

DOI:

10.22301/IJHMCR.2528-3189.910

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

ORIGINAL ARTICLE

INTERNATIONAL JOURNAL
OF HEALTH MEDICINE AND
CURRENT RESEARCH

REFRIGERATION OF DRIED LEAF BLOOD BANANA (MUSA PARADISIACA L) ON BLOOD PROFILE HB, LEUKOSIT, TROMBOSIT, ERITOSIT IN MALARIA DISEASE PATIENTS IN PUSKESMAS DOCULAMO SUB DISTRICT WEST GALELA DISTRICT NORTH HALMAHERA

Said Kudo^{1,2*}, Desiani Subaduan², Helti C. Petrus^{1,2}, Faleryn sahuleka^{1,2}

¹ Medika Mandiri Foundation, North Halmahera, North Moluccas, Indonesia.

² Sekolah Tinggi Ilmu Kesehatan (STIKES) Halmahera Program Studi S-1.

ARTICLE INFO

Article History:

Received 27th March, 2018
Received in revised form
25th April, 2018
Accepted 30th Mei, 2018
Published online 30th June, 2018

Key words:

Malaria, Banana Leaf Cepatu (*musa paradisiaca*).

***Correspondence to Author:**

Said Kudo

Sekolah Tinggi Ilmu Kesehatan
(STIKES) Halmahera Program
Studi S-1

E-mail:

said.kudo@gmail.com

ABSTRACT

Malaria is a disease caused by parasites that partly live within the human body and parasite parasites multiply in the human heart when the erythrocytes are invaded by one of four species of protozoan parasite and plasmodium genus (NIAD, 2011). This study aims to determine. Effect of Water Consumption of Rice Stem of halmahera banana (*musa paradisiaca L*) Against the increase of hb, leucocytes, platelets, erythrocytes in malaria patients in roko village, Galela Barat sub-district, North Halmahera regency of 2017. Type of research used is research "quasy eskperiment design with Pre-post test control group ". With a large sample of 10 respondents in Roko Village sampling by non probability sampling type consecutive sampling. Result of T test analysis show that there is influence of Rancid Water. Halmahera banana leaves against increased hb, leukocyte, platelets, erythrocytes with T-count value is 3.767. > T-table value = 2.776 Therefore the null hypothesis (Ho) is rejected and the alternative hypothesis (Ha) is accepted.

Copyright © 2018, **Said Kudo**. This is an open access article distributed under the creative commons attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Citation: Said Kudo^{1,2*}, Desiani Subaduan², Helti C. Petrus^{1,2}, Faleryn Sahuleka^{1,2}, 2018 "Refrigeration Of Dried Leaf Blood Banana (Musa Paradisiaca L) On Blood Profile Hb, Leukosit, Trombosit, Eritosit In Malaria Disease Patients In Puskesmas Doculamo Sub District West Galela District North Halmahera", International Journal of Health Medicine and Current Research, 3, (02), 910-914.

INTRODUCTION

Malaria disease has been known since the time of Greece. Malaria is spread almost all over the world between the lines 60 ° north latitude and 40 ° south latitude, covering more than 100 tropical and subtropical countries. The world population at risk of malaria is about 2.3 billion or 41% of the world's population today. Each year malaria cases number 300-500 million and result in 1.5 to 2.7 million deaths, especially in Sub-Saharan Africa. Based on WHO epidemiological data estimated 56% of the world's population live, malaria is still a public health problem including in Indonesia. In Indonesia malaria is commonly spread throughout the archipelago, especially in eastern Indonesia. However, in western Indonesia, malaria cases are also found high (Harijanto, 2010).

In Indonesia, malaria is still endemic in some areas. Generally in the malaria areas are remote areas that some sufferers are from the weak economic class. Of the more than 200 districts / cities in Indonesia, as many as 167 districts / municipalities are malaria endemic areas. The areas with the highest malaria cases were reported for the 10% of Indonesia, among them 5.9% in Maluku, 2.77% in North Maluku, 0.49% in northern Sumatra, 0.14% in western Sumatra.

