



2nd ICHMS & 2nd LSC

PROCEEDING

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The 2nd International Conference of Medical and Health Sciences (ICMHS) and The 2nd Life Sciences Conference (LSC) 2016

*"Towards a Better Quality of Life
through Interdisciplinary Research"*

Yogyakarta, 9th-10th December 2016
The Alana Hotel and Convention Center

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**The 2nd International Conference of Medical & Health Sciences
and
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TABLE OF CONTENT

COMMITTEE	viii
WELCOMING SPEECH	
Welcome Message from Committee	ix
Welcome Message from Dean	x
Welcome Message from Rector	xi
Welcome Message from the Head of Provincial Health Office Special Region of Yogyakarta	xiii
KEYNOTE SPEAKER OF INTERNATIONAL CONFERENCE	xv
REVIEWER	xvi
FULL ARTICLE	
Diabetic Neuropathy - A Chance Towards A Better Treatment <i>Tri Wahyuliati</i>	2
Herbal Medicine a Holistic Approach; in Case of Food Supplement Formulation of <i>Sauropus androgynus</i> and <i>Elephantopus scaber</i> to Modulate Immune and Hormonal System in Pregnant <i>Salmonella typhi</i> Infected Mice <i>Muhammad Sasmito Djati</i>	10
Continuing Competence of Practicing Nurses in Indonesia <i>Fitri Arofiati, SKep.,Ns, MAN Ph.D</i>	19
The Influence of Neuromuscular Taping (NMT) in Walking Speed for the Patients After Ischemic Stroke <i>Umi Budi Rahayu</i>	29
Correlation between Larvae Free Number with DHF Incidence in Sleman, Yogyakarta, Indonesia <i>Tri Wulandari Kesetyaningsih, Sri Andarini, Sudarto, Henny Pramoedyo</i>	34
Correlation Interdialytic Weight Gain-Idwg towards Physical and Psychological Health to Quality of Life in Patients with Hemodialisa <i>Cecilya Kustanti, Maria Putri Sari Utami</i>	42

**The 2nd International Conference of Medical & Health Sciences
and
The 2nd Life Sciences Conference 2016**

Quality of Life in Hemodialysis Patiens with Hypertension <i>Maria Putri Sari Utami, Elsy Maria Rosa, Azizah Khoiriyati</i>	48
Environmental Housing Characteristic of Pulmonary Tuberculosis Sufferers in Slum Area <i>Iwan Stia Budi, Yustini Ardillah, Indah Purnama Sari, Dwi Septiawati</i>	55
Exploration Study in Psychological Changed on First Trimester Pregnant Women at Kembaran II Health Center, Banyumas <i>Wilis Dwi Pangesti, Dewi Ambarwati, Inggat Ratna Kusuma</i>	63
The Anxiety of Pregnant Mother with History of Abortion in Health Service 2 Banyumas Qualitative Study <i>Evicenna Naftuchah Riani, Wilis Dwi Pangesti, Diah Atmarina Yuliani</i>	72
Analysis of Infection Control Risk Assessment and Strategies to Reduce Health-Care Associated Infections in RS PKU Muhammadiyah Gamping Yogyakarta <i>Nurmalita Sari, Elsy Maria Rosa</i>	76
Health Promotion Program for Disaster Eruption of Mount Merapi Refugee in Youth Centre Sleman Distric, Yogyakarta Special Province, Indonesia <i>Novitasari Ratna Astuti</i>	91
Pap Smear is Important Screening of Cervical Cancer for Women <i>Ivanna Beru Brahmana</i>	100
Analysis of Compliance on Implementing Standard Precautions on Dental Health Service at PKU Muhammadiyah Gamping Hospital of Yogyakarta <i>Maria Margaretha S Nogo Masa, Elsy Maria Rosa</i>	108
Qualitative Study of Stakeholders' Knowledge Regarding Alert Village Program in Ogan Ilir Regency <i>Asmaripa Ainy, Iwan Stia Budi</i>	123
The Influence of Parents Knowledge and Health Care Access to the Identification of Children with Hearing Impairment <i>Asti Widuri, Alazi, Muhammad Pringgo Arifianto</i>	131

