute respiratory infections (respiratory tract infections) in toddlers in the working area of the Antang Public Health Center, Makassar. Journal of Health Scientific Diagnosis, 2018; Vol, 12 (6), 168 eISSN: 2302-2531.
2. <http://WHO.go.id> 2019 WHO Respiratory Tract Infection Prevalence Data.
3. <http://Kesmas,Kemkes.go.id> Main results of RISKESDAS, Ministry of Health, Republic of Indonesia. 2013-2018.
4. <http://Kesmas,Kemkes.go.id> Main Results of Provincial Level RIKESDAS. 2013 - 2018.
5. Results of Recapitulation of Respiratory Tract Infection Data of North Halmahera District Health Office. Year .2020.
6. Results of Recapitulation of Respiratory Tract Infection Data at Pitu Health Center, North Halmahera Regency, 2020.
7. Pinta, et al. Identification of Phytochemical Contents and Tests for Minimum Inhibitory Levels and Minimum Kill Levels of Extra Ethanol Leaves of Pangi Leaves of Pangi (Pangium Edulle Reinw. Ex Blume)

- Against the Growth of Escherichia Coli Bacteria. Pharmacon Pharmaceutical Scientific Journal-Element Year 2017; Vol, 6 (3) 261 ISSN. 2302-293.
8. Payow, M, C, et al. Anti-Inflammatory Test of Pangi Pangium Edulle Reinw Leaves on Formalin-Induced Rattus Novergicus White Rats. Tropi Biopharmasetical Journal, 2019; Vol, 2 (2) 40-47.
  9. Mapanawang, AL, The Invention Of Chemical Compounds Of Herbal Medicine Containing Piridine For Corona Virus (Covid-19 Mers) Hiv, And Hepatitis, International Journal Of Health Medicine And Current Research, 2020; Vol, 5 (01) 1565-1571, DOI : 10.2230110.

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