

Artikel

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ABSTRACT BOOK

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TRACK 1

Public Health and Family
Medicine Epidemiology
Tropical Medicine

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Preimplantation Genetic Testing – A Total Solution for Prenatal Care

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ABSTRACT

¹³ The rapid development of genomic technology has made the twenty-first century the most prominent century for the scientific research in genomic medicine. Technical advances by means of next generation sequencing (NGS) technologies improve the capacity to detect and quantify genetic variants, including germline and somatic mutations and polymorphisms, across the genome. The growing number of publications and patents indicate that application of NGS-based molecular testing to assist accurate diagnosis of disease incidence, the degree of prognosis or the most appropriate treatment for individual disease is inevitable in the future trend. And it is the main spirit of “Precision Medicine”. For the foreseeable future, NGS-based molecular testing will be as common as the current biochemical tests or general physical examination. The application of genomics in preventive medicine, especially in prenatal care, is particularly important. The NGS-based prenatal tests through ¹³ the use of maternal blood to detect fetal chromosomal abnormalities, or as little as 1-10 cells from a single embryo to detect embryo chromosomal abnormalities have shown the advantages over the traditional prenatal tests. It is believed that NGS-based prenatal testing will become a trend leader under this new generation of genome technology. The Center for Genomic medicine (CGM) in the National Cheng Kung University was established as a University research center but has transformed to provide services for clinical diagnosis. Our goal is to turn the maternal and fetal genetic testing to a new era of faster, more accurate and comprehensive for next-generation Maternal-fetal precision medicine. In addition, we have established the pipeline for conducting whole exome sequen¹³g and successfully apply the system to detect genetic variant(s) that result in simple as well as complex human diseases. This presentation will outline our achievements and prospective developments in prenatal healthcare.

The Development and Ethical Problems in Assisted Reproductive Technology (ART)

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ABSTRACT

Background. While assisted reproductive technology (ART), including *in vitro* fertilization has given hope to millions of couples suffering from infertility, it has also introduced countless ethical, legal, and social challenges. *The objective* of this paper is to identify the aspects of ART that are most relevant to present-day society and discuss the multiple ethical, legal, and social challenges inherent to this technology. *Scope of Review* Assisted Technology Reproduction (ART) involves a number of different procedures to help address fertility problems and increase the likelihood of pregnancy. IVF (*Invitro Fertilization*) is the union of egg and sperm *in vitro* (in the lab/tube). Subsequently the embryos are transferred into the uterus through the cervix and pregnancy is allowed to begin. At first, ART (*Assisted Reproductive Technology*) was limited to infertile married couples whose desire to have children, but with the rapid development of ART, it became the object of human desire as another service to be purchased. ART allows a woman to gestate a fetus genetically unrelated to her. Known or unknown to the couple become involved in ART such as the sperm donor, the egg donor, the embryo donor, and the surrogate mother. The driving force behind each of these technological advances has been a combination of scientific ingenuity and public demand for ART. In fact, it raises several ethical, legal, social, philosophical and theological issues. The Ethical and Legal Issues covering access of service, family relationships, commercializing reproduction, embryo status and embryo selection. Most of countries face many of the same ethical, legal, and social challenges in coming to terms with ARTs, they deal with them in different ways because of their different histories and traditions. *Conclusions.* ART has resulted in a tectonic shift in the way physicians and the general population perceive infertility and ethics. ART is directly challenging society to reevaluate the way in which human life, social justice and equality, and claims to genetic offspring are viewed. Furthermore, these issues will force legal systems to modify existing laws to accommodate the unique challenges created by ART. Society has a responsibility to ensure that the advances achieved through ART are implemented in a socially responsible manner.

Keywords : ART, technological advances, object of human desire, ethical problems.

Presented: at the 4th International Conference of Medical and Health Sciences (ICMHS), School of Medicine, Faculty of Medicine and Health Sciences, Universitas Muhammadiyah Yogyakarta, August, 2020.

Coronary Stent: From University Research to Factory

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ABSTRACT

Coronary heart disease due to plaque blocking of cardiovascular has been counted as the highest human killer among other diseases. Until recently, PCI (Percutaneous Cardiovascular Intervention) has been used as a gold standard procedure for opening the block by implanting a coronary stent. The number of cardio patient in Indonesia itself increases each year and it has been attracted universities researchers around the globe. However, most of those were terminated on technical papers both presented in conferences and journals. It is hard to find the stents that developed by university and manufactured commercially by medical company. This paper will present UGM's experience in how a coronary stent has been developed and brought it to the factory floor. For this, synergy within 6-helix (multi-discipline researchers supported by university incubation centre, hospital, DIKTI, Ethic Clearance Institution, BPOM and medical company) is strongly required. All these processes from research to factory would be presented. Potential obstacles during processes and solution would also be discussed in detail.

Keywords: coronary stent, commercial, factory, research, university, 6-helix.

