

Combination Of Tea-Ginger-Mint Extract Increase The Elderly Immunity

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Abstract--During the Covid 19 pandemic it is very important to have an alternative immunostimulant, especially for the elderly who are prone to exposure to the virus. Immunostimulants that are suitable for the elderly are in the form of extracts that can be brewed so that they are comfortable to consume. Many vitamin products and immunostimulant supplements, several important ingredients can be consumed. Some that have good content are tea extract, ginger and mint leaves. The purpose of this study was to determine the effect of the combination of Tea-Ginger-Mint Extract as an immunostimulant on the immunity of the elderly. The study used a Quasy Experimental design with a pretest-posttest non-equivalent control group design. The population of this research is the elderly, the sample of the study is 30 elderly people aged 60-75 years with a purposive sampling technique. The independent variable is the Tea-Ginger-Mint Extract. The dependent variable is the immunity of the elderly. The instrument used is the observation sheet. The treatment was for 4 weeks with the sample divided into 2 groups, namely the control group and the treatment group. Data analysis was carried out in 2 stages, namely Phase I Normality Test and Stage II Influence Test by using T-Test. The experimental results of the treatment group p value $0.00 < 0.05$, which means that there is a significant difference in increasing immunity before and after being given Tea-Ginger-Mint Extract. The results of the T-Test p value $0.000 < \alpha 0.05$, which means that Tea-Ginger-Mint Extract is effective as an immunostimulant to increasing immunity of the elderly. Conclusion the combination of Tea-Ginger-Mint Extract is effective in increasing the immunity of the elderly.

Keywords--Extract, tea, ginger, mint, immunity

I. INTRODUCTION

Maintaining body immunity is one of the recommended ways to prevent transmission of the corona virus (Covid 19). Apart from eating healthy foods, immunostimulants are also needed to keep the body in shape. Basically, the body has a defense system, as a natural mechanism to fight the threat of the corona virus which causes a person to become infected and several symptoms appear, such as sneezing, fever and others. The spread of the corona virus is easier only through the air and a vaccine has not been found. In cases like this, the best thing that can be done is preventive action, externally or internally.

Clinical Expert Prof. Dr. dr Iris Rengganis, Sp.PD-KAI said that internal prevention can be done by modulating (regulating) the immune system. Immunostimulants work to stimulate the formation of immune cells such as B cells which will then form antibodies. When the risk of exposure to viral infections is very high, immunostimulants can be added in addition to other precautions. Immunostimulants of a certain duration, until the risk of exposure to the virus decreases. Should be consumed before a person is infected with a disease because immunostimulants take time to stimulate the immune system. The use of immunostimulants can be recommended for age groups who are vulnerable to low immune system, especially the elderly (over 60 years).

In the transition season and the development of various viruses and diseases, the role of immunity is very important. Because with a strong immune system, you will definitely stay healthy and be able to overcome various health problems. To keep strengthening the immune system by consuming immunostimulants. Immunostimulants can help the immune system work by stimulating the formation of various immune cells.

Many vitamin products and immunostimulant supplements, several important ingredients can be consumed. One of the important ingredients that must be possessed is that green tea extract has been clinically proven to modulate the immune system and prevent further spread of infection. Ginger extract is also very crucial, it can prevent viral replication and stimulate an increase in the immune system. Another and important ingredient is mint leaf extract which plays an active role and works synergistically on the immune system.

The immune system or immune system is the cells and many other biological structures that are responsible for immunity, namely the defense in organisms to protect the body from external biological influences by recognizing and killing pathogens. In order to function properly, this system will identify various kinds of external biological influences such as from infections, bacteria, viruses to parasites, as well as destroying other foreign substances and eliminating them from the cells and tissues of healthy organisms so that they continue to function normally.

Humans have complex defense mechanisms, which can be divided into the innate immune system and the adaptive immune system. The innate immune system is a form of initial defense involving surface barriers, inflammatory reactions, the complement system, and cellular components. The adaptive immune system develops because it is activated by the innate immune system and it takes time to be able to exert a stronger and more specific defense response. Disorders of the immune system can include immunodeficiency, autoimmune diseases, inflammatory diseases, and cancer. Immunodeficiency can occur when the immune system is underactive, which can lead to repeated infections and can be life-threatening.