**The 2nd International Conference of Medical & Health Sciences
and
The 2nd Life Sciences Conference 2016**

The Comparison of Maternal Leukocytosis Incidence between Preterm Premature Rupture of Membranes and Premature Rupture of Membranes at Term in Panembahan Senopati Hospital Bantul Yogyakarta <i>Choirotun Jum'iyatin Nisak, Supriyatningsih</i>	137
Analysis of Patient Safety Culture Instrument by MaPSaF <i>Arum Astika Sari, Arlina Dewi</i>	143
The Relationship of Fish Consumption to Cognitive Development in Students of SD Saptosari, Gunungkidul, Yogyakarta <i>Dewi Ngaisyah</i>	158
Inter Professional Education and Collaborative Practice: Reflection from Health students <i>Wiwik Kusumawati, Ika Setyawati, Romdzati, Likky Tiara Alphianti</i>	164
Steroidal Saponin in Ethanol Extract Tuber of Purple Yam (<i>Dioscoreaalata L.</i>) Decrease IL-4 Density of Blood Sera on BALB/c Mice Model Digestive Tract Allergy <i>Sri Nabawiyati Nurul Makiyah, Muhaimin Rifa'i, Widodo, Muhammad Sasmito Djati</i>	173
Managerial Leadership Competence in PKU Muhammadiyah Hospital of Gamping <i>Ranggit Oktanita, Qurratul Aini, Ekorini Listiowati</i>	184
Malaria Occurrence Factor Analysis Based on Elevation of Sea Surface in the District of OganKomeriungUlu, South Sumatra <i>Pademi Alamasyah, Chairil Anwar, Dwi Setyawan, Laila Hanum</i>	200
Increasing Family Involvement to Reduce of Cigarette Consumption with Participatory Learning Action (PLA) Approach <i>Tri Hastuti Nur Rochimah, Salmah Orbayinah</i>	212
Air Pollution Effect to Human Health in Palembang City <i>Marsidi, M.T. Kamaluddin, Fauziah N. Kurdi, Novrikasari</i>	230
Identification of Patient Satisfactory Profile for Outpatient Pharmaceutical Service at Private and Government Hospital within Semarang District <i>Pramitha Esha Nirmala Dewi, Novita Dwi Dahliyanti</i>	241

**The 2nd International Conference of Medical & Health Sciences
and
The 2nd Life Sciences Conference 2016**

Intervention of Family Nutritional Awareness to Increase Family's Food Security <i>Fatmalina Febri, Anita Rahmiwati, Fenny Etrawati</i>	249
The Effects of Exercises in Molecular Neuron Cells of Cerebellum in Congenital Hypothyroidism Rats <i>Idiani Darmawati, Marten Bhara Suryo Aji, Zulkhah Noor</i>	258
The Effect of Air Freshener Exposure on Corneal Thickness of White Rat (<i>Rattus norvegicus</i>) <i>Yuningtyaswari, Pajar Sigit Nugroho</i>	265
The Correlation between Education about Personal Hygiene and Knowledge and Attitude of Personal Hygiene of the Adolescent <i>Kusbaryanto, Wahana</i>	272
The Relationship between Sports Activities and Premenstrual Syndrome In SMA N 1 Sentolo, Kulon Progo <i>Fenthy Vabiella, Alfaina Wahyuni</i>	277
Relationship Thyroid Status to the Physical Growth and Psychomotor Development on Children Under 2 Years in Endemic Areas of Iodine Deficiency Disorders in District Samigaluh of Kulonprogo Regency <i>Adang Muhammad Gugun, Zulkhah Noor, Jifani Rasyad, Mardylla Nur Fitriany..</i>	282
Baby Blood Vessel Detection-Based Touch Sensors <i>Ade Pajar Pirdianto, Anna Nur Nazila Chamim</i>	299
Analysis of Factors that Influence Smokers Using Alcohol among Students in a Private University in Yogyakarta <i>Iman Permana, Gibran Ilham Setiawan</i>	306
The Effectiveness of Combined Warm Water Foot Submerging and Breath Relaxation Therapy on Lowering the Blood T Pressure in Hypertensive Patients in the Work Area of Puskesmas Penumping Surakarta <i>Prima Trisna Aji, Novita Kurnia Sari, Sri Nabawiyati Nurul Makiyah</i>	315
Assessment of Interprofessional Communication and Collaboration: Using Multi Methods <i>Sri Sundari Purbohadi</i>	335