ID Number: ABS-316

Abortion and Unmet Family Planning Needs: A Case Study in Java Provinces, Indonesia, 2020

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ABSTRACT

Background: Women with unmet contraceptive needs rarely say that they do not realize the importance of contraceptives since they typically do not have access to contraceptives sources or supply or the price is unaffordable for them. In most countries, married women who ever experience side effects from contraceptives and have health risks prefer not to use it. For decades, advocates, health professionals, policymakers, and funding agents have used information about unmet needs for contraceptives to identify kinds of investments needed in family planning programs to help the development of the country. By helping women prevent unwanted pregnancies, those invented programs can reduce unwanted births and unsafe abortions, thereby improving the health of mothers and children. This can contribute to other development goals, such as reducing the poverty rate and slowing population growth. The importance of using contraception to regulate fertility has been recognized globally. This is a key aspect of reproductive health for women who want to limit their pregnancy rate.

Purpose: This study aims to analyze abortion rate and percentage of unmet need in Java provinces, Indonesia, in 2020.

Method: This study uses cross sectional to analyze data from *Indonesia Demographic and Health Survey conducted in 2018, reports on contraceptive services of National Population and Family Planning Board (BKKBN)*, and Statistics Indonesia. The data were taken from all Java provinces, which are West Java, Central Java, and East Java. The statistical test used in this study was a linear regression to test the relationship between abortion and unmet need.

Results and Discussion: Unmet need is a complex measure. It has been a debate for years among experts on demographic surveys and public health; on how can these happen, is it about by health care factor or about intentions and motivations of women or couples themselves.

Conclusions: From the population, which is women in Java provinces, the number of unmarried women who are sexually active is smaller than the number of married women is. The majority of women in this study are already married, and social norms often became obstacles in pre-marital sexual activities. Unfortunately, this group has the highest number of unmet need for contraceptives, so health workers and whole community are expected to take part actively, considering that in this era of society, many residents have not met their needs for contraceptives due to various reasons and situations.

Keywords: unmet need, abortion, Java provinces

ID Number: ABS-317

6
**Factors Influencing Palliative Care for Women with Breast Cancer in Java Island,
2020**

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ABSTRACT

This study aims to examine factors associated with palliative care in women with breast cancer. The method used in this study was *cross-sectional* in collaboration with The Indonesian Plant Parenthood Association (PKBI) and Indonesia Breast Cancer Foundation (YKPI). The instruments used were demographic data, socio-economic data, and PNPC questionnaire (Problems and Needs of Palliative Care). The number of samples was 178 women with breast cancer, selected using inclusion criteria as follows: women with breast cancer for more than 1 year, age around 20 years old or more, literate, and in a conscious and stable state. After multivariate analysis with linear regression, monthly income ($t = -2.90$, $p\text{-value} = 0.04$, $95\% \text{ CI} = -3.789 - 1.807$), marital status ($t = -2.10$, $p\text{-value} = 0.04$, $95\% \text{ CI} = -3.111 - 1.665$), residency ($t = -5.10$, $p\text{-value} = 0.04$, $95\% \text{ CI} = -4.211 - 1.415$), difficulties concerning the meaning of death ($t = -6.10$, $p\text{-value} = 0.07$, $95\% \text{ CI} = -9.211 - 1.110$), difficulties in finding someone to talk to ($t = -6.10$, $p\text{-value} = 0.04$, $95\% \text{ CI} = -6.211 - 1.677$), and difficulties in pain management ($t = -5.33$, $p\text{-value} = 0.03$, $95\% \text{ CI} = -3.211 -$

1.886) are associated with palliative care for women with breast cancer in Indonesia in 2020. The r -value for these results was 0.109 . To conclude, this study shows that pain management is a factor that greatly influences the results of palliative care received by women with breast cancer. In this case, nurses, doctors, and families must increase their roles proactively. Patients' families can actively participate by attending trainings from doctors and nurses about several steps of pain management. Future researchers can conduct further studies on conducting palliative care for women with breast cancer both at home and in the hospital.

Keywords: Palliative care, women with breast cancer

ID Number: ABS-510

Rural-urban Differences in Characteristic and Lipid Profile among Javanese Ethnic of Type 2 Diabetes Patients

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ABSTRACT

Background: Urbanization has led to changes in human health with the inception of non-communicable diseases such as Diabetes mellitus (DM). This is generally due to the adaptation to unhealthy and sedentary lifestyles, with poor diet patterns. The purpose of this research is to compare the characteristics of people with type 2 DM (T2DM) among the Javanese ethnic living in rural and urban. **Method:** This was an observational analytic study, with the cross-sectional approach used to obtain data from 102 T2DM patients in Gunungpati (rural), Pandanaran and Purwoyoso Health Centers (urban). The characteristics assessed included age, sex, BMI, blood pressure, blood sugar levels and lipid profile. Furthermore, the Mann Whitney U test was used to test the characteristics differences with a significance value of $p \leq 0.05$. **Results:** There were significant differences between FPG control ($p = 0.032$) and HDL levels ($p = 0.006$). Meanwhile, characteristic data such as age ($p = 0.214$), gender ($p = 0.790$), BMI ($p = 0.196$), and blood pressure ($p = 0.123$) did not have significant differences. Furthermore, insignificant results were also obtained at various levels of FPG ($p = 0.917$), cholesterol ($p = 0.436$), triglycerides ($p = 0.724$), LDL ($p = 0.188$), and the Chol / HDL ratio ($p = 0.297$). In urban areas, the average cholesterol levels (185.59 ± 52.59), triglycerides (203 ± 158.76 mg / dl), HDL (62.60 ± 16.69 mg / dl), LDL ($201.16 \pm 59, 36$ mg / dl), were higher than those in the rural areas. **Conclusion:** The result shows that the blood sugar levels, Lipid profiles, cholesterol, triglyceride, LDL and glycemic control of Javanese T2DM patients in urban areas are higher than those in rural areas. However, only HDL is significantly different.

