

ISBN: 978-979-95117-6-1

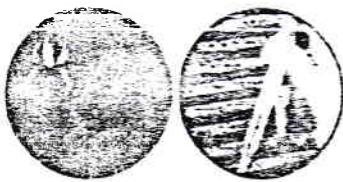
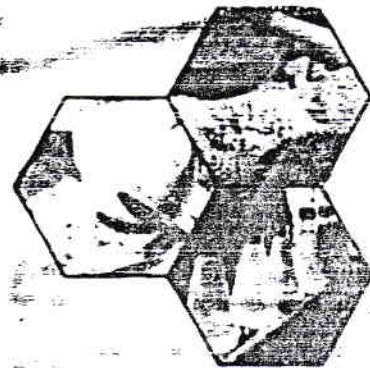
**PROCEEDING OF
MAKASSAR INTERNATIONAL SYMPOSIUM
ON PHARMACEUTICAL SCIENCE (MIPS)
Makassar - South Sulawesi
Indonesia**

March 19-20, 2009

PERSEKUTUAN
Telah diperiksa kebenarannya dan sesuai dengan aslinya
Telah diperiksa kebenarannya dan sesuai dengan aslinya
Yogyakarta tgl. _____

Yogyakarta
FAKULTAS FARMASI UNIVERSITAS AHMAD DAHLAN
FAKULTAS FARMASI UNIVERSITAS AHMAD DAHLAN
DEKAN

Dra. ANY GURTARTI, M.Si., Apt.
Dra. ANY GURTARTI, M.Si., Apt.
NIP. 60960149
NIP. 60960149



**Faculty Of Pharmacy
Hasanuddin University**



DAAD

**Deutscher Akademischer Austausch Dienst
German Academic Exchange Service**

Penerbit CV 21COM Makassar

MIPS | Makassar Internasional Symposium
on Pharmaceutical Science
MIPS 2009

Recent Progress in Drug Discovery

Editors:

Marianti A. Manggau

Elly Wahyuddin

Yulia Yusrini D.

Aryadi Arsyad

Lukman M.

Yayu M. E.

Mufidah

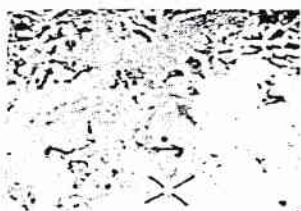
Subehan

Habibie

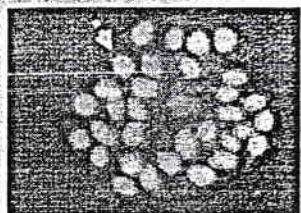
Firsan

March 19-20th, 2009
Makassar, Indonesia

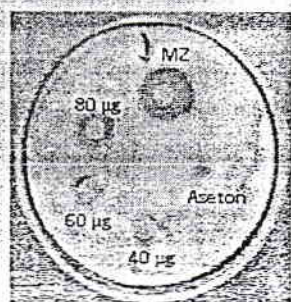
CONTENTS



Effect of ACF on MCF-7 cells growth (p30)

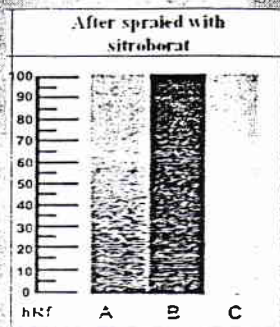


Apoptotic effect of ACF on MCF-7 cells (p30)

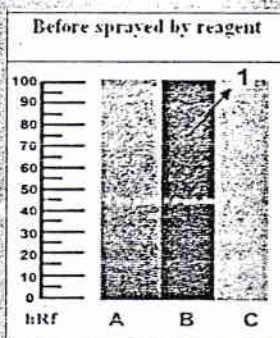


Antifungal assay (p53)