**The 2nd International Conference of Medical & Health Sciences
and
The 2nd Life Sciences Conference 2016**

Bed Side Teaching as Effort for Decreasing Needle Stick and Sharp Injury in Clinical Practice Students of PSIK FKIK UMY <i>Azizah Khoiriyati, Novita Kurnia Sari</i>	342
The Relationship between Working Period and Cholinesterase Blood Levels among Pesticides-Spraying Workers in the Oil Palm Plantation <i>Restu Dewi Lestari, Merry Tiyas Anggraini</i>	350
The Effect of Interpersonal Relationship toward Birth Satisfaction <i>Hema Dewi Anggraheny</i>	356
Effect of Early Mobilization Education of The Level Anxiety and Independence of Patients After Total Knee Replacement in Hospital <i>Amik Muladi, Sagiran, Azizah Khoiriyati</i>	363
The Effect of Normal Dose Extract Gempur Batu Kejibeling (<i>Strobilanthus crispus.BL</i>) to the Histological of Rat's Digestive Tract <i>Yoni Astuti, Ali Usodo Mulyo, Harminani</i>	371
Effectiveness of Alcohol 70%, Clorhexidine Gluconate 4% Soap and Irgasan DP 300 as Hand Sanitizers in Reducing Bacterial Growth <i>Inayati, Pinter Hartono</i>	377

**The 2nd International Conference of Medical & Health Sciences
and
The 2nd Life Sciences Conference 2016**

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The 2nd Life Sciences Conference 2016**

**Chair person of The 2nd International Conference of Medical and
Health Sciences and The 2nd Life Sciences Conference 2016**



Welcome to Jogja, sugeng rawuh!

For the second time, the Faculty of Medicine and Health Sciences Universitas Muhammadiyah Yogyakarta is going to conduct the 2nd International Conference of Medical and Health Sciences (ICMHS) this December in vibrant Yogyakarta, Indonesia. This year we are going to collaborate with the Life Sciences Society of Pakistan for their 2nd Life Sciences Conference (LSC) with Dr. Zahid Iqbal as the general secretary.

This year's conference theme "Towards a better quality of life through interdisciplinary research" will be celebrating an era of seamless interdisciplinary integration and collaboration in scientific innovations with the involvement of more extensive topics and disciplines in the conference. We aim to exhibit the products of that kind of approach in solving challenges, improving the quality of life, and creating sustainable developments. We are happy to announce that our conference is filled with Invited speakers from Pakistan, United States of America, Uni Emirates Arab, Malaysia and Indonesia. Presentations will be conducted in oral as well as poster that covers topics from medicine, public health, dentistry, pharmacy, biomedical to agriculture. To put more credibility to the conference we are collaborating with Isra Medical Journal and the Asian Journal of Agriculture and Biology to publish selected papers from the event. Other paper will be published in the ISBN Proceeding book.

The last but not least, enjoy the conference, start networking and sharing ideas, and let immerse yourself to the heritage cultural ambient of Jogja, sumonggo!

Yogyakarta, 1st December 2016

dr. Iman Permana, M.Kes, Ph.D.

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and
The 2nd Life Sciences Conference 2016**

**Dean of Faculty of Medicine and Health Sciences,
Universitas Muhammadiyah Yogyakarta**



Assalamu'alaikum Wr. Wb.