Keywords: type 2 DM, rural, urban, Lipid profile

ID Number: ABS-622

The Relationship between Climate Factors and Dengue Hemorrhagic Fever Incidence in Sleman, Yogyakarta

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ABSTRACT

Dengue hemorrhagic fever (DHF) is the infectious disease in tropical and subtropical climates. Dengue hemorrhagic fever is caused by virus which is spread through the bite of Aedes mosquito. Climate influence the spreading of the disease by influencing the activity of vector and viruses. Sleman Regency is the endemic area which has a variety of geographical conditions, so that the possibility of climate plays a role in here. The influence of rainy days on the incidence of dengue in Sleman Regency so far is unknown. Research is analytic observational with cross-sectional design. Dengue event data for 2008-2015 was obtained from the District Health Office. Climate data in the same year were obtained from the Meteorology Climatology and Geophysics Agency of Yogyakarta. The climate parameters investigated are humidity, temperature, difference in maximum-minimum temperatures, rainfall and rainy days. Spearman correlation analysis is used to determine the significance of the relationship between variables. There were 4,125 DHF cases in Sleman in 2008-2015. The analysis showed that humidity was positively correlated with DHF ($p = 0.000$; $r = 0.458$), rainy day was positively correlated ($p = 0.000$; $r = 0.429$), rainfall was positively correlated ($p = 0.000$; $r = 0.428$). Temperature does not correlate ($p = 0.407$; $r = 0.086$), temperature difference is also uncorrelated but shows a negative direction ($p = 0.06$; $r = -0.278$). It was concluded that the determinants of DHF events in Sleman Regency were humidity, rainfall and rainy days. As the three parameters increase, the incidence of DHF increases.

Keywords: rainfall, DHF, rainy day, humidity, temperature

ID Number: ABS-671

Handwashing Urgency to Prevent Coronavirus Infection

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ABSTRACT

Background: The Coronavirus (COVID-19) is an infectious disease caused by a newly discovered Coronavirus. COVID-19 has been identified as a cause of respiratory disease outbreaks in Wuhan, Hubei Province, China, since December 2019. Most people infected with the COVID-19 will experience mild to moderate respiratory disease, and recovered without the need for special treatment. The purpose of this study was to analyze the handwashing urgency to prevent the corona virus infection

Method: The design used was literature review; the articles were collected using search engines such as Google Scholar, EBSCO, Sciencedirect, and Proquest. The used criteria for the articles were those published in 2010-2020.

Results: The mortality case rate reported today is around 2%. In other sources reported that the mortality is 1.4% among 1099 patients with Covid as confirmed by the laboratory. Medical professionals treating the patients with COVID-19 have a high risk of contracting infections, including the aerosol-producing procedures such as non-invasive ventilation, high-flow nasal cannula, bag-mask ventilation, and intubation. It is recommended that all medical personnel involved in the management of the COVID-19 suspected patients must comply with the precautions through airborne, hand hygiene, and the administration of personal protective equipment. The transmission by hands is the main way of the microbes and infections to spread, therefore, hand hygiene is the most important step to avoid and prevent the infection transmission of harmful germs.

Conclusion: Handwashing is the most important step to avoid the transmission of harmful germs and to prevent the infection.

Keywords: Handwashing, Coronavirus, Prevention of Infection

ID Number: ABS-687

Correlation of Age, Duration of Diabetes Mellitus, and HbA1C Levels with Erectile Dysfunction in Type II Diabetes Mellitus

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ABSTRACT

Background: Uncontrolled diabetes mellitus (DM) can cause erectile dysfunction. Research shows that erectile dysfunction more common in a longer period of DM. Age and HbA1C levels are correlated with type II DM. Aims of this study are to show the correlation between age, duration of DM, HbA1C levels, and erectile dysfunction in type II DM. **Methods:** a cross-sectional study from 34 males with type II DM in the prolanis group at Harjobinangun Village, Sleman, Yogyakarta were performed. Erectile dysfunction was assessed by using the International Index of Erectile Function (IIEF-5) questionnaire. HbA1C levels are measured from blood samples. Data were analyzed using chi-square analysis (95% CI). **Results:** 70.6% subject were aged > 60 years and 61.8% subjects had DM for more than 10 years. There is no correlation between age, duration of DM, HbA1C levels, and erectile dysfunction in type II DM ($p > 0.05$). **Conclusion:** There is no correlation between age, duration of DM, HbA1C levels and erectile dysfunction in type II DM

Keywords: Age, DM, Duration of DM, HbA1C Levels, Erectile Dysfunction, IIEF-

ID Number: ABS-757

The Influence of Social Environment Against Diarrhea Prevalence in Yogyakarta City

