



Preceeding book
The 1st International nursing Conference

Complementary Nursing Issue and Updates in 2015

STIKES Hang Tuah Surabaya
June, 6th 2015

Editor :

Prof. Yayoi Iwasaki, RN., PhD
Prof. Dr. Rika Soebarniati, dr., S.KM., M.PH
Prof. Dr. Nursalam, M.Nurs (Hons)
Dr. Bambang Widjanarko Otok, M.Si
Dr. Ah. Yusuf, S.Kp., M.Kes

Published by:



STIKES Hang Tuah Surabaya

Preceeding Book the 1st International Nursing Conference Complementary Nursing Issue and Updates in 2015

Editor:

Prof. Yayoi Iwasaki, RN., PhD
Prof. Dr. Rika Soebarniati, dr., S.KM., M.PH
Prof. Dr. Nursalam, M.Nurs (Hons)
Dr. Bambang Widjanarko Otok, M.Si
Dr. Ah. Yusuf, S.Kp., M.Kes

Cover Designer:

Ach Arfan Adinata, S.Kep., Ns

Setting / Lay Out:

Ach Arfan Adinata, S.Kep., Ns

Copyright and the Editor:

Printed and Published by:

STIKES Hang Tuah Surabaya Press
Jl. Gadung No.1 Surabaya 60244
Telp/Faks: (031) 8411721
Website: www.stikeshangtuah-sby.ac.id
Cetakan: 1, Surabaya, 2015

ISBN : 978-602-72856-0-6

COMMITTEE

Advisor

Wiwiek Liestyningrum, M.Kep
The Head of STIKES Hang Tuah Surabaya

Ns. Setiadi, M.Kep
The First Head Assistant of STIKES Hang Tuah Surabaya

Ns. Dwi Supriyanti, S.Pd., S.Kep., M.M
The Second Head Assistant of STIKES Hang Tuah Surabaya

Committee President

Ns. Puji Hastuti, M.Kep

Committee Voice President

Meiana Harfika, SKM., M.Kes

Secretary

Taufan Agung P, S.Sos

Treasurer

Nenny Andriani, SE
Ns. Dya Sustrami, S.Kep., M.Kes

Scientific Committe

Ns. Diyah Arini, S.Kep., M.Kes
Ns. Nuh Huda, M.Kep., Sp. Kep.MB
Ns. Dwi Priyantini, S.Kep
Ns. Hidayatus Sya'diyah, M.Kep
Ns. Dini Mei Widayanti, M.Kep
Ns. Christina Yuliasuti, M.Kep
Ns. Qori'ila Saidah, M.Kep., Sp. Kep.An
Ns. Merina Widiastuti, M.Kep
Lela Nurlela, S.Kp., M.Kes

Ceremonial Committe

Ns. Dhian Satya R., M.Kep
Ns. Dwi Ernawati, M.Kep
Sapto Dwi Anggoro, S.Pd
Ns. Antonius Catur S., M.Kep

Secretariat

Ns. Nur Muji Astuti, S.Kep
Ns. Rifka Pahlevi, S.Kep
Ns. Dedi Irawandi, S.Kep
Wasis Agung Ahmadi
Theresia Atik Nurharjanti
I Wayan Kama Utama