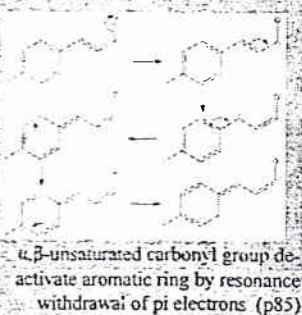
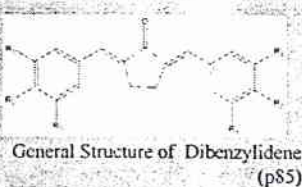
1. Transformation of Cocrystalline Phase in Binary Mixture of Trimethoprim and Sulfamethoxazole by Slurry Technique
Frizal Zain, Yeyet C. Sumirtapu, Sundani N. Soewand and Atuzal Halim
2. Evaluation of Anti-emetic use in pediatrics with Retinoblastoma at Dharmas Cancer Hospital (National Cancer Center)
Azrifitria, Edli S Tehuteru and Diniyah Siti Rahmah
3. Quality of Life Research on Geriatric Patients with Multipathology in Sardjito Hospital Yogyakarta
Dyah Aryani Perwitasari, Indri Oktiasari and I Dewa Putu Pramantara
4. The Influence of Morinda citrifolia, L. Fruit Extract as Adjuvant on IgY Production Raised in Laying Chickens against Avian Influenza Vaccine
Ediat Sasmito and Sri Harimurti
5. Chloroform Fraction of Areca (Areca catechu L.) Induces Apoptosis and Decreases Bcl-2 Expression on MCF-7 Cells
Edy Meiyanto, Sri Handayani and Ratna Asmah Susidarti
6. The Influence of Niosome System (SPAN 20/60-Cholesterol) on The Preparation Characteristics and Released of Diclofenac Sodium from HPC: HEC Gel Based
Esti Hendradi, Tutiek Purwanti, Desy Dwi Listyani and Ika Rossalia Prijadi
7. The Delivery of Crushed Tablets Using Food and Beverages: Is There a Problem? A Case Study Using Amlodipine Tablet
Zakky Cholish, Lisa Nissen and Kathryn Steadman
8. Formulation Of Chewable Tablet Containing Temu Putih (Curcuma Zedoaria (Berg) Roscoe : Combination Of Mannitol-Lactose And Sorbitol-Lactose As Filler
Setyo Nurwaini, Mufrod, Eka Yuliana Dian Prawesti and Wulan Ratna Niagtyas
9. Formulation Of Lozenges Containing Extract Of Kemangi (Ocimum Sanctum L.) Using Sodium Carboxy Methyl Cellulose And Gelatin As Binders
Erindyah R Wikanyasning, Setyo Nurwaini, Radityo Taufan and Asepia Yustandre
10. Antipyretic Effect Of Centella Asiatica L. Infusion On Male Swiss Mice
Rana Yuliani, EM Sutrisna and Windi Irawati
11. Isolation of Antidermatophyte Active Compound from Eleutherine americana L. Merr.
Erah Rosamah, Irawan Wijaya Kusuma and Titin Asmunah
12. Determination of Mercury (Hg) on Perna Viridis in Semarang Bay Using Atomic Absorption Spectrophotometry
Breto Santoso, Sabikis and Adhi Prayitno



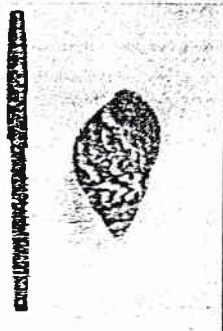
Chromatogram (p76)



Chromatogram (p76)