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ABSTRACT

Abstract Diarrhea is still considered a public health problem in Indonesia. The cases of diarrhea tend to increase year by year. There are many risk factors of diarrhea, especially the behavior and social environment. An example was handwashing after bowel movements, type of water storage reservoir, septic tank presence, education level, type of house floor, toilet construction, and drinking water source. This research is conducted to know the effect of social environments like distance houses with rivers, temporary landfills, and the market on diarrhea prevalence in Yogyakarta City. This study uses the observational analytic method with a cross-sectional design. The study had been conducted in 13 sub-districts located in Yogyakarta City. The variables studied were the number of diarrhea patients per sub-district and the range of the patient's residence with the river, temporary landfills, and market. Based on the distance between the patient's house and the social environment, the multi-buffer method is determined. The results show that 74% of respondents located at a distance of fewer than 200 meters from the river, 75% was found further than 500 meters from landfills, and 61% was found further than 500 meters from the market. The regression analysis shows that the distance between the diarrhea patient's houses with a river, temporally landfill, and market influences the incidence of diarrhea in Yogyakarta City (p -value < 0.05). It concluded that there is a significant influence of the social environment with diarrhea prevalence in Yogyakarta City, Special Region of Yogyakarta.

Keywords: *diarrhea, market, river, spatial analyses*

ID Number: ABS-776

Client Centered Counseling Decreases Anxiety in Elderly Patients with Chronic Disease

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ABSTRACT

Chronic non-communicable diseases, diabetes and hypertension, are serious global health problems. The prevalence of the elderly is increasing. Sudden changes in life can cause psychological reactions such as anxiety which has negative impact on the patient's disease course. Client-centered counseling is expected to be one of the activities that can relieve anxiety. The aim of this study is to investigate the effect of client-centered counseling on the improvement of anxiety in elderly people with chronic disease. This research is a quasi-experimental study with one intervention group and one control group. The sample was 30 people from primary health centers obtained through a purposive sampling technique and divided into two groups. Client-centered counseling interventions were carried by a psychologist. Anxiety assessment was conducted by interviewing the patients, before and after in both groups, within 1 month using HARS questionnaire. The data were analyzed using descriptive statistics and t-test. The assessment of pretest anxiety level in the intervention group found that an average of 20.27 ± 4.63 , while the control group was 18.80 ± 5.52 . Post-test anxiety levels in the intervention group was 13.93 ± 2.85 while those in the control group were 6.60 ± 4.83 . The paired t-test showed a significant change in the intervention group ($p = 0.01$), while that of in the control group was also significant ($p = 0.01$). Based on the independent-test, the mean anxiety level change was significant ($p=0.001$) between two groups. Client-centered counseling helps reduce anxiety in the elderly patients with chronic disease.

Keywords—Anxiety, Client Centered Counseling, Chronic Disease

ID Number: ABS-802

Demographic and Clinical Patterns of Malaria Fever at Subaim Health Care Center in East Halmahera North Maluku in 2016

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ABSTRACT

Background: North Maluku was one of the five highest malaria-endemic areas in Indonesia in 2016. The condition of the North Maluku Province, especially East Halmahera Regency, is dominated by rice fields and forests which allows many places to breed *Anopheles sp.* *Plasmodium* infection can occur regardless of a person's sex or age and can cause various clinical manifestations such as fever, chills and sweating.

Objective: The purpose of this study was to look at the distribution of malaria-related to the demographics of the sub-district, age, sex and type of *Plasmodium*, as well as to determine the clinical relationship of malaria fever with *Plasmodium* type in Subaim Health Care Center, East Halmahera, North Maluku in 2016.

Methods: This was an analytical descriptive study conducted in November 2019 - March 2020 using medical records data at the Subaim Health Care Center, East Halmahera, North Maluku in 2016. Demographic data of the region, age, gender and type of *Plasmodium* were processed descriptively, while data Clinical malaria fever is treated with *Phi and Cramer's V* analysis. Data are presented in tabular and graphical form and mapped based on environmental conditions and endemic areas using ArcView GIS software 3.3.

Results: There were 158 cases of malaria in East Halmahera and the most frequent were found in Wasile Subdistrict with 145 people. Malaria patients consisted of 84 female patients (53%) and 74 male patients (47%) and were dominated by toddlers aged 1-5 years (33%) and children 6-14 years (32%). Positive patients infected with *P. vivax* were 68%, *P. falciparum* 27% and *P. mix* 5%. The clinical relationship between malaria fever and *Plasmodium* species was not significant because p value $>0,05$ ($P. vivax = 0,284$; $P. falciparum = 0,148$; $P. mix = 0,514$).

Conclusion: Most malaria cases occur in Wasile District, and are dominated by patients aged under five (1-5 years) and children (6-14 years), female sex, and *Plasmodium* in the form of *P. vivax* and there is no significant relationship between clinical malaria fever with *Plasmodium* species.

Keywords: North Maluku, Demography, Malaria, Clinical Fever

ID Number: ABS-984

Diabetes Mellitus Performing Arts Theater to Activate Social Nerves in Changing Behavior

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ABSTRACT

Background: The tense condition and language barrier are the main problems in the difficulty of T2DM patients understanding the material delivered by the doctor. This study aimed to create a relaxed and pleasant environment based on local culture during health education in Sleman, Yogyakarta.