Science, especially in the areas of health and life growing more rapidly. We need to work together in the research of various disciplines to the advancement of science and to provide benefits to human life.

After successfully organized international scientific meeting last year, the Faculty of Medical and Health Sciences Universitas Muhammadiyah Yogyakarta, held the second scientific meeting ICMHS along with "2nd Life Sciences Conference". In this second scientific meeting, FKIK UMY collaborates with various researchers, among others from Pakistan, Malaysia, and the United States. Taking the theme "Towards a better quality of life through interdisciplinary research" we hope to establish cooperation with various parties to be able to contribute ideas to the civilization of human life.

Finally, we congratulate the scientific meeting in the city of Yogyakarta Indonesia. Enjoy the beautiful city of Yogyakarta with priceless historical relics. We hope that this meeting can run smoothly and provide benefits to the advancement of knowledge.

Wassalamu'alaikum Wr. Wb.

Yogyakarta, 1st December 2016

dr. Ardi Pramono, M.Kes, Sp.An.

**The 2nd International Conference of Medical & Health Sciences
and
The 2nd Life Sciences Conference 2016**

Rector of Universitas Muhammadiyah Yogyakarta



Assalaamu'alaikum Wr. Wb.

Ladies and Gentlemen,

Welcome to the 2nd International Conference on Medical and Health Science in conjunction with the 2nd Life Sciences Conference 2016

Welcome to Yogyakarta City of Tolerance

Our Faculty of Medicine and Health Sciences has been doing such international conference almost every year for the last ten years. This and other previous conferences are the things that supporting our vision as an excellence and Islamic university, a young and global university. We will always try to keep monitoring the development of science through sending more lecturers to do the sabbatical leave overseas, doing international research collaborations and also the international conference. Each department should do this strategy of internationalization so that each department has its own network. Faculty of medicine and health science is one of the most progressive units in implementing this strategy by inviting international experts on a regular basis. This program will certainly strengthen our vision.

International conference on medicine and health sciences is a smart choice to offer our lecturers access to the most recent development of the subjects. The participants will also gain the same knowledge and latest information on medicine and health sciences. As everyone knows that the development of science and technology are faster today compared to the previous period. Information technology, computer, and other development havefastened the transformation of medicine and health science into the different and more complex stage.

**The 2nd International Conference of Medical & Health Sciences
and
The 2nd Life Sciences Conference 2016**

Cellular technology, for instance, can be used for several functions including those that directly impacts our daily life. There is no long distance call anymore today because cellular phone can do everything we need to contact other people far from where we stand anytime anywhere. People will finally innovate cellular phone for the sake of personal health services. We will in the future using our simple cellular phone to detect our body temperature, blood pressure, even how much fat we have in our body and how much it is supposed to be. We may also be able to check the health of our body without leaving our house and order medicine without going into the drug store. Everything is almost possible as long as we think hard for the better of people in the future. Enjoy the conference and don't forget to visit our rich tourist destinations, mountains, beaches or caves (underground waterways).

Thank you

Wassalaamu'alaikum Wr. Wb.

Prof. Dr. Bambang Cipto, MA

**The 2nd International Conference of Medical & Health Sciences
and
The 2nd Life Sciences Conference 2016**

Keynote Speech

**by Head of Provincial Health Office Special Region of Yogyakarta
in International Conference
of Medical and Health Sciences and Life Sciences Conference**

The Alana Hotel and Convention Center, Yogyakarta, December 9-10, 2016

The honorable:

- Rector of Muhammadiyah University of Yogyakarta,
- The Dean of Medical and Health Sciences Muhammadiyah University of Yogyakarta,
- The chairman of organizing committee of the international conference of medical and health,
- Distinguished guests and colleagues.

Assalamu'alaikum Warahmatullahi Wabarakatuh,

First of all, we thank God for His blessings that today we may attend the International Conference of Medical Health Towards a Better Quality of Life Through Interdisciplinary Research in Yogyakarta.