TABLE OF CONTENTS

No	Title	Page
Speaker Topic		
1.	Recovery-Oriented Nursing for People With Mental Illness	1
2.	Policy And Implementation of Complementary Nursing (Indonesian Nurse's Perspective)	13
3.	The Prospective of Complementary Nursing In Malaysia	21
4.	Chinese Medicine	25
Participant Topic		
5.	Autogenic Relaxation on Self-Efficacy In Patients With Cervical Cancer At Puskesmas Surabaya	27
6.	The Effectiveness of Government Strategy to Decrease Maternal and Infant Mortality Rates	33
7.	The Effects of Benson Meditation To Reduce Anxiety Level of Adolescent Female With Premenstrual Syndrome	45
8.	The Effectiveness of Cross Cradle Hold Breastfeeding Position Against Episiotomy Pain of Post-Partum Mothers	51
9.	The Competency of Midwives In Early Detection and Treatment of High Risk of Pregnant Women To Reduce Maternal Mortality	59
10.	The Relationship of Intelligence Quotient (IQ) With Social Personal Development of Pre-School Children Introduction.	67
11.	The Effect of 4S's Technique To Physiological And Behavioral Responses on Newborn	73
12.	RFPP Method for Recovery of The Nutritional Status of Children With Malnutrition and Poor Nutritional Status: A Literature Review	81
13.	The Relationship of Parenting Styles and The Achievement of Developmental Tasks of Toddler	89
14.	Effect of Early Mobilization To Pain, Blood Pressure and Pulse In Patients After Operation Sectiocaesaria	97
15.	Efficacy and Safety of Homeopathic Medicines As A Complementary and Alternative Medicine: A Literature Review Introduction	105
16.	Islamic Nursing Process In Fulfilling Spiritual Need (Prayer) of Immobilized Patients	111

17.	The Efficacy of Red Betel Leaves Boiled Water On Blood Glucose Levels In Healthy People	119
18.	Transcutaneous Electrical Nerve Stimulation As A Complementary Therapy On Pain Management of Acute Colic Renal	127
19.	The Effect of Foot Massage On Ankle Brachial Index (ABI) In Patients With Type 2 Diabetes Mellitus	133
20.	The Effect of Lamtoro (Leucaena Leucocephala) Consumption To Decrease Blood Glucose Levelsof Patient With Diabetes Mellitus	139
21.	The Effects of Therapy of Listening Al-Qur'an; Surah Ar-Rahman and Deep Breathing Exercise (DBE) On Pain In Patients With Post Abdominal Surgery	147
22.	Achievement of Suctioning Competency Through Peer Learning	153
23.	The Levels of Blood Glucose and Blood Cholesterol Before and After Aerobic Exercise In Patients With Diabetes Mellitus	167
24.	Improving Visual Health (Myopia) With "Vision Therapy"	177
25.	The Effectiveness of Guided Imagery Relaxation To Meet The Needs of Sleep In Patients With Post Laparotomy	181
26.	The Techniques of Deep Breathing Relaxation and Auditory Distraction To Reduce Level of Pain	187
27.	The Effect of Diaphragma Breathing Exercise To Decrease Asphyxiate In Patients With Copd	195
28.	The Effects of Counseling On Improving Perception Among People At Risk of HIV/AIDS	203
29.	The Effectiveness of The Application of Audio Media On Health Education In Community Health Center (Puskesmas)	211
30.	The Effect of Brain Gymnastics On The Ability To Remember The Lessons of Social Science	219
31.	The Different Level of Insomnia In Elderly Before And Afterkeroncong Music Therapy	231
32.	The Effect Of Rose Aromatherapy To Decrease Stress Levels On Early Adolescence (12-15 Years Old)	239
33.	Improving The Empowerment of Mother Larvae Observer Through Education and Training Approach Based On Health Promotion Model	247
34.	The Effect of Warm Water Foot Soak To Decrease Hypertention On Elderly	255
35.	Effect of Mixed Water Lime And Soy Sauce In Treating Cough Of Toddler	261
36.	The Relationships of Caring Nurse With Patient Satisfaction In Phc Hospital In Surabaya	269
37.	Bipolar Disorder In Young Adults: Culture As Etiology And Basic Intervention (A Literature Review)	275