Methods: This type of research is qualitative with case study design. This study included T2DM prolanis participants in the Sleman's Local Health Center (Puskesmas). The researchers conducted a Focus Group Discussion Session (FGD). Most participants were Javanese. The FGD was used to get answers about questions related to the participants' langue in Javanese culture. **Result:** The majority of T2DM patients were unemployed women of 45-60 years old with middle-level education. Peer group discussion through art performances is one form of intervention chosen by patients to deliver health material. The patient's active role during the discussion increases the motivation of other patients to take an active role. Peer education effectively changed the behavior of T2DM patients for physical activity and eating control. This condition was influenced by the patient's motivation and perception about the importance of introducing DM. Through PSTDM cranial nerves, V, VII, IX, X, and XI in the form of singing together, the loud song and Mount Caping and dancing with T2DM patients will be activated. **Conclusion:** Performing arts DM is an educational program that can create a relaxed and pleasant environment so that patient with DM can understand the material delivered by the educator.

Keywords: T2DM, performing arts theater, social nerves, behavior

ID Number: ABS-999

Implementation of Universal Health Coverage in Indonesia: Knowledge, Perception and Experience of the Poorest Households Related to Maternal and Child Health

*Note: Sub-titles are not captured in Xplore and should not be used

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ABSTRACT

Introduction : This study aims to access UHC coverage to the poorest and near-poor households, especially regarding maternal and child care. To assess current knowledge and perceptions of the poorest and near-poor households (both PBI participants and non-JKN participants) on the implementation of UHC. Examining media habits and communication channels of the poor and near-poor.

Methods: This research will mainly convey a survey approach or quantitative data collection. This research will provide quantitative information about the knowledge and perceptions of the poor towards the application of UHC in two districts namely Kulonprogo (The number of maternal deaths is the lowest in 2017 = 3 cases) and Gunung Kidul (The highest number of maternal deaths in 2017 = 12 cases).

Results: While the number of JKN members continued to increase, including those not previously covered by the insurance scheme. In terms of maternal and child health, JKN is preferred over Jampersal largely due to better completeness of JKN coverage and a higher proportion of costs incurred by JKN compared to Jampersal. Complicated administrative procedures are one of the obstacles preventing poor and marginal groups from becoming JKN members.
(Abstract)

Keywords— Universal Health Coverage, poor household, Maternal and Child Health (key words)

ID Number: ABS-1029

The Effect of Noise and Working Period to the Cortisol Level on Worker

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ABSTRACT

The workers were exposed to noise in the environmental work have risk affected by health problems, one of them is work stress. Work stress can be shown by increasing cortisol levels. The purpose of this study was to analyze the effect of noise and working period with the cortisol levels of workers exposed to continuous noise. This research used analytic observational. Technical sampling used proportional quota sampling. The number of subjects was 72 people. The variables measured were noise, working period, and cortisol levels. Statistical analysis used two-way Anova, and the significance level used 5%. The results of this research showed that there was an effect of noise on cortisol levels ($p = 0,000$) and there was an effect of the working period on cortisol levels ($p = 0,000$), but there was no effect of noise interactions and working period on cortisol levels ($p = 0,770$).

ID Number: ABS-1165

Mental Emotional Disorders in the Community

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ABSTRACT

According to Indonesia Basic Health Research 2018, the prevalence of mental emotional disorders which is indicated by depression and anxiety symptoms was 9.8% 7 households. Screening of mental emotional disorders in populations at risk needs to be done so that people with mental emotional disorders can be handled promptly and appropriately. The purpose of this study was to determine the prevalence of mental emotional disorders in risk communities through screening in the integrated care facility setting as well as its related factors. This research was a descriptive analytic study with a cross sectional method, which was conducted in January-April 2019. Subjects of this study were taken from 4 integrated care facilities in the area of Kasihan 2 Community Health Center, Bantul district, Special Region of Yogyakarta, Indonesia as many as 104 people. Inclusion criteria were 18-59 years old, cooperative, willing to participate in the study. Exclusion criteria: having serious physical illness or disability, comorbidity with substance abuse or other serious mental disorders. Screening using Self Reporting Questionnaire (SRQ) 20. The data was processed using a computer program, SPSS. Descriptive data were presented on categorical-based using distribution frequency of characteristics of the subjects and percentages of mental emotional disorders. Bivariate analysis to evaluate the correlation among characteristics factors of the subjects' and mental emotional disorders using chi-square test. Most subjects were in the age range of 41-50 years, female, unemployed and high school graduate. A total of 29 people (27.9%) subjects had mental emotional disorders. The most reported symptoms were easily feeling tired, namely 45 people (43.3%) and feeling worried, tense and anxious, namely 35 people (33.7%). There was 1 person who had suicide ideation. The factor associated with mental emotional disorders was the level of education (p value = 0.05). Mental emotional disorders were experienced by 27.9% of the subjects in this study with the most symptom was easily feeling tired. Screening of mental health disorders should be performed periodically in the community and primary care setting.