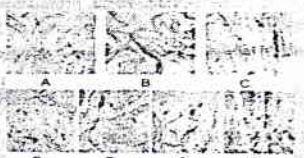
13. The Physicomechanical Characteristics Of Corn Starch (*Zea Mays. L*) As Exipients In Solid Dasege Form Formulation
Yandi Syukri, Ratna Dewi and Feris Firdaus
14. Acute Renal Failure Of Acci Used In The Treatment Of Congestive Heart Failure Cross Sectional Study
Vitarani Dwi, Ananda Ningrum, Lutfi Chabib and Saepudin
15. Formulation of Gel Containing Robusta Coffee Extract (*Coffea canephora L.*) for Skin Wound Healing
Yuli Paemudisastra, Anang Subgha and Nurul Lestari
16. Drug Utilization 90% (DU90%) Profile of Antibiotic Use During 2002-2007 at a Private Hospital In Central of Java
Saepudin, Vitarani D.A.Ningrum, Ivan S. Pradipta and Memy Syamriati
17. Antioxidant Activity of Ethyl Acetate Fraction of Kenikir (*Cosmos caudatus H. B. K*) Herb Extract and TLC Profile
Suparmi, Kepundan Kurniasih and C.I.Soegihardjo
18. Evaluation of Gel Containing Essential Oil of *Citrus aurantifolia* Leaf and In Vitro Antibacterial Activity
Anita Sukmawati, Mufrod, Ratna Yuliani and Putri Galuh Y Rosyad
19. Style Of Nuclear Magnetic Resonance (Nmr) Spectrum Of 2,5-Dibenzylidene Cyclopentanone Series Of Curcumin Analog
Sardjiman
20. Study Of Antiemetic To Cancer In Patients With Cytostatic Therapy In Ds Hospital Madiun, East Java, Indonesia
Enok Muzayen, Retno Yastrawati and R.A. Oetari
21. The effect of Snakehead (*Ophiocephalus streatus*) Fish Water Extract Cream on the Recovery of Rabbit's (*Oryctolagus cuniculus*) Skin Wound Histopathologically
Robert Tunguli, Faisal Attamimi, Eva Firmina Sabu and Rama P. Hiola
22. The Influence of Sambung Nyawa [*Gynura Procumbens (Lour.) Merr*] Leaf Extract on Lymphocyte Culture of Breast Cancer Mice (C3h) Cells
Shirly Kumala, Kartina and Kusmardi
23. Radiolabeling of Carcinoembryonic Antigen (CEA) Monoclonal Antibody with Generator-Produced Rhenium-188 for Radioimmunotherapy
Muhammad Yanis Musdja
24. Antifungal Activity From Snail Mucus (*Achatina fulica Bowdich*) Against Fungi *Trichophyton mentagrophytes* and *Trichophyton rubrum*
Nurmeilis, Megga R. Pikoli and Rahmah Garmila
25. Antiangiogenic Activity Of Etanolic Extract From Rambutan Pericarp (*Nephelium Lappaceum L.*)
Ilady Anshory, Ari Wibowo, Saepudin and Nita Pujianti



Suzai (p114)



Chick embryo chorioallantoic membrane (CAM) induced by bFGF (p118)

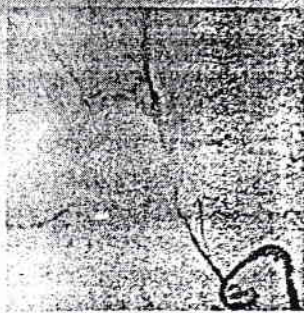


Histopathology assay with hematoxylin-eosin stain in the CAM for each group (p120)

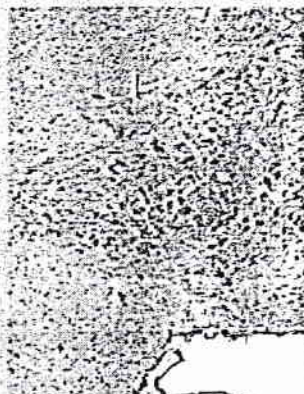


Passiflora foetida L (p142)

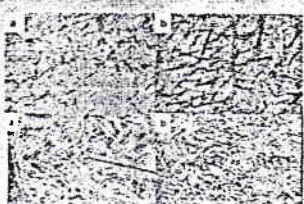
26. Inventory, Relocation, Antimicrobial and Phytochemical Screenings of Some Traditional Medicinal Plants of South East Sulawesi (Zingiberaceae)
Sahidin I, Ruslin and Ardiansyah
27. Antibacterial Properties Of Some Traditional Medicinal Plants Of South East Sulawesi (Indonesia)
Ruslin, Ardiansyah and Sahidin I
28. Histamin Content In Some Fishery Products Distributed In The Market In Makassar
Meta Mahendradatta
29. Formulation of Cacao Bean (*Theobroma cacao* Linn) In Scrub Cream I
Pakki E, Syukur R, Nursiah, Sumarheni and Jusriani, D
30. Ethnopharmacy and Chemical Component Identification Study of Permot Herb (*Passiflora foetida* L.) at 3 Ethnic of South Sulawesi.
Aktisar Roskiana Ahmad, Asni Anin and Iskandar Zulkarnain
31. Formulation of Ethanol Extracts Betel Nut (*Areca cathecu*) as Mouthwash
Mudzakkir Rewa, Ermina Pakki, Nursiah Hasyim, Faradiba and Mujharia
32. The Dissolution Test of Formulation Phenylbutazone Tablets Using Polysorbate-80
Amran Ilyas Tandjung
33. Design of Oral Multiple Dose Simulator Program with One Compartment Model
Yusriadi
34. A Computer Application for Simulation of Drug Plasma Concentration of Amoxicillin, Ciprofloxacin, and Tetracycline after Oral Multiple Dose Administration
Yusriadi
35. Novel CYP3A4 and CYP2D6 Inhibitors from Indonesian Medicinal Plants
Subehan, Shigetoshi Kadota and Yasuhiro Tezuka
36. The Effect Of Nk-1 Antagonist Administration On Dopaminergic Cell Death In Parkinson's Disease Animal Model
Yulia Yusrini Djabir
37. Zidovudin Analysis Method Validation in Plasma in vitro Using HPLC
Yahdiana Harahap, Rizka Andalusia and Tania Surya
38. Effect Of Bitter Melon (*Momordica Charantia*) Leaves Juice On Immunoglobulin M (Igm) And Immunoglobulin G (Igg) Activity Of Male Mice (*Mus Musculus*)
Arie Arizandi K., Hajjar Astuti, Rangga Medianto A, and Mufidah
39. Test Effect Extract Etanol Leaves Murbei (*Morus alba* L.) as Antimalaria to Male Mice (*Mus musculus*) Use in vivo Method
Dewi Yuliana, Rusli and Asni Amin