My distinguished colleagues,

In Indonesia National Long Term Development Plan (2005-2024), the Indonesian Ministry of Health have determined a paradigm shift that have governed health services in health development plan. There has been a shift from Curative Health Services to Preventive and Promotive Health Services.

Recently, Indonesia suffers from a triple burden of diseases as health development challenges. The triple burden of diseases are: 1) the backlog of common infections, undernutrition, and maternal mortality; 2) the emerging challenges of non-communicable diseases (NCDs), such as cancer, diabetes, heart disease; and 3) mental illness, and the problems directly related to globalization, like pandemics and the health consequences of climate change.

Dear colleagues,

Here are some data that show several health problems in Indonesia:

1. Maternal mortality rate in 2015 is 4,809 cases, infant mortality rate in 2015 is 22,267 cases;
2. Regarding to children under the age of five, the national stunting rate is 37.2% which consists of 18% for very short dan 19.2% for short (Risksedas 2013);

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3. HIV testing coverage is 14% dan antiretroviral (ARV) therapy coverage is 65.58% (Directorate General of Disease Control and Prevention Ministry of Health, 2015);
4. Tuberculosis (TB) notification rate in 2015 is 73.5% and tuberculosis treatment success rate is 72% (Directorate General of Disease Control and Prevention Ministry of Health, 2015).

Distinguished guests,

Indonesia Health Development Program in 2015-2019 strengths in improving human quality life through Health Indonesia Program with family approach. The Indonesian Ministry of Health issued The Minister of Health Regulation (Permenkes) No. 39 Year 2016 as a Guideline of Implementation of Health Indonesia Program with Family Approach. This program has 12 main indicators as markers of a family health status. Currently, many health programs have been implemented by Indonesian Ministry of Health, Provincial Health Offices, and District Health Offices. However, many health problems, some as mentioned above, still become health burdens. We may ask a question whether the programs that we conducted have answered the health problems we have in Indonesia.

It would be better if all health programs that we implement based on scientific health research, especially interdisciplinary research. The research should be related to detection, prevention, and treatment of diseases or problem solving for better health.

My dear colleagues,

Being a province with speciality, Special Region of Yogyakarta placed Traditional Medicine as one of the priority programs in Provincial Medium Term Development Plan (2017-2022). We still encounter many challenges in developing Traditional Medicine, especially in providing services which are based on scientific evidence.

Distinguished colleagues,

We look forward to results of interdisciplinary research which would support health problem solving, especially by developing traditional medicine in Yogyakarta. We believe that collaboration in interdisciplinary research would improve quality of human life.

Finally,

Thank you for your attention. We wish you a successful conference.

Wassalamu'alaikum Warahmatullahi Wabarakatuh,

On behalf of
the Head of Provincial Health Office
Special Region of Yogyakarta

Drg. Pembajun Setyaningastutie, M.Kes

**The 2nd International Conference of Medical & Health Sciences
and
The 2nd Life Sciences Conference 2016**

**SPEAKER OF
INTERNATIONAL CONFERENCE**

Zahid Iqbal

Al-Nafees Medical College Isra University Islamabad Campus Islamabad, Pakistan
“One Health Program for Public Health Benefit”

Prof. Dr. Abdul Khaliq

Professor, Department of Agronomy, University of Agriculture, Faisalabad
“Role of Agriculture in Poverty Alleviation of Rural Areas”

Fitri Arofati

Universitas Muhammadiyah Yogyakarta, Indonesia
“Continuing Professional Development of Practicing Nurses in Indonesia”

Tri Wahyuliati

Universitas Muhammadiyah Yogyakarta, Indonesia
“Diabetic Neuropathy - A Chance Towards A Better Treatment”

Mohammad Khalid Ashfaq

University of Mississippi, USA
“Natural Products –Use or Misuse”

Muhammad Mukhtar

American University of Ras Al Khaimah, United Arab Emirates
“Emerging Biotechnologies and Genomic Medicines in Human Health and Well-Being”