	Cardiopulmonary Resuscitation of One By Stander	287
41.	The Correlation Between Clinical Guidances Competence With Clinical Skill Attainment of Nursing Students	295
42.	The Effectivity of Deep Breathing Toward Pain During Radial Artery Catheterization Among Coronaryheart Disease (CHD) Patients In "HK" Hospital Jakarta	303
43.	Making A Learning Video Pediatric Basic Life Support By Camtasia Studio Base On Powerpoint	309
44.	The Effectivity of Walking and Watching Movies To Decrease The Rate of Depression In Elderly	313
45.	Therapeutic Touch As A Complementary Therapy For Healing In Nursing : A Literature Review	319
46.	The Influence of Consume Nanaku Rice With Blood Sugar Level Among Patients With Diabetes Mellitus	325
47.	The Effect of Avocado Leaves To Decrease Blood Pressure Amongelderly With Hypertension	333
48.	The Effect of Feeding Rules Programme Toward Body Weight Changing Among Children In Playgroups Ponorogo	341
49.	The Effectivity of Bubble Continuous Positive Airway Pressure (CPAP) Among Neonates With Severe Respiratory Distress Syndrome (RDS) In Dr.Ramelan Navy Hospital Surabaya	345
50.	The Relationship Between Obstetric Conditions And The Incidence of Preterm Labor In Dr.Ramelan Navyhospital Surabaya	355
51.	The Effect of Counseling To Improve Self-Esteem And Acceptanceamong Patients With Type 2 Diabetes Mellitus	367
52.	The Efficacy of Blood Glucose Control For Reduce Ulcer Foot Degrees Among Patients With Diabetes Mellitus	377
53.	The Efficacy of Instrument For Early Detectionmental Health Disorder Among Health Cadres And Society In Pekalongan	385
54.	Family Social Support On Patient With Hypertension	393
55.	The Predictive Factors Associated With Breastfeeding Self-Efficacy (BSE) Among Breastfeeding Mothers	399
56.	The Relationship Between Gestational Age and Asphyxia Among Newborn Baby	405
57.	Analysis of The FactorsHyPerglycemia Among Patients With Diabetes Mellituswhosetaking Oral Hypoglycemia Drugs (OHD)	413

58.	The Relationship Betweenworkingmother, Vaccine Availability, The Activity of Health Officer and The Completeness Of Polioimmunization Programme Among Toddler In Health Centers Mekar, Kendari.	423
59.	The Risk Factors of Cardiovascular Desease	431
60.	The Relationship Between Stress Management And Teenager Learning Motivation Among High School Students (Sma) Antartika Sidoarjo	437
61.	The Effect of Recite Qur'an On Quality of Sleep Among Elderly In Elderly Health Center (Posyandu Lansia) Matahari Senja Surabaya.	443
62.	The Effect Ofinterpersonal Communication, Supervision and Trust On Performance of Clinical Hospital Instructor Nursing Students In Lampung Province.	451
63.	The Effects Of Career Development System, Justice, And Responsibility For Quality of Lecturer's Service In Health Polytechnic Tanjungkarang Lampung	461

THE EFFECT OF LAMTORO (*LEUCAENA LEUCOCEPHALA*) CONSUMPTION TO DECREASE BLOOD GLUCOSE LEVELS OF PATIENT WITH DIABETES MELLITUS

Meiana Harfika, Romlah
Diploma Nursing Program
Stikes Hang Tuah Surabaya
Surabaya, Indonesia
meianaharfika@gmail.com

ABSTRACT

Diabetes mellitus is a metabolic disease with main symptoms such as increased urination, increased thirst and increased hunger. Lamtoro (*Leucaena Leucocephala*) is a traditional ingredient to decrease blood glucose levels in patients with diabetes mellitus. This was pre-experiment design with *one group pre test method post test*. There were 9 respondents selected by using *purposive sampling* in Health Centers SidotopoWetan Surabaya. The results showed that eating lamtoro had an influence to decrease blood glucose levels. It was 7 respondents (77.77%) had a decreased of glucose level, 2 respondents (22.23%) had an increased of glucose level. Meanwhile, the statistic test of Wilcoxon signed ranks test showed $P > 0.05$. *Pre-experimental* research did not show a decrease in patients with diabetes mellitus. It meant that the influence of eating lamtoro with the decrease blood glucose levels in patients of diabetes mellitus was caused by diet, pattern of taking drugs, behavior and activity, and high stress levels. The implication of this study indicated that the effect of eating lamtoro is controlled and supported by good diet pattern, not consuming foods containing high carbohydrates, proteins and fats.