Chick embryo chorioallantoic membrane (CAM) induced by bFGF (p118)



Representative pattern of dopaminergic neuron distribution in the SNc (p170)



Optical microphoto crystal habit (p13)

40. Isolation Endofit Microbial of Turbinaria Murayana Seaweed
Rusli, Muzakkir Baiz and Aminullah
41. Antimicrobial Activity of Cassia alata L n-Butanol Extract from Wajo, South Sulawesi Toward a Range of Microorganisms by Bioautography-TLC.
Aminullah, Rusli, Habibie and Zainal Abidin
42. Analysis of Neem Leaves (Azadirachta Indica A. Juss) Ethanolic Extract Effect on Immunoglobuline M (IgM) Activity of Male Mice (Mus musculus)
Habibie, Kus Haryono, Marianti A. Manggau, Mufidah and Aminullah
43. The Antimicrobial Activity of Turbinaria sp Ethyl Acetate Extract Toward a Few Microorganism by Bioautography-TLC.
Muzakkir Baiz, Rusli, Zaraswati and Zainal Abidin
44. Anti Platelet Aggregation and Free Radical Scavenging Activities of Mezze-tia parviflora Becc. Woodbark Ethanolic Extract
Mufidah, Marianti A. Manggau, Hasyim Barium and Gemini Alam
45. In Vitro and in Vivo Study : Antimicroba Properties and TLC Bioautography Profiling on Vibrio colera, and Antidiarrhoea Activity of Permot Herb (Pas-siflora foetida Linn.) Extract from South Sulawesi to Mice (mus musculus).
Asni Amin, Mirawati, Abd. Malik, Virsa Handayani, Hertina and Lukman Labussy
46. The Influence of Polyvinylpyrrolidone K-30 to the Dissolution Rate of Phenylbutazone Prepared in Solid Dispersion
Latifah Rahman, Aliyah Putranto and Irawan Setiawan
47. Single Drop Microextraction in Pharmaceuticals Analysis
Ganden Supriyanto
48. Soil Actinomycetes of Podor Coastal in Larantuka, East Flores: Isolation and Primary Screening for Antimicrobial Activities
Sartini M. Natsir Djide, Usmar, and Sesilia Bulu Ode!
49. Gastrointestinal Absorption Of Griseofulvin From Liquid Organic Acids And Esters In Rats
Syahrudin Kadir, Firsan Nainu, Teruo Murakami and Noboru Yata
50. Possible Factors Behind the Enhanced Gastrointestinal Absorption of Gris-eofulvin from Liquid Organic Acid Ester Solutions in Rats
Syahrudin Kadir, Sumarheni, Yulia Yusrini Djabir, Noboru Yata.
51. Effect of Humidity Aging on Disintegration, Dissolution and Cumulative Urinary Excretion of calcium p-aminosalicylate formulation
Syahrudin Kadir, Sartini and Sumarheni
52. Anti-atherosclerosis Effect of Physalis angulata Herb in Hypercholesterol-emic Mice
Marianti A. Manggau, Lukman Muslimin, Gemini Alam, Syahrudin Kasim, Habibie