Muhammad Sasmito Djati

Brawijaya University Malang, Indonesia
“Herbal Medicine a Holistic Approach: in case of food supplement formulation of Sauropusandrogynus and Elephantopuscaberto modulate immune and hormonal system in pregnant Salmonella typhi infected mice”

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and
The 2nd Life Sciences Conference 2016**

REVIEWER

1. Dr. Zahid Iqbal, Ph.D (Isra University, Islamabad, Pakistan)
2. Prof. Dr. Abdul Khaliq (University of Agriculture, Faisalabad)
3. Dr. Mohammad Khalid Ashfaq, DVM, DTVM, MS, Ph.D (University of Mississippi, USA)
4. Dr. Muhammad Mukhtar, Ph.D (American University of Ras Al Khaimah, United Arab Emirates)
5. Dr. Ir. Muhammad Sasmito Djati, MS. (Brawijaya University Malang, Indonesia)
6. Fitri Arofiati, S.Kep., Ns., MAN., Ph.D (Universitas Muhammadiyah Yogyakarta, Indonesia)
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15. Dr. Elsy Maria Rosa, M.Kep (Universitas Muhammadiyah Yogyakarta, Indonesia)
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19. Dra. Lilis Suryani, M.Kes (Universitas Muhammadiyah Yogyakarta, Indonesia)
20. Drh. Tri Wulandari K, M.Kes (Universitas Muhammadiyah Yogyakarta, Indonesia)
21. Dr. dr. Wiwik Kusumawati, M.Kes (Universitas Muhammadiyah Yogyakarta, Indonesia)
22. Sabtanti Harimurti, S.Si., M.Sc., Ph.D., Apt. (Universitas Muhammadiyah Yogyakarta, Indonesia)

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and
The 2nd Life Sciences Conference 2016**

**SPEAKER OF
INTERNATIONAL CONFERENCE**

ICMHS-O-1-9

Quality of Life in Hemodialysis Patients with Hypertension

Maria Putri Sari Utami¹, Elsy Maria Rosa², Azizah Khoiriyati²

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Abstract

Mostly patient with ESRD choosed Renal replacement therapy hemodialysis. On the other hand, hemodialysis was known which had negative affect on quality of life. Comorbidity was one of the factors that affected quality of life (QOL) in patients with hemodialysis. Hypertension was known as the highest comorbidity in patients with hemodialysis. This study evaluated QOL in hypertension patients on maintenance hemodialysis therapy. This method of this research is prospective cohort study was used and The QOL index was measured by the WHOQoL-BREF questionnaire. 79 samples on hemodialysis unit in PKU Muhammadiyah Yogyakarta hospital were collected during March to May 2016. The result showed that comorbid hypertension affected the quality of life patients with hemodialysis. Patients with hemodialysis without comorbid hypertension had a good QOL 4,7 times than patients with hypertension comorbidity Hypertension were known as factors that affected quality of life patients with hemodialysis.

Keywords: haemodialysis, hypertension, comorbidity, quality of life

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INTRODUCTION

Chronic Kidney Disease (CKD) is a progressive and irreversible impairment of renal function and it causes the body to fail in maintaining fluid metabolism and electrolyte balance, which causes uremia.¹ Chronic kidney disease consists of several stages and the final stage of chronic kidney disease is called End Stage Renal Disease (ESRD). ESRD is indicated by the inability of the kidney to maintain body homeostasis,² with a glomerular filtration rate less than 15 mL/min/1.73 m².³

In the United States, individuals with ESRD increased from 261.3 per 1000 population in 1994 to 348.6 per 1000 population in 2004.⁴ This condition also occurs in Indonesia. Patients with chronic kidney disease in Indonesia until 2007 reached 70,000 and spread throughout Indonesia.