Keywords: Mental Emotional Disorders, Screening, SRQ, Community

ID Number: ABS-1201

Knowledge, Attitudes, and Practices of Cough Etiquette Regarding Patients with Pulmonary TBC in Lempake Health Center, Samarinda City, East Kalimantan Indonesia

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ABSTRACT

Healthcare workers play a very important role in the successful containment of infectious diseases such as Tuberculosis (TBC). TBC can spread rapidly to visitors, health care personnel in the health care settings after TBC is introduced by TBC patients. This study aimed to analyze the relationship of knowledge, attitude, and behavior about cough etiquette in patients with TBC in Puskesmas. The study design was a cross-sectional and study was conducted from November to December 2019. Sampling was done by purposive sampling from TB 03 register at Polyclinik DOTS at Public Health Center Lempake Samarinda included 95 respondents. Most TBC patients covered their mouth with their hands (56,2%) or did not cover at all (16,6%). 34% of TBC patients used a sleeve arm, elbow, or tissue as advice by Kemenkes. Visual prompt improved cough ethic behavior among TBC patients by gender. In the bivariate analysis, there was an association between knowledge of cough etiquette in Tuberculosis patients at Puskesmas Lempake ($p = 0,016$), attitude ($p = 0,014$), and the behavior ($p = 0.023$). Knowledge, attitudes, and behavior about cough etiquette has a relationship to patients with TB pulmonary at Public Health Center Samarinda.

Keywords: cough etiquette, tuberculosis

The Effect Of Covid-19's Corpse Burial On The Groundwater : A Literature Review

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ABSTRACT

Introduction: SARS-CoV-2 or Covid-19 is a threat to public health throughout the world and has significant impact. On March 12th, 2020, the World Health Organization (WHO) declared the SARS-CoV-2 outbreak as a global pandemic. Since the end of December 2019 until mid-July 2020, there have been a total of 13.6 million confirmed Covid-19 cases in the worldwide, with 585,000 fatalities. Based on S.I No. 146/1994 concerning Safety, Health, and Welfare Regulations at Work (Biological Agents), covid-19 is grouped into Hazard Group 4, ie organisms that cause severe disease in humans, have a high risk of spreading to the community and there is no prophylaxis or effective therapy. Covid-19 spreads from human to human, mainly through breathing (droplets or aerosols) or transmitted by touching the surface / object contaminated by the virus. Covid-19 corpse can also be a source of transmission, through holes or liquid from the corpse. So, the covid-19's corpse burial which is not in accordance with the covid's protocol, can spread the virus. Aim: The purpose of this paper is to determine whether the virus can spread through ground water contaminated by covid-19's corpse. Method: we conducted a literature review related to covid-19 and groundwater. Results: According to a literature study approach, the virus from the covid-19's corpse cannot contaminate the groundwater. Conclusion: The burial of covid-19's corpse according to the protocol, has no effect on groundwater.

Keywords: Covid 19, Corpse, Groundwater

ID Number: ABS-1164

**Measuring the Urban Self-Payers' WTP for the JKN-KIS
Health Insurance: A Choice-Based Conjoint Approach**

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ABSTRACT

In this research, we estimate the willingness to pay (WTP) of the urban self-payers for the Indonesian JKN-KIS health insurance plans. Unlike the employer-supported and the government-supported members, self-payers choose their insurance plan based on their preferences because they pay for it out of their own pocket. Instead of using the popular contingent valuation method, we use the choice-based conjoint which is considered the best method for measuring preferences. An online survey was conducted to collect choice data using randomly generated questionnaires which are designed such that the options available to each respondent are balanced, orthogonal, and have minimum overlap. Individual preferences, which are represented by individual utility values, are estimated using the Bayesian method assuming a mixed logit model with multivariate normal distribution. Individual choices are then predicted based on individual utilities using the randomized first choice simulation. The continuous and differentiable demand function for each plan is obtained by aggregating the choices across all respondents and interpolating the result using cubic splines. Based on the demand functions derived from the data of 228 respondents, it is estimated that under the current premium scheme, more than 95% of the urban self-payers will choose the first-class and the second-class plans with preference shares of 62.17% and 34.03%, respectively. By conducting sensitivity analysis, we also found that even by increasing the monthly premiums up to Rp250,000 for the first-class and Rp200,000 for the second class, the combined share of preference is still greater than 95%.

ID Number: ABS-1972

Farmers Knowledge about Pesticide Safety Management in Ponorogo

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ABSTRACT

Agricultures are one of the important economic support in Ponorogo. Along with this fact, the personal health of the farmers became an important concern to take care of. Agricultural activities are very closely related to the use of pesticides. Most of farmers in Ponorogo used anorganic pesticides to maintain their rice and horticultural field. Based on Andarini and Rosanti (2018), 36.7% of farmers in Ponorogo had a high risk of pesticide contamination. The effectiveness of pesticide safety management can be achieved along with good knowledgement of it. This study aimed to analyze farmers' knowledge about pesticide safety management.

The figure 2 showed that farmers habit on personal equipment and personal hygiene is still low. This could be harmful because the risk of pesticide in contamination in the blood increased. According to Rahman, et al (2015) and Sefa, et al (2015) pesticides can inhibit the enzyme cholinesterase which manifests disorders of the reproductive organs, skin, respiration and could be risk of cancer. Farmers carry out pesticide management only based on usual habits instead of pesticide safety management. According to Rijal JP, et al (2018) farmers' knowledge highly affect on the effectiveness of the application of pesticide safety management.