Quality of Life Research on Geriatric Patients with Multipathology in Sardjito Hospital Yogyakarta

Dyah Aryani Perwitasari¹, Indri Oktiasari¹ and I Dewa Putu Pramantara²

¹Pharmacy Faculty Ahmad Dahlan University, Yogyakarta

²Dr.Sardjito Hospital, Yogyakarta

Abstract

The growth of geriatric population increases from year to year. Characteristic of geriatric is multi-pathology leads to the use of polypharmacy. The research about quality of life of geriatric patients with multi-pathology has been done in Dr. Sardjito Hospital Yogyakarta. This research was intended to assess the quality of life of geriatric patients and factors which affecting the patients' quality of life. This research was observational research. Data was taken by interviewing the patients. The identity of the patients such as initial name of patient, gender, age, number of drugs consumed, number of disease diagnose and length of observation at geriatric polyclinic of multi-pathology were recorded. Population target was multi-pathology geriatric patients in geriatric polyclinic period November - December 2007. Quality of life measurement has been done by using SF 36 questionnaire which has been translated and validated in Indonesian version. But the translation procedures of SF 36 questionnaire has not been adjusted with the standard procedures. The standard procedures of translation and validation of SF 36 questionnaires are still done, in the backward translation. The backward translation is done by two native and independent translators. While the next steps such as pilot testing and validation of the questionnaires will be done soon. The result of research using SF 36 indicated that average of multi-pathology geriatric patient have a medium quality of life. From 44 geriatric patients with multi-pathology, 9 patients (20,45%) with high quality of life, 27 patients (61,36 %) had medium quality of life, and 8 patients (18,18%) with low quality of life. There was significant influence with negative correlation between quality of life and the number of diagnose and number of drugs in consumed. Meanwhile, the length of observation at geriatric polyclinic did not have influence to the quality of life. The quality of life had a negative correlation with the number of diagnose and the number of drug consumed, while the length of the observation did not have influence on the geriatric patients' quality of life.

Keywords: Quality of life, geriatric, hospital, SF 36

Introduction

The growth of geriatric population increases from year to year. Currently the population of geriatric reach 21% of total population in Europe (Muszalik et al, 2009). The gradual phenomenon of aging of the population, named demographic transition, is the main reason for the renewed interest in the elderly (Reganon et al, 2009). Average life expectancy is increasing significantly. In Polandia the average life of expextancy is 70.2 for woman and 78.3 for man (Muszalik et al, 2009). In Indonesia, the life expectancy for Indonesian population (men and women) increase from 67,8 years old at 2000-2005 period to 73,6 years old in 2020-2025 period (Anonim, 2005). Enormous progress in medicine, especially in life saving interventions, as well as the development of infectious illness prevention, the development of social care, a higher life-standard, and the general progress of civilization has influenced the increase in the number of elderly people (Muszalik et al, 2009).

Email: diahperwitasari2003@yahoo.com

The characteristics of the geriatric patient were multi-pathology, one patient has several illnesses at the same time. The main consequence of multipathology condition is one patient could consume lots of medicine (polypharmacy). Ninety-two percent of the geriatric patients that were treated in RSCM Jakarta during 2006, 84% among them had 5 diseases diagnosed or even more. Acquired illnesses, for example the coronary heart disease, COPD, osteoarthritis, diabetes mellitus, hypertension, and the urinary tract infection, may require one to two different medicine for each disease (Heriawan, 2007).

The consequence of using combine drug interventions, especially among elderly, need to be assessed in terms of their effects in improving the quality and not merely the duration of life. This research encourage the use of broadly based health-status measures which encompass the aspects of physical, psychological and social well-being in evaluating the outcomes of different forms of treatments and cares. These consist of both disease-specific measurement which are designed to be sensitive to the outcomes of particular disease processes, and generic measures designed to be ap-

plicable across a wide range of medical conditions (Hayes et al, 1995)

Quality of life (QoL) is defined as individuals' perceptions of their position in life in the context of the culture and value systems in which they live, and in relation to their goals, expectations, standards, and concerns; it is a broad-ranging concept, incorporating in a complex way the person's physical health, psychological state, level of independence, social relations, personal beliefs, and relationship to features of the environment (Yen et al, 2007). Impairments of both physical and cognitive functions with old age are major sources of economic expense, anxiety, and deterioration in quality of life, not only for the elderly people themselves but also for their younger family members who often end up supporting them (Johnson et al, 2009)

The quality of life could be generally measured with complex situation that consist of item, the scale, the authority, and the instrument. Item was a single question, and the scale contained the availability of categories or other mechanisms to state the response to the question. The authority identified the focus of certain attention, like the argumentation capacity or functional, and possibly became the response to item single or the response to several item that was related. The instrument was the collection from item that was used to obtain the data. The instrument could contain a single question global or several items that could or possibly will not be classed in the authority that was separated (Luderitz, 2000).