During the Covid 19 pandemic, it is very important to have an alternative immunostimulant, especially for the elderly who are prone to exposure to the virus. Immunostimulants that are suitable for the elderly are extracts that can be brewed so that they are comfortable to consume. The purpose of this study was to determine the effect of the combination Tea-Ginger-Mint Extract as an immunostimulant on the immunity of the elderly.

II. METHOD

The population of the research is the elderly, the sample of the study is the elderly aged 60-75 years as many as 30 people. The sampling technique was purposive sampling technique. The independent variable in this study was the Tea-Ginger-Mint Extract. The dependent variable is the immunity of the elderly with the category of Vital Signs examination results, physical complaints, psychological complaints.

The research design used Quasy Experimental which is a type of research design that has high accuracy, with a pretest-posttest non-equivalent control group design, namely research where the conclusions of the research results are obtained by comparing the data before and after the intervention between the treatment group and the control group. The instruments used were the observation sheet and the Vital Sign measuring instrument.

Conducting experiments or treatments for 4 weeks. Samples were divided into 2 groups, namely the control group (given tea alone consumed once a day) and the treatment group (given the Tea-Ginger-Mint Extract consumed once a day). Data analysis was carried out in 2 stages, namely Phase I Normality Test and Stage II Influence Test by using T-Test.

III. RESULT

The difference in the immunity of the elderly before and after being given Tea-Ginger-Mint Extract Week 1-4 p value = 0.00 < 0.05, it was concluded that there was a significant difference in the increase in immunity before and after being given Tea-Ginger-Mint Extract. In the control group which was only given tea, the value of p = 1.00 > 0.05, it was concluded that in the control group there was no significant difference in increasing immunity. Based on the statistical t test, the p value was 0.000 < α 0.05. So which means that Tea-Ginger-Mint Extract is effective for increasing the immunity of the elderly.

Paired Samples Test

	mean	Std Deviation	df	Sig.
Pair 1 Pre Test & Post Test	90	1,787	89	,000

According to Dana Hunnes, PhD, a senior dietitian at Ronald Reagan UCLA Medical Center and a professor at the Fielding School of Public Health, explains the health benefits of herbal infusion. Tea can boost the immune system and help fight various forms of cancer due to its antioxidants and plant chemicals. Important substances in herbal brewing can be obtained from extracts or other food ingredients. Tea will be more effective when combined with other ingredients. Ginger has good benefits for increasing the body's immunity, digestive system, fighting inflammation, as well as traditional medicine for colds and nausea. This can happen because ginger has antioxidant, anti-inflammatory, and antibacterial properties that can strengthen the body's resistance and prevent infection. Ginger contains chemical compounds such as gingerol that help fight inflammation and cancer. This compound is commonly used as a dietary supplement to treat nausea and various types of arthritis or arthritis. Peppermint can help fight viruses and bacteria and boost the immune system. Peppermint also acts as a reliever for nausea, indigestion, or other gastrointestinal disorders. The main ingredients in peppermint, menthol and methyl salicylate can relieve anxiety, reduce pain, and prevent bacterial growth.

Ginger tea is an herbal tea that has long been used to relieve stomach aches. The ingredients of gingerol and shogaol can help calm the stomach and prevent nausea and vomiting. Peppermint tea can relieve stomach aches due to its antioxidant and menthol content. The combination of Mint Ginger Tea provides more benefits from the uses of each of these ingredients. The combination of Mint Ginger Tea can be used as an Immunostimulant against the Immunity of the Elderly. Tea contains anti-inflammatory which helps minimize the risk of inflammation, and contains antioxidants that function to prevent oxidative stress. Ginger contains gingerol which has anti-inflammatory, strong antioxidant, antiviral, and antibacterial properties in the body. Ginger can also lower the level of inflammation which helps improve immune function. Mint leaves are a powerful source of antioxidants and can be used when feeling lethargic, anxious or under stress.

IV. CONCLUSION

Tea-Ginger-Mint Extract is effective as an immunistemulant to increase immunity in the elderly.

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