Increased incidence of malaria and outbreaks in some areas due to environmental changes and development that are not health insightful and high mobility of incoming people from non malaria endemic areas to malaria endemic areas or vice versa. During 2003-2008, malaria incidents occurred in 15 provinces covering 30 districts in 93 villages with almost 20,000 people with 389 deaths. The increase of malaria cases tends to lead to the outbreak of outbreaks in some areas, one of the causes is due to the monitoring and analysis of malaria data which is still weak at all levels, so that the action dilaksanakan often do not give optimal results (Harijanto, 2010).

Malaria is one of the deadliest diseases in the world. WHO data 2014 recorded 198 million cases of malaria occurs globally and cause 584,000 deaths in 2013. Malaria infection occurs in many parts of the world, especially tropical and sub-tropical areas including Indonesia. Of the 293 districts / cities in Indonesia, 167 of them are located in malaria endemic areas, said dr. Arend Laurence Mapanawang, Sp.Pd., FINASIM.

Research conducted zulaikhah, et al, (2011) community behavior plays an important role both on the development of bad mosquito malaria. Relationship with

the physical environment and cultural factors have a relationship of malaria, many people's behavior is less to malaria, among others, do not use wire gauze on the ventilation, the presence of water puddles that do not use mosquito repellent.

The incidence of malaria is affected by several factors, ie hosts (humans and mosquitoes), agents (parasite / plasmodium) and environment (environment). have a big effect on the presence or absence of malaria in a region. The presence of brackish water lakes, raccoon, fish ponds, forest clearing and mining in an area will increase the likelihood of malarial disease because the place is a place of malaria mosquito breeding. Individuals who have low immunity to malaria have a greater risk. (marlian santi, 2012).

Dried banana leaves may still not much to know. Though the leaves are often referred to as this harmonious we can not take for granted. Quite a lot of benefits and efficacy of dried banana leaves not only limited to craft or as a food wrapper, but you can also use as an herbal medicine.

There are some ingredients stored in dried banana leaf or kelaras, which was able to treat some minor ailments such as sore throat and even also reduce heat.

The shape of banana leaves such as longitude of the blade with a length of about 150-400 cm and the width of 70-100 cm with the leaves attached to the branches neatly shaped and the veins arranged parallel, banana leaf memili layer of wax on the bottom surface and do not have the bone of leaves on the part so banana leaves easily torn when slammed wind (cahyono, 2010).

METHODS

This study design menggunakann Quasy-circling Design Control Group design pre test and post test cotnrol group i.e. There are two groups. The first group was given preferential treatment and the second group was not given preferential treatment. The group that was given a treatment called circling groups and groups who were not given the treatment called group control.

After that is done one time measurement in front (pre-test) for the two groups, then do the treatment in the first group (experiment group) and in the second group (control group) were not given preferential treatment. After it's done measurement again (post test) in the two groups. This aims to see the comparison group given treatment (experiment group and a group that is not given preferential treatment (control group).

Place and time of research

The research was conducted in Roko Village, West Galela District, for one month from June to July 2017.

Population

Population is the total amount consisting of objects and subjects that have certain characteristics and qualities set by researchers to be studied and drawn conclusions. (Mapanawang 2016) the population in this research is 100 people in Roko Village who suffer from malaria disease.

Sample

The sample is part of the number and characteristics possessed by the population used for the study. If the population is large, it is impossible for researchers to take all of these for researchers, for example because of the funds, energy, and time they can use the sample from that population (Mapanawang 2016). which became the number of samples of 10 people with malaria in Roko Village District West Galela.

RESULTS

This research was conducted from June to July 2017. In Roko Village, Galela West District, for one month from June to July 2017. This research used Quasy Experiment Design Control Group design with pre-test and post test control group ie there are two groups. The first group was given treatment and the second group was not treated. The treated group is called the experimental group and the untreated group is called the control group.

Afterwards, a pre-test was performed for both groups, then treated in the first group (experiment group) and in the second group (control group) was not given treatment. After that was done again measurements (post test) in both groups. It aims to look at comparisons in experimental groups and control groups. 49 Respondents are some of the number and characteristics possessed by the population used for the study. If the large population, researchers are unlikely to take all for researchers for example because of funds, energy, and time the researchers can use a sample of the population (Mapanawang 2016). The sample size is 10 people with malaria in Roko Village District Galela West.