Several factors influencing the instrument could be used to measure the quality of life, which are the reliability, the validity, the responsiveness, the sensitivity, the appropriateness of the question, and the practical use. If the reliability of the instrument was significant means that the instrument of the quality of life must produce the same results when re-done in the similar condition. The validity was the compatibility of the instrument measuring the quality of life to the patient's population. The responsiveness was a measurement from the change inside score that was observed and thought that was true from a construction. Sensitivity referred in the grating capacity to reflect true changes or differences in the quality of life (Luderitz, 2000).

The SF-36 was derived from an original 149-item health-status questionnaire developed and tested on a population of over 22 000 patients as part of the Medical Outcomes Study (MOS). Its 36 questions comprise eight health scales measuring three aspects of health (functional status, well-being, and 'overall evaluation of health') and also includes an un-scaled assessment of change in health status. The SF-36 is intended to provide a short, comprehensive and easy to administer tool for use in clinical settings and to be applicable across social and demographic groups. The validity and reliability of the SF-36 has been confirmed among patient populations in the USA and shown to detect differences in health status for patients with different types and severity of medical condition (Hayes et al, 1995).

In Indonesia, the valid version of SF 36 is not available yet. At the moment, the reseacher is doing translation procedures which called backward translation. The

backward translation is done independently by two native English translators who have good capability in Indonesian language. The next procedures are the discussion between researcher and the translators to make the valid version of SF 36 and then the pilot testing will be done (Koller et al, 2007).

Material and Methods

Subjects and setting

The research was descriptive analytic design which was carried out prospectively during one month in the geriatric polyclinic of RSUP Dr. Sardjito Yogyakarta. The target population was all the geriatric patients (>60 years old) who had multipathology diagnose. The patients got more than 3 types of drugs because of the multipathology condition. The exclusion criteria were patients who was rejecting to be a respondent and could not be interviewed due to the condition of the patient which hamper them to answer the question.

SF 36 questionnaires

The SF-36 measures quality of life using eight dimension scales, in which the higher scores (range: 0–100) indicating better quality of life. The SF-36 has been intensively validated in many countries and in patients with various medical conditions. The translation procedures in this research was done by 1 translator for the forward translation and the backward translation has not been done. The validity and reliability was carried out against 30 geriatric patients treated the road in the geriatrics polyclinic of RS Dr. Sardjito Yogyakarta.

The logical validity was carried out by comparing r counted with the r of table. The item will be the valid variable when r counted positive and r counted $> r$ of table, while the item will be invalid variable when r counted negative and r counted $< r$ the table. The internal consistency of the Indonesian version was assessed using Cronbach's alpha coefficients. Internal consistency of a magnitude of 0.70 or greater was sought.

Data Analysis

Data was descriptively analysed and showed in the tables. The scores of each item questions were calculated and divided with the number of question, then grouped based on the each domain. Regression and correlation analysis ($p < 0.05$) was carried out to know the effect of multipathology diagnose, the length of patients' observation in hospital and the number of drugs consumed by the patients into patients' quality of life.

Result and Discussion

An aging society is a serious challenge for the civilization. Old age is not an illness, it is a physiological process that is impossible to stop. It is only possible to prevent early aging and age-related unfitness. High levels of medi-

cal and social care also improve the quality of life of the chronically ill elderly persons (Muszalik et al, 2009)

The validity test from the SF questionnaire 36 showed that there were 11 items of the question that thought r counted < r of table. It meant that this item was invalid. The items that were invalid were question no 2, 3, 20, 23, 25, 26, 27, 30, 34, 35, 36. The invalid question was withdrawn from the questionnaire. Cronbach's α was higher than 0.70 for each item of the SF instrument, means that the reliability is high.