Keywords : Lamtoro, Blood Glucose, Diabetes Mellitus

INTRODUCTION

Diabetes is not curable, but can be stabilized with healthy diet, sufficient exercise, and fruits, which are rich in vitamins and contain a variety of substances that can help to cure diseases and control blood glucose levels. Vegetables and fruits are healing substances to rebuild the damaged tissue. Fruits can reduce blood glucose levels by inhibiting the absorption of sugar and stimulating pancreatic beta cells to produce insulin (Djauhari, 2009). Genetic factor and poor lifestyle and diet pattern are causes of the disease known as diabetes or sugar arise. The disease is characterized by blood glucose levels that

exceed normal limits as a result of the body that lacks insulin. In addition, the medical treatment of diabetes can also be overcome premises of traditional medicine by balancing blood glucose levels.

Diabetes mellitus is ranked 4th as a human killer. The International Diabetes Federation Congress in 2003 stated that more than 194 million people worldwide suffer from this disease. While in Indonesia alone recorded 2.5 million people are expected to continue to grow (Suryo, 2009:5). According to WHO data, Indonesia kept ranked 4th largest in the number of people with Diabetes Mellitus in the world. In 2000, it was approximately 150 million people with diabetes

mellitus. This number is increased to double by 2005 and could partially.

The increase will occur in developing countries. However, in 2006, the estimated number of diabetics in Indonesia rose sharply to 14 million people, and it was only 50 percent of people were aware of it and about 30% came for treatment regularly (Nabil, 2009: 5). This figure will grow more than 380 million in 2025 (Djauhari, 2009: 17). In every 19 minutes, there is one person in the world has a stroke due to complications from diabetes, and every 90 minutes, there is one person in the world blind due to complications of diabetes, and every 12 minutes, there is one person in the world has a heart attack due to complications of diabetes. The population of diabetics in Indonesia is estimated between 1.5 to 2.5%, excepts in Manado, that is around 6% with a population around 200 million people. It means approximately 3-5 million of people suffer from diabetes (Nabil, 2009: 11). From preliminary study, diabetics in January were 237 patients. While in February were 210 and March were 236 patients at the health center SidotopoWetan Surabaya.

Most of the people on the ground are like to consume traditional medicine for any illness. Patients consume lamtoro by boiling leaf or fried seeds. These patients not only consume lamtoro, but also consume brotowali, retreat, apple, aloe vera etc. Lamtoro in Indonesia almost fell after planthopper pests. Propagation instead of the old seed dispersal can also be accomplished by stem cuttings. But consuming lamtoro too much and in the long term can cause hair loss because it contains mimosin, but mimosin easily disappear during the cooking process and immersion. The prevalence of diabetics is increased in Indonesia. Therefore, the World Diabetes Day 1996 advises to look for natural ingredients that are readily available to be used as a traditional medicine, which is valuable because current diabetes drugs are quite expensive. Lamtoro seeds are easily found in Indonesia and believed by the public can lower blood glucose levels.

Although diabetes mellitus is a chronic disease that does not cause death directly, but it can be dangerous if the treatment is not appropriate. Therefore, the management of diabetes mellitus requires multidisciplinary treatment that includes a non-drug therapy and drug therapy. This study will try to review the herbal treatment of diabetes mellitus by using lamtoro.

LITERATURE REVIEW

Diabetes is one of the oldest diseases in humans, with full name is diabetes mellitus, derived from the Greek word: Siphon (pipeline) and sugars that describes the symptoms of uncontrolled diabetes, releasing a sweet smell urine because it contains sugar (glucose) (Ruby W. Bilous, 2008: 7). Diabetes is a permanent change in body chemistry system resulting too much sugar in the blood (DR. Ruby W. Bilous, 2008: 10). It is a disease in which glucose (a simple sugar) in the blood has high levels because the body cannot release or use insulin adequately (Nably RE, 2009: 12). Diabetes mellitus commonly called "diabetes" only as a condition having increased levels of glucose in the blood. Diabetes is a disorder of chemical on carbohydrates, fats, and proteins from food due to insufficient expenditure or lack of insulin. Insulin is a hormone produced by pancreas to arrange blood glucose (Savitri Ramaiah, 2006: 1).

Lamtoro (*leucaena leucocephala*) is a plant that has a tree trunk-sized hard and it is not rice. The compound leaves are decomposed in a double-bladed stalk.

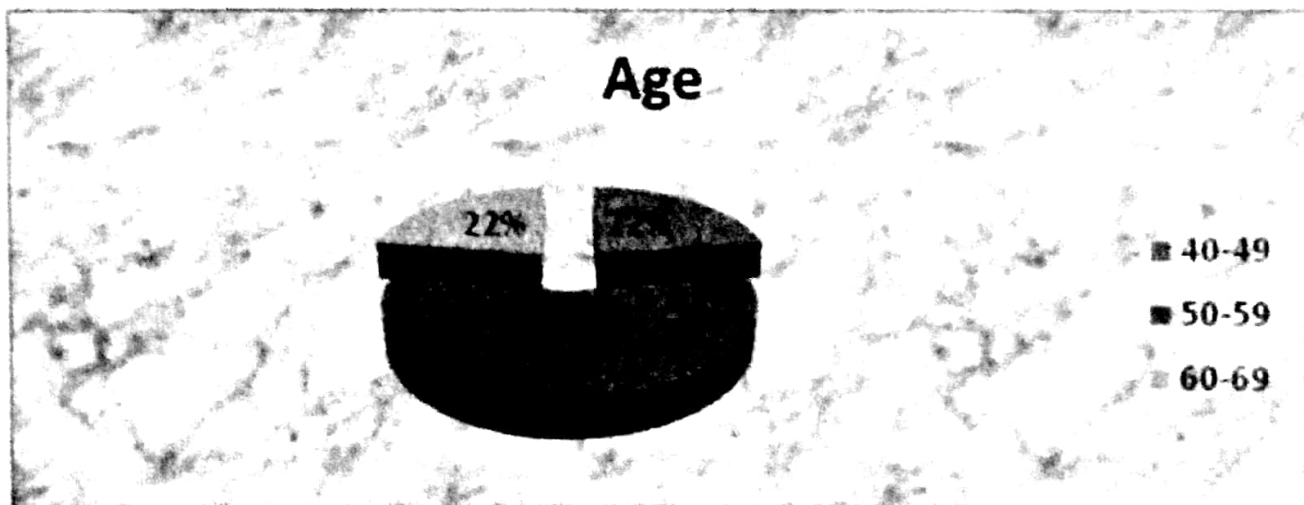
METHODS

This study used a pre experiment design of one group with pre and posttest. Lamtoro was given to decrease glucose levels in patients with Diabetes Mellitus in TambakWediLama Surabaya. The independent variable in this study was giving lamtoro to Diabetes Mellitus patient in TambakWediLama Surabaya. The dependent variable in the study was the reduction of glucose levels of patient with Diabetes Mellitus.

Figure 5.1 showed that women were more than men. That women were 77.8 % and men

b. Characteristics of respondents based on age

Figure 5.2 The distribution of frequency of respondents based on age in Puskesmas Wetan Surabaya in May 2010. (N : 9)



3 showed that 56% of respondent were having no education, 22% were in basic education, and the other 22% of respondents were having junior high background of education.

Characteristics of respondents based on religion

4 The distribution of frequency of respondents based on religion in Puskepurabaya in May 2010 .

Religion



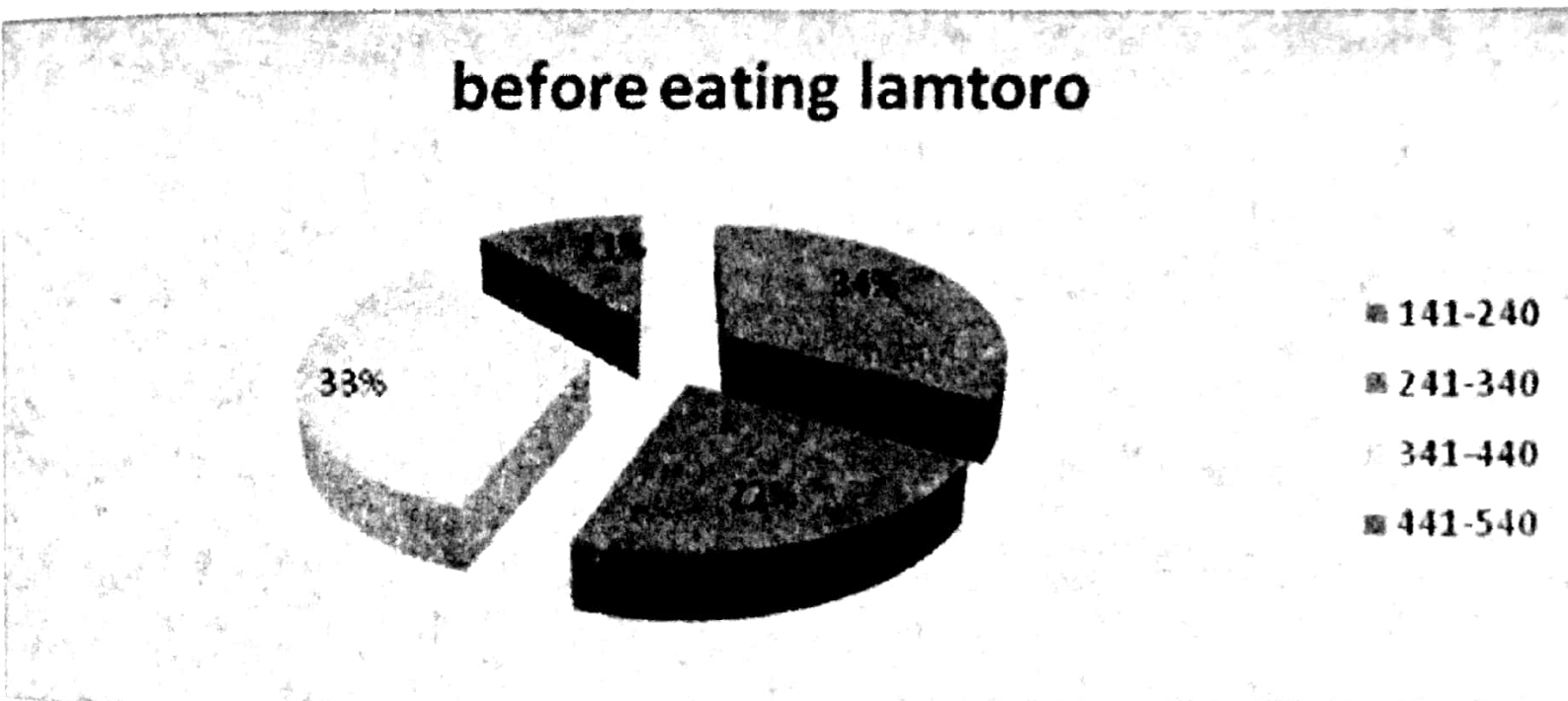
5.5 showed that 44.4 % of respondents worked as housewives, and 55.6 % of respondents worked as private work / entrepreneur.

ata
effect of the reduction of glucose levels in patients with diabetes mellitus in P
Wetan Surabaya was presented.

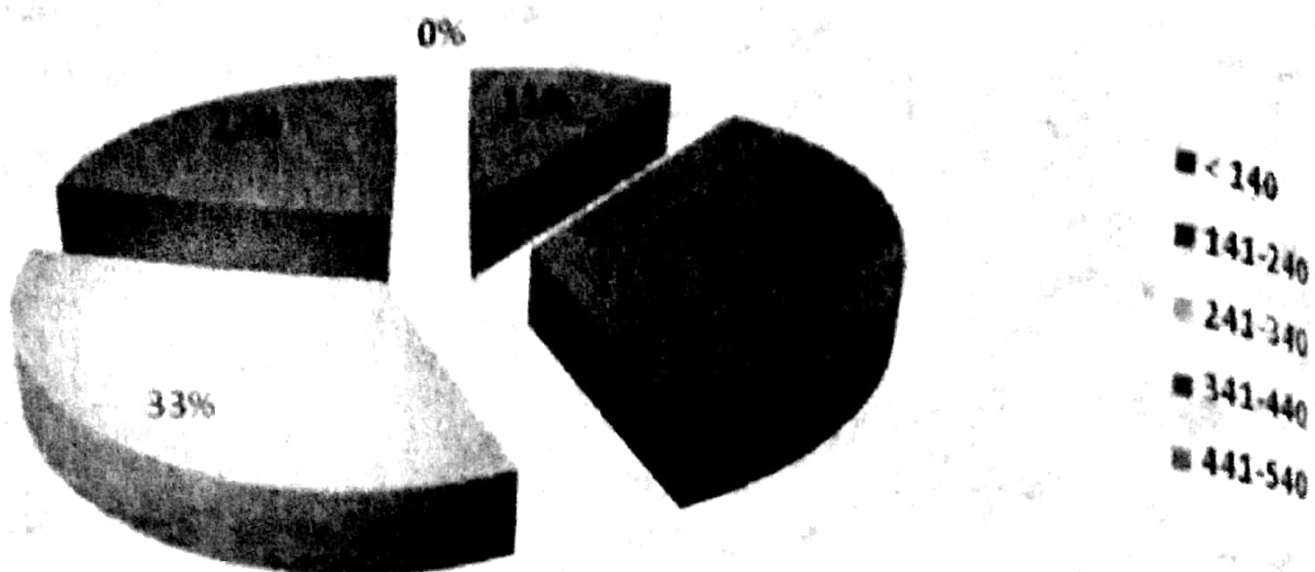
istics of respondents

Glucose level of Respondents before taking Lamtoro

re 5.6. The distribution of frequency of respondents before eating lamtoro in P
topoWetan Surabaya in May 2010.(N = 9)



after eating lamtoro



5.2 showed that 11% of respondents with GDA <140 mg/dl, 34% of respondents were in the 141-240 mg/dl range, 33% of respondents was 241-340 mg/dl, and 22% of respondents was 341-440 mg/dl.

Effect of Lamtaroto Decrease Blood Sugar Levels In Patients

Figure 5.3 Data pre and post test of 9 respondents with diabetes mellitus in Puskesmas Sidorejo, Sidoarjo in May 2010. (N = 9) in May 2010

Discussion

Blood glucose levels of patients with diabetes mellitus in pre-test.

The results showed a variation of blood glucose level of respondents before consuming lamtoro, which was 33.34% of respondents were 141-240 mg/dl, 33.34% of respondents were 341-440 mg/dl, 22.23% had a glucose level of <140 mg/dl and 241-340 mg/dl, and 11.1% had 441-540 mg/dl of glucose level. However, the blood glucose levels of respondents were above normal (rather high). This is in accordance with the opinion of Wright Boglar (2008) that the threshold of blood glucose was 120-140 mg/dl. Things that cause high blood such as heredity, race, obesity, age, lack of exercise, pregnancy, infection and stress. Biological changes that are the symptoms of the occurrence of diabetes mellitus include: increased excessive thirst, excessive hunger increased, increased frequency of urination including at night.

Researchers assumed that levels of blood glucose of respondents were still high due to poor lifestyle that researchers found through interview with the respondents in Health Centers SidotopoWetan Surabaya. Hans Tandra (2008) mentioned that some things that need to be considered in terms of lifestyle of diabetics, including the habit of food consuming containing sugar and salt overload, lack of activity, stress, and others. There were 40% of the sample used to consume foods had a high blood glucose. Food intake consists of carbohydrates, protein and fat. Carbohydrates increase blood glucose, which will increase blood glucose levels and there is an excess of carbohydrates in the body will effect in the entire system of the body to out of balance again.

On the other hand, stress is one cause of increased blood sugar levels and heart disease. It can be seen from the results of observations. The results of the research showed more than 80% of respondents were feeling lack fun in life among others, economic hardship, lack of harmony in the household working in the elderly.

Blood sugar levels of patients with diabetes mellitus in posttest intervention

The results of data measurement of blood glucose levels in the experimental group that has been given Lamtoro therapeutic for 3 times and also 3 times for checking showed that the number of respondents with higher levels of blood glucose < 140 was one respondents (11%), 141-240 mg/dl as many as three respondents (34%), 241-341 mg/dl three respondents (33%) and 341-440 mg/dl as many as 2 respondents (22%). Respondents having a decreased blood glucose were five respondents (77.77%), and respondents having an increased blood glucose were 2 respondents (22.23%). These measurements were performed after the intervention of lamtoro for 1 week.

These results showed the difference of glucose levels between one person and another. Changes in blood glucose levels are caused by diet pattern, the regularly in taking medicine, behavior and activity, and stress levels, which are different for each person during the course of therapy.

On average in patients with diabetes mellitus

Wilcoxon signed ranks test was performed, and statically showed $P > 0.05$. Although there some respondents experienced an increase (22.23%), it is probably because there is no control over lifestyle, and behavior that can lead to changes in glucose levels in people with diabetes mellitus at the time of the herbal therapy for >1 week. Changes in blood glucose levels are caused by uncontrolled diet, taking drugs irregularly, behavior and lack of activity, and higher stress levels.

Effect of Lamtoro Against Decrease of Blood Sugar Levels in Patients with Diabetes Mellitus In Health Center SidotopoWetan Surabaya.

Wilcoxon signed rank test in the experimental group by comparing the GDA before and the intervention produced $p = 0.310$. This meant that there was a difference between GDA before and after consuming Lamtoro for >1 week.

Physiologically, in normal or diabetic

individuals, insulin is a hormone produced by pancreas to regulate the amount of glucose in the blood. Insulin uniquely shapes glucose levels. Insulin makes cells extract of glucose from the blood and by destroying the protein and fat, partly stored and partly used for energy. Lamtoro chemical content can stabilize insulin in normal way of working. DR. Ruby W. bilous (2008: 10) mentioned that the blood sugar comes from the food, and chemically treated by the liver. Some glucose are stored and partly used for energy. Insulin uniquely shapes glucose levels. Insulin makes cells extract of glucose from the blood and by destroying the protein and fat.

Results of this study confirmed that the results of statistical testing was there were any differences of blood glucose levels with a pre-experimental study before the intervention (pre-test) and after intervention (post-test). The test results of Wilcoxon signed ranks was $P > 0.05$ after the treatment the form of lamtoro for >1 week. The pre-experimental study did not show a decline in patients with diabetes mellitus. It meant no intervention effect of lamtoro to decrease blood glucose levels in patients with diabetes mellitus in Health Centers SidotopoWetan Surabaya.

REFERENCES

- Bilous, R W. (2008). *Bimbingan dokter pada Diabetes*. Jakarta : Dian Rakyat
- Djauhari, E. (2009). *150 Resep Herbal untuk menaklukan Diabetes Mellitus*. Yogyakarta : 9 months publishing.

- Harianto, S. (2009). *Ensiklopedi Tanaman Indonesia*. Yogyakarta : PALMALL.
- McWright, B. (2008). *Panduan Bagi Perawat Diabetes*. Jakarta : PT. Pustaka Raya.
- Nabil. (2009). *Cara Mudah Mencegah dan Mengobati Diabetes Mellitus*. Yogyakarta :Aulia Publishing.
- Nursalam dan Pariani. (2001). *Pendekatan Proses Metodologi Riset keperawatan*. Jakarta :Sageng Seto.
- Nursalam. (2003). *Konsep dan Penerapan Metodologi Penelitian Ilmu Keperawatan*. Jakarta :Salemba Medika.
- Setiadi. (2007). *Konsep dan Penulisan Riset Keperawatan*. Yogyakarta :Graha Ilmu.
- Suryo, J. (2009). *Rahasia Herbal Penyembuhan Diabetes*. Yogyakarta : B First (P BentangPustaka)
- Tandra, H. (2008). *Segalah Sesuatu yang harus Anda ketahui Tentang Diabetes*. Jakarta :Gramedia Pustaka Utama.
- Tandra, H. (2009). *Kiss Diabetes Goodbye*. Surabaya : PT. Temprina Media Grafika