Malaria is a parasite-induced disease that partially lives within the human body and partially in the mosquito's body (NIAD, 2011). The parasite multiplies

in the human liver when the erythrocyte is invaded by one of four species of protozoan parasite and plasmodium genus wahab, 2010) most common species encountered are plasmodium falciparum and plasmodium vivax. plasmodium malariae encountered in eastern Indonesia whereas plasmodium ovale ever found in Papua and East Nusa Tenggara (Prabowo, 2010).

Vitamin E has antioxidant effects that the body needs to fight, counteract and neutralize free radicals that adversely affect the body. Vitamin E can also help maintain body immunity because of its role to help build the body's defense system and help fight infections attack germs, vitamin E can also overcome anemia (lack of blood) because in the banana leaf contains enough iron for anemia sufferers. (Yuniastuti et al, 2010) squalene

Overall, the result of statistical test analysis (SPSS) by using T test (T arithmetic and T table) shows that Water Decoction of dried banana leaf has an effect on blood profile of hb, leucocytes, platelets, erythrocytes in malaria patient in Roko Village, Galela West District sub- North Halmahera.

Experiment Group (Pre-Test and Post-Test)

Experiment Group (Pre-Test and Post-Test)

a. Decision-making based on comparisons of T arithmetic and T tables.

b. If T count is greater than T table then H_0 is rejected

c. If T count smaller than T table then H_0 accepted

Known T count is 8,918, 3,767, 6,000, 6,532 while T table is searched by the way

a. a. 5% significant level for the 2 side test then the significant level is divided into 2.5%

b. b. Df (degree of freedom) or degree of freedom sought by the formula of the amount of data -1 or $5-1 = 4$

c. c. The test is done by 2 sides with $df = 4$ value and significant value 0.05 then from t table got value 2,776.

Because T arithmetic lies in the H_0 area is rejected, it can be concluded that blood profile levels before and after consume Water Decoction Leaves dry or kapok cepatu is not the same or different significantly. Decision-making based on probability value

a. If the probability is > 0.05 , then H_0 is rejected

b. . If the probability is < 0.05 , then H_0 is

accepted for the 2-sided test, each side divided by 2 to become

1) The probability number is $/2.00.025$, then H_0 is accepted

2) Probability $/2.00.025$, H_0 is rejected

It can be seen that T count for hb, leukocyte, platelets, erythrocytes is 8,918, 3,767, 6,000, 6,532 with probability 0.001, 0.020, 0.004, 0.003 for 2-sided test, the probability number is 0.001, 0.020, 0.004, 0.003 / 2 then H_0 is rejected While T count for blood profile is <0.025 , with probability for test 2 side probability number is hence H_a accepted.

That blood profile level before and after consume Water Decoction Banana leaf dried shoots relatively different or Water Decoction Banana leaf dried fruit is effective in raising blood profile.

Control Group (Pre Test and Post Test)

Decision-making based on comparisons of T arithmetic and T tables.

a. If t arithmetic greater than t table then H_0 accepted

b. If t arithmetic smaller than t table then H_0 rejected

Given T count is 0.930, 0.331, 0.535, -535 while T table is searched in a way

a. 5% significant level for the 2 side test then the significant level is divided into 2.5%

b. Df (degree of freedom) or degree of freedom sought by the formula of the amount of data - 1 or $5-1 = 4$

c. with a value of $df = 4$ and significant value 0.05 then from t table obtained value of 2.776 ..

DISCUSSION

In patients with malaria there is an increase in blood profile in the experimental group that the influence of boiled water of dried banana leaves to increase levels of platelets containing vitamin C such as gedy boiled water research on increasing levels of platelets.

CONCLUSION

Based on the results of research on malaria patients there is an increase in blood profile in the experimental group that the influence of boiled water of dried banana leaves to increase levels of platelets containing vitamin C such as gedy boiled water research on increased levels of platelets.

The result of statistical test of SPSS from significant value that is $p = 0,001$, $<0,05$ then alternative hypothesis accepted and null hypothesis rejected can be concluded that existence influence of boiled water of dried banana leaf to increase of platelet in Roko Village District Galela Barat Regency of Halmahera North.

REFERENCES

1. Harijanto dkk⁽¹⁾ Malaria dari Molekuler ke Klinis, Penerbit Buku Kedokteran EGC. Jakarta, 2010.
2. Arend Mapanawang dkk⁽²⁾, Ekstra daun gedi terhadap anemia, International Journal Of Health Medicine End Curent, 2016 ; Research Vol 1 (Issue 2) : Hal.194-200, DOI : 10.22301/IJHMCR.2528-3189.194.
3. Arend Mapanawang dkk⁽³⁾, Ekstra rumput palem terhadap malaria, International Journal Of Health Medicine End Curent, 2016 ; Research Vol. 1 (Issue 2) : Hal.212-216, DOI : 10.22301/IJHMCR.2528-3189.212
4. Prabowo A4. mencegah dan mengatasi malaria, Pustaka swara, Jakarta, 2010.
5. Zulaikhah S.T., Faktor yang mempengaruhi terhadap kejadian malaria didaerah endemis malaria. Pengaruh perilaku terhadap malaria, Jurnal sains medika, 2011 ; vol. 4 (Issue 5) : Hal 168-176.
6. Saputro K.P. hubungan lingkungan sekitar rumah dan praktik pencegahan dengan kejadian malaria. Jurnal of public health, 2015 ; Vol. 2 (Issue 3) : 76-83.
7. Jay & raharja. Obat-obat penting, PT. elex media, Jakarta, 2011.
8. Soedarto. Malaria epidemilogi plasmodium-anopheles penatalaksanaan penderita malaria, Sugeng Seto. Jakarta, 2010.
9. NIAD. understanding malaria fighting an Ancient scourage, national institute of, 2011.
10. Rampengan TH. Penyakit Infeksi Tropik, EGC. Jakarta, 2010.
11. Depkes RI. Modul Epidemiologi, Ditjen P2M dan PLP, Jakarta, 2010.
12. Widayanti. Analisis kadar hemoglobin, pacific Indonesia lines. Universitas Sumatera Utara, 2010.
13. Zarianis. Efek suplementasi zat besi-vitamin C terhadap hemoglobin, Tesis program magister. Universitas diponegoro, 2010.
14. Effendi.z.peran leukosit sebagai inti inflamasi alergik dalam tubuh, Library. Jakarta, 2010.
15. Kosasih dkk. Tafsiran hasil pemeriksaan laboratorium klinik, Edisi ke-2. Jakarta, 2010.
16. Widman. F. K. Tinjauan klinis dan hasil pemeriksaan laboratorium, Edisi ke-9. Jakarta, 2010.

17. Handayani, f. d. & Darwin, A. vector malaria di daerah endemis, Salemba medika. Jakarta, 2010.
18. Haanen C. Pengantar ilmu penyakit darah, Cetakan pertama. Bandung, 2010.
19. Gandasoebrata R. Penuntun laboratorium klinik, Cetakan ke-10. Jakarta, 2010.
20. Anonim. Fungsi darah, Akses pada tahun 2013 bulan september tanggal 17(Internet). (Cited tahun 2017 bulan Mei tanggal 15), depkes RI. <http://www.e-smartschool.com>.
21. Achmadi, Manajemen penyakit berbasis wilayah. Universitas Indonesia-Press. Jakarta, 2010.
22. Almatsier Sunita, Prinsip dasar ilmu gizi, Gramedia Pustaka Utama, Jakarta, 2010.
23. Arend Mapanawang, Riset di bidang kesehatan, Medika Mandiri Halmahera. Tobelo , 2016.
24. Pratama. Nyamuk Anopheles sp dan factor yang mempengaruhi. Jurnal majority, 2015 ;Vol. 4 (Issue 5) : Hal 20-27.
25. Sacher dkk, Tinjauan klinis hasil pemeriksaan laboratorium. Edisi ke-11. Jakarta, 2010.
26. Cahyono, Pisang Usaha Tani Dan Penanganan Pascapanen. Revisi kedua. Yogyakarta, 2010.
27. Yuniastuti, Gizi Dan Kesehatan. Graha ilmu. Yogyakarta, 2010.
28. UNICEF, A.S. The prescriber, Malaria prevention and treatment (online). allergy and infectious di sease, u. s. department of health and human. service, 2010.