Keywords: farmers, knowledge, Pesticide Management

ID Number: ABS-2393

The Relationship of the Body Mass Index with the Quality of Life of Diabetes Melitus Type 2 in Primary Services

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ABSTRACT

Quality of life is one of the parameters for evaluating the current clinical output of diabetes mellitus patients. Research has been conducted to determine the relationship of BMI with blood sugar levels and quality of life and the factors associated with improving quality of life in DM patients in primary care. Method: This cross sectional study was conducted on 153 DM patients at Jetis I Health Center, Bantul. Inclusion criteria were: (i) Adult patients, both men and women aged 18 years or older, diagnosed with diabetes mellitus patients who were treated at the Jetis I Public health center (J1PHC) Bantul during the study period, and were willing to participate in the study. The exclusion criteria were DM patients with a diagnosis hearing loss, pregnancy, kidney disorders and patients with complications or a history of concomitant TB, HIV AIDS, heart failure, coronary heart disease, endocrine negligence (hypothyroidism or hyperthyroidism), chronic musculoskeletal disorders or mental disorders. Retrieval of primary data exposure to cigarette smoke, and quality of life is done through interviews. Secondary demographic data, history of illness, diagnosis, laboratory data and treatment history were taken from medical records. The mean test was performed using one-way ANOVA for ratio scale data. The Chi-square test was used to determine the relationship between BMI and the quality of life of DM patients.

The results showed that BMI, fasting blood sugar levels and quality of life of DM patients in the community were categorized as very good. Male gender, educated graduated elementary school, normal BMI, fasting blood sugar levels normal, obedient in undergoing anti-HR drug therapy and good perception of the disease have a greater chance to have a better quality of life. Age factors, the presence of comorbidities, cigarette exposure, physical activity and carbohydrate diets have not been shown to be associated with improvement in the quality of life of DM patients in Jetis I Public health center (J1PHC), Bantul DIY.

Based on the results of this study it can be concluded that the quality of life of DM patients in Jetis I Health Center is very good. Men, educated graduated from elementary school, normal BMI, and normal fasting sugar levels are associated with improved quality of life in DM patients in J1PHC.

Keywords: quality of life; Diabetes mellitus; body mass index; PHC;

ID Number: ABS-2432

Climate Variability and Incidence of COVID 19 in Jakarta

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ABSTRACT

Background: Since the first case was detected on March 3, 2020, the incidence of COVID 19 exponentially increased in Jakarta. Some theories claimed COVID 19 was interfered by climate variability. The aimed of this study is to search and predict correlation between daily incidences of COVID 19 with climate variability in Jakarta.

Method: A cross sectional study with total sampling daily case of COVID 19 in Jakarta from March 3rd to July 3rd, 2020. Climate variability are consisting of mean of daily temperature (MDT), mean of daily humidity (MDH), mean of daily rainfall (MDR), length of solar radiation (LSR), mean of daily wind velocity (MDW). Incidence of COVID 19 was taken by data in Department of Health (DoH), Jakarta, while climate variability were obtained by data in Geophysical and Meteorological Board (BMKG). Those data analyzed by Pearson Correlation and Linear Regression by SPSS version 23.

Result: The mean and standard deviation of incidence COVID 19 for five months were 98.32±56, MDT 29.1±0.77, MDH 77.9±3.84, MDR 51.3±453.2, LSR 5.03±2.5, MDW 1.7±0.51. Pearson correlation was found MDT p=0.048, r=0.17; MDH p=0.015, r= -0.219, MDR p=0.397, r=0.087, LSR p=0.857, r=0.016, MDW p=0.000, r=-0.362, respectively. However, Linear Regression in model two was obtained MDW (p=0.000, β = -0.474, CI 95%= -79.4 to -34.3) and MDT (p=0.000, β =0.37, CI 95%= 13.2 to 40.1).

Conclusion: Climate variability parameters such as MDT was positively correlated with incidence COVID 19, MDH and MDW were negatively associated with incidence of COVID 19. However, only MDT and MDW can predict incidence of COVID 19 in Jakarta.

Keywords: Climate variability, Incidence COVID 19, Jakarta

ID Number: ABS-2443

Relationship of Age, Body Mass Index, and Gravida in Pregnant Women with Preeclampsia in Muhammadiyah Hospital Surabaya

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ABSTRACT

Background/aim: Preeclampsia is one of the causes of increased maternal mortality. The rate in East Java Province reached 91.00 per 100,000 live births. The highest cause of maternal death in 2016 was preeclampsia/eclampsia, which was 30.90% or 165 people. This study aims to determine the relationship of age, body mass index (BMI), and gravida to pregnant women who have preeclampsia at Muhammadiyah Hospital in Surabaya.

Materials and Methods: This cross-sectional study uses total sampling obtained 210 pregnant women, as many as 105 preeclampsia pregnant women and 105 normal pregnant women. **Results:** The results of bivariate statistical tests found that age, BMI is a risk factor for the incidence of preeclampsia (p: 0.039; p: 0.002), and gravida has no relationship (p: 0.410). Differ with the multivariate test; there was an influence of age 36-45 years on the incidence of preeclampsia with a risk of 4.060 times compared to the age of 20-35 years, obese affected with a risk of 4.696 times compared to a healthy weight and gravida influencing with a risk of 2.099 times experiencing preeclampsia.

Conclusion: There is a relationship between age, BMI, and gravida in preeclampsia at Muhammadiyah Hospital in Surabaya.