ESRD patients should immediately take renal replacement therapy to survive.⁵ Renal replacement therapy can be either a transplantation or dialysis, which consists of peritoneal dialysis and hemodialysis. Currently hemodialysis renal replacement therapy is the most widely selected and the number continues to increase in recent years. Data from the United States Renal Data System (USRDS) mentions that in the US more than 65% of ESRD patients receive hemodialysis therapy.¹ In Indonesia in 2009, there were 5,450 patients with kidney failure who runs hemodialysis. These conditions continues to increase. In 2010, the number of patients with renal failure who had hemodialysis increased as much as 8034 patients and in 2011 as many as 12 084 patients.⁶

Hemodialysis is a renal replacement therapy is conducted 2-3 times a week and it needs 4-5 hours of treatment, which aims to remove the remnants of the metabolism of proteins and correct fluid and electrolyte balance disorder.^{2,7} Eventhough hemodialysis is given, not all uremi toxin can be taken out. It can cause a wide range of comorbid. Comorbidity is defined as the occurrence of conditions / diseases other than ESRD.⁸

Patients who receives hemodialysis has a high comorbid prevalence, such as Atherosclerosis Cardiovascular Disease (ACVD), Congestive Heart Failure (CHF), hypertension, diabetes mellitus (DM) and cognitive disorders, which comorbid is one risk factor for mortality.⁹ In the research conducted by Pakpour et al. (2010),¹⁰ It is stated that 66% of 250 hemodialysis patients have comorbid. With the wide variety of comorbid would add to the symptoms experienced by patients, and will have an impact on hospital visits, Length of Stay (LOS), the cost of hospitalization, and mortality.¹¹

Comorbid hemodialysis patients who have the highest prevalence is hypertension, diabetes mellitus (DM) and then heart disease.¹² The prevalence of hypertension in hemodialysis patients is 26.8%. Hypertension is a cause of disease or complications of hemodialysis. The high prevalence of hypertension in hemodialysis patients will cause a lot of comorbidities and worsen the quality of life.¹³ Hypertension affects the physical, psychological and social conditions that change the quality of life of patients.¹⁴ The

The 2nd International Conference of Medical & Health Sciences and The 2nd Life Sciences Conference 2016

purpose of this study to determine the relationship between comorbid hypertension and quality of life of hemodialysis patients.

MATERIALS AND METHODS

The method used for this research is a prospective cohort study. The risk factors studied are comorbidity on hemodialysis patients. The quality of life has been measured within 2 months. This research was conducted at Hemodialsia Unit of RS PKU Muhammadiyah Yogyakarta in March-May, 2016.

The population for this study is all patients who carry out hemodialysis at the Hemodialysis Unit of RS PKU Muhammadiyah Yogyakarta. The inclusion criteria is age over 18 years; patients who have taken hemodialysis routinely in the last 3 months; patients who have comorbid; the patient who can communicate using Indonesian; patients who is willing to become the respondents. Exclusion criteria is consisted of patients who had surgery three months earlier; patients with psychiatric disorders; patients with loss of consciousness; hearing disorders; patients who have malignant disease, tumor. The samples are collected using consecutive sampling method and 79 patients are taken as the study samples.

Data have been collected using a questionnaire which consists of two questionnaires; a respondent characteristics and the quality of life. The quality of life questionnaire in this study uses the WHOQoL-BREF which consists of 26 questions. The questionnaire WHOQoL-BREF has been proven its validity and reliability by Nurcahayarti (2011),¹⁵ with the results of the validity 0.390 - 0.798 and reliability of 0.941. Comorbidity data has been collected by looking at the patient's medical record.

This research has passed the test of ethics by the Board of Ethics at Faculty of Health Sciences University of Muhammadiyah Yogyakarta number 117/EP-FKIK-UMY / III / 2016. This research was carried out with regarding to the rights of patients. Prior to this research, patients are given information about the research, objectives, benefits, and disadvantages that will be experienced by the patient if they involve in the research. Patients have the right to refuse in participating without given any sanction. Data collected will be guaranteed confidential and only used for research purposes.