Completed questionnaires were collected from 44 subjects. The characteristics of the respondent or the subject of the research could be clarified in this research, the multipathology diagnosa, the number of drug consumed and the length of hospital observation are shown in table 1.

A considerable increase in life expectancy in many countries results in the increasing number of elderly people, including the chronically ill ones. Treatment, nursing and rehabilitation of these patients require a large financial expenditure. Chronic diseases may significantly deteriorate the quality of life. The medicine and nursing of today aspire to take holistic care of each patient, to restore the affected functions of the patients. If a disease is chronic, it is necessary to maximize the patient's independence and efficiency (Muszalik et al, 2009).

The description of patients' quality of life was shown in table 2 and table 3.

Generally, patients' quality of life is moderate. This condition could be resulted from the good life style and their health were under the good controlled by health profesional. Otherwise, the uncontrolled existence of the body internal disease could reduce the quality of the life.

Table 3 showed that the highest average score of quality of life in the geriatric patients was social function and the lowest score was vitality. It could be said that in general the vitality of the geriatric patients with multi-pathology was low. This vitality could be linked with the tired and energy loss. Otherwise the body pain was one of the biggest problems that was experienced by geriatric patients with multi-pathology.

Previous study of Banages et al (2006) about the quality of the life of the hypertension patients Spain suggested that women in Spain the age 60 years above that experienced hypertension had the quality of the life was worse than to non-hypertension women. This study said that the psychosocial factor could influence the quality of the life. Medical treatment showed the change in a level that was small in the psychosocial dimension. Meaning that the existence of the well-off maintenance can increase level of quality of the life despite small, or most could not maintain the quality of the life of the patient in order to be not increasingly low. In this research, most of the patients had hypertension and the social function was one of the lowest domains in SF 36. Given this feature, to increase the social function of the patients could be encreasing the quality of life.

From the regression and correlation analysis, it was showed that the patients quality of life had negative correlation with the number of drugs consumed and the number

Table 1. Patients' characteristics (n=44)

| | N | % |
|-----------------------------------|----|--------|
| Age, year : | | |
| a. 60-65 | 10 | 22.73 |
| b. 66-70 | 12 | 22.27 |
| c. 71-75 | 11 | 25.00 |
| d. 75-80 | 11 | 25.00 |
| Sex : | | |
| a. Male | 18 | 40.81 |
| b. female | 26 | 68.09 |
| Employment status : | | |
| a. Housewife | 9 | 20.45 |
| b. Homemaker | 2 | 4.55 |
| c. Government employee | 6 | 13.64 |
| d. Retiree | 27 | 61.36 |
| Multi-pathology diagnosa : | | |
| a. 2 diseases | 27 | 61.360 |
| b. 3 diseases | 11 | 25.000 |
| c. 4 diseases | 5 | 11.370 |
| d. 5 diseases | 1 | 2.270 |
| Number of drug consumed : | | |
| a. 2 drugs | 7 | 15.91 |
| b. 3 drugs | 15 | 34.09 |
| c. 4 drugs | 11 | 25.00 |
| d. 5 drugs | 8 | 18.18 |
| e. >5 drugs | 3 | 6.82 |
| Diagnosa : | | |
| a. Hypertension | 30 | 68.18 |
| b. Osteoarthritis | 12 | 27.27 |
| c. Gout | 11 | 25.00 |
| d. Hyperlipidemia | 10 | 22.72 |
| e. Osteoporous | 8 | 18.18 |
| Length of observation : | | |
| a. 0-1 year | 6 | 13.64 |
| b. 1-5 years | 16 | 36.36 |
| c. 6-10 years | 14 | 31.81 |
| d. 11-15 years | 4 | 9.09 |
| e. 16-20 years | 4 | 9.09 |

Table 2. Patients' quality of life (n=44)

| Quality of life | N | % |
|-----------------|----|-------|
| a. High | 9 | 20.45 |
| b. Moderate | 27 | 61.36 |
| c. Low | 8 | 18.18 |

of diseases. It means that the more number of drug consumed and the more number of disease, the lower of quality of life. While, the length of observation did not have correlation with the quality of life.