Keywords: preeclampsia, pregnant women, age, BMI, gravida

ID Number: ABS-2448

The Influence of Health Education (Health Promotion) Breast Self-Examination (BSE) Against Behavior of BSE (Knowledge, Attitudes, and Action) Student of Madrasah Aliyah Ar-Raudlatul Ilmiyah Islamic Boarding School Kertosono in Early Detection of Breast Cancer

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ABSTRACT

Background: Breast Self-Examination (BSE) behavior in teenagers is essential for the early detection of breast cancer. BSE is a cheap and easy way to detect early. The incidence of breast cancer in Indonesia is significant, and the mortality rate cannot be separated due to a lack of awareness. BSE health education is one of the factors that can influence BSE behavior, which includes knowledge, attitudes, and actions. With the formation of BSE behavior, if health workers can immediately check found abnormalities or changes in the breast. Besides and can directly get therapy and, in the long term, can reduce the mortality rate of breast cancer.

Purpose: To determine the effect of health education on behavior (knowledge, attitudes, and actions) BSE students of Madrasah Aliyah Islamic Boarding School Ar-Raudlatul Ilmiyah Kertosono

Method: This research is a true-experimental study with the posttest-only control group design. Tools used to collect data knowledge, attitude, and action is a questionnaire. The analysis is only made at the posttest-only.

Result: The results of analysis in the knowledge, attitude and action questionnaire obtains a Pearson correlation > 0.444 , p-value < 0.05 , and Cronbach alpha value > 0.6 . Independent T-Test obtained significance values (p < 0.05) from each domain that is equal to 0.00 in the knowledge domain, 0.00 in the attitude domain, 0.03 in the action domain, and 0.00 in the total behavior score.

Conclusion: The questionnaire is valid and reliable. There is a significant influence of BSE health education on behavior, knowledge, attitudes, and actions **Keyword:** Health Education, BSE, Knowledge, Attitude, Action

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ID Number: ABS-2489

Personal Hygiene That Could Save Boarding Students from Scabies Disease

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ABSTRACT

Scabies transmission in boarding schools or pesantren is very high. Both direct and indirect scabies transmission depends on the personal hygiene behavior from boarding students. However, what kind of personal hygiene behaviors that need to be emphasized to prevent the transmission of scabies need to be analyzed further. This is a cross sectional study with 130 samples of students of the Madrasa Muallimin Muhammadiyah boarding school. Hygiene behavior was measured by a validated questionnaire. The incidence of scabies was measured by a history of having scabies in the last 3 months. Statistical analysis using Chi-square and Anova. There are 130 boarding students, 35 students have not had scabies, 47 students have had scabies in the last 3 months and 48 students have had scabies before the last 3 months. Personal hygiene is not related to the level of knowledge of students about scabies. Personal hygiene and scabies knowledge are not related to the incidence of scabies in the last 3 months. Analysis of the type of behavior with oneway anova showed that scabies in the last 3 months was associated with hand and nail hygiene behavior ($p = 0.011$), genital hygiene ($p = 0.047$) and towel hygiene (0.012). All three behaviors contributed the role of hygiene behavior in preventing the incidence of scabies in the last 3 months in the boarding school. Conclusion: the role of personal hygiene behavior to prevent transmission of scabies is determined by hand and nail hygiene behavior, genitalia, and towels.

Keywords—personal hygiene, scabies, boarding school.

ID Number: ABS-2515

Community Acceptance of Local Lethal Ovitrap

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ABSTRACT

Background: Ovitrap is one of tools that has functions in surveillance and reducing mosquito density index. The performance of ovitraps vary in size and its components. Kepanjen ovitrap is one of lethal ovitrap developed locally in Indonesia. It has been applied in an ecosystem approach research in controlling dengue vector.

Objective: This paper aims to describe the community acceptance of the local lethal ovitrap in order to improve tools and methods in an ecosystem approach.

Methods: This report is a part of an ecosystem approach research in controlling dengue vector. This is a longitudinal study in which elementary students and health cadres were asked to applied ovitrap for 4 months from November 2013 – Februari 2014 in their house and schools. The number of sample were 62 person were come from 5 villages in Malang City, East Java, Indonesia. During the application of ovitrap, observation was also conducted to obtain real condition. At the end of the application, elementary students/ parents and health cadres were asked to fulfil a questionnaire. Data were analysed descriptively.

Results: Sampling of *ovitrap*s in schools showed that 89,7% wrong installation, 2,7% rolled/ dirty, 0,5% not yet installed, 0,5% thrown away, 1,1% filter papers were not dyed, and 5,4% filter papers were broken/ lost. While *ovitrap*s installed and placed in health cadres/ students showed that 51,2% well installed, 4,9% rolled/ dirty, 24,4% installed, 7,3% thrown away, 12,2% filter papers were broken/ lost.

However based on the questionnaire, 85% of respondents support the installation of ovitrap and feel its benefits. Besides, not more than 60% of respondents have practiced that show they support the application of ovitrap.

Conclusion: Community acceptance of ovitrap is still poor in term of research activity. Therefore in involving public in the research of ovitrap the researchers need to train them and emphasized the importance of the research of ovitraps.

Keywords : lethal ovitrap, community, acceptance

ID Number: ABS-2525

The Relationship between Quality of Healthcare Service and Satisfaction of BPJS Patients at a Community Health Center