**The 2nd International Conference of Medical & Health Sciences
and
The 2nd Life Sciences Conference 2016**

RESULTS

Table 1. Distribution of Respondents Characteristics in Hemodialysis Unit of RS PKU Muhammadiyah in Yogyakarta during March-May 2016 (n = 79)

Characteristics	n (%)
age (years old)	
< 40 years old	22 (27,8)
≥ 40 years old	57 (72,2)
Sex	
Male	49 (62)
Female	30 (38)
Education level	
Low	21 (26,6)
High	58 (73,4)
Occupation	
Unemployed	49 (62)
Employed	30 (38)
Marital status	
Unmarried	12 (15,2)
Married	67 (84,8)
Dialysis duration	
New	32 (40,5)
Old	47 (59,5)

Source : Primary data 2016

Table 2. The relationship between Comorbidity Hypertension with the Patient Quality of Life in Hemodialysis Hemodialysis Unit at PKU Muhammadiyah Hospital Yogyakarta during March-May 2016 (n = 79)

Comorbidity	Quality of Life		X ²	p*	OR (95% C.I)
	good	bad			
Hypertension					
No	7	3	3,186	0,043	4,735
Yes	24	45			(1,036-18,473)

p < 0,05 based on Chi Square*

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DISCUSSION

The results of this research is that there is a relationship between comorbid hypertension and quality of life. Patients without comorbid hypertension have better quality of life than patients with comorbid hypertension. Patients without comorbid hypertension is likely to have a quality of life that is 4.7 times higher than respondents with comorbid hypertension.

Hypertension causes complications of CKD with the number of 26.8% in ESRD. The high incidence of hypertension in hemodialysis patients will cause a lot of comorbid so that quality of life is worsen.¹³ Hypertension is the most important factor for the development of heart disease and cerebrovascular complications.¹⁶ Hemodialysis patients with hypertension affects several dimensions of quality of life, such as; physical, psychological, and social.¹⁴ The quality of life of patients with hypertension are affected by hypertension itself as headaches, anxiety and weakness.

Besides the hypertension, the quality of life of patients affected by antihypertensive side effects such as fatigue and sleep disturbances.^{17,18} However, the effect of antihypertensive drugs on quality of life is an important part in controlling blood pressure since giving medication is the mainstay of therapy in patients with CKD. The National Kidney Foundation Kidney Disease Outcomes Quality Initiative (K/DOQI) recommends a target blood pressure of CKD patients below 130/80 mmHg with therapies aimed at lowering blood pressure, lowering the risk of cardiovascular disease, and slowing down the progression of kidney disease. Any reduction in Mean Arterial Pressure (MAP) of 10 mmHg (down to 92 mm Hg) to provide benefits in maintaining the LFG from 3.7 to 5.0 mL/min/year. A decrease in blood pressure can maintain kidney function and it seems to be comparable with proteinuria as a result the amount of therapy that is run by patients decreases. Although many patients receiving antihypertensive medication, only 30% has a controlled blood pressure. Therefore, hypertension in hemodialysis patients should be controlled, since the systolic blood pressure > 180 mm Hg would give bad influences.¹⁹

The Quality of life of ESRD patients with comorbid hypertension are also associated with patient characteristics. Patients \geq 40 years of age are at risk to suffer from hypertension and at that age the declining of GFR begins.²⁰ This will affect the quality of life for hemodialysis patients. Men have a higher risk to suffer from hypertension and ESRD.²¹ However, men have a better quality of life than women. This is because men have better social relationship and support than women.²²

The success of hemodialysis patient blood pressure control involves various parties, whether there are the patient, family, and health professionals. Patients with the support of the family must comply the rules of the consumption of antihypertensive drugs. Hemodialysis nurses also need to measure blood pressure during hemodialysis periodically, and record it in the medical records of hemodialysis patients.

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CONCLUSION

Based on the analysis, it can be concluded: Characteristics of patients who undergo hemodialysis in Hemodialysis Unit of RS PKU Muhammadiyah Yogyakarta mostly male, age > 40 years, having high education, unemployed, married and having a long run of hemodialysis; Comorbid hypertension affects the quality of life for hemodialysis patients.

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