Multi-pathology often becomes the cause of polypharmacy. For each problem, the health professional possibly gave one or two drugs. The clinical appearance that was most unclear for geriatric patients, caused some problems for the physician in diagnose the geriatric patients. In this framework, it was needed the role of pharmacy to give some information about the drugs, for example drug-drug interaction, drug-food interaction, and adverse drug reaction. In an aging society, the percentage of geriatric patients using the medical services increases. Results of the present study show that health related factors have an influence on quality of life of elderly persons. These results may be useful in planning and providing professional geriatric care. The results of such type of research may be used as an aid in the planning of professional medical and nursing care for patients of various ages.

Table 3. Mean, SD and % mean

| | Mean | SD | % Mean |
|--------------------|-------|-------|--------|
| Quality of life | 68,23 | 12,73 | |
| Physical Function | 20,00 | 5,22 | 74,07 |
| Physical Condition | 5,98 | 1,75 | 74,71 |
| Pain | 7,00 | 2,25 | 70,00 |
| General Health | 7,66 | 1,49 | 76,59 |
| Vitality | 4,20 | 1,39 | 70,00 |
| Social Function | 4,36 | 0,96 | 87,27 |
| Emotional | 4,29 | 1,44 | 71,59 |
| Mental health | 14,84 | 3,32 | 82,45 |

Table 4. Regression analysis between quality of life and patients' characteristic

| Patients' characteristic | Significancy |
|---------------------------------------|--------------|
| Multi-pathology | 0,013 |
| Number of drugs consumed | 0,015 |
| Length of observation in the hospital | 0,824 |

Conclusion

The average of multi-pathology geriatric patients had a medium quality of life. From 44 geriatric patients with multi-pathology is obtained patient with high quality of life as 9 patient (20,45%), medium quality of life 27 patients (61,36 %), and 8 patients (18,18%) with low quality of life. There was significant influence with negative correlation between quality of life and the number of diagnose and number of drugs in consumption. Meanwhile, the length of

observation at geriatric polyclinic did not have influence to the quality of life. Quality of life has the negative correlation with the number of diagnose and the number of drug consumption, whilst the length of the observation did not have influence on the geriatric patients' quality of life.

References

- Anonim, 2005, Data Statistik Indonesia, Biro Statistik Indonesia, Jakarta
- Banegas, J., Castillon P, Artalego F, Gracisni A, Ruilope L. 2006. Association Between Awareness, Treatment, and Control of Hypertension, and Quality of Life Among Older Adults in Spain, *Am J Hypertens*, 19, 686-693.
- Johnson W, Deary IJ, McGue M, Christensen K, 2009, Genetic and Environmental Links Between Cognitive and Physical Functions in Old Age, *Journal of Gerontology : Psychological Sciences*;10,1-8
- Heriawan, C, 2007^b, Polifarmasi pada pasien geriatri : Mengapa terjadi dan bagaimana mengatasinya?, dalam *Menyiapkan Strategi Terpadu untuk Meningkatkan Kualitas Pelayanan Obat pada Pasien Geriatri*, Yogyakarta : Universitas Islam Indonesia.
- Hayes V, Morris J, Wolfe C, Myfanwy M, 1995, The SF-36 health survey questionnaire: is it suitable for use with older adults?, *Age and Ageing*,
- Koller M, Aaronson NK, Blazeby J, Bottomley A, Dewolf I, Fayer P, Johnson C, Ramage J, Scott N, West K, 2007, Translation procedures for standardised quality of life questionnaires: The European Organisation for Research and Treatment of Cancer (EORTC) approach, *European Journal of Cancer*; 1810-1820
- Luderitz B, Jung W, 2000, Quality Of Life In Patients With Atrial Fibrillation, *Archives Of Internal Medicine*, 160, 12, 1749-1757.
- Muszalik M, Kornatowska KD, Kornatowski T, 2009, Functional assessment and health-related quality of life (HRQOL) of elderly patients on the basis of the functional assessment of chronic illness therapy (FACIT)-F questionnaire, *Archives of gerontology and geriatric* , 1-5
- Reganon IR, Colomer A, Vivar FF, Manzarbeitia J, Manas AR, Esteban A, 2006, Outcome of Older Critically Ill Patients: A Matched Cohort Study, *Gerontology* ;52:169-173
- Yen CF, Kuo CY, Tsai PT, Ko CH, Yen JY, Chen TT. 2007, Correlations of quality of live with adverse effects of medication, social support, course of illness, psychopathology and demographic characteristics in patients with panic disorder, Depression and Anxiety 24:563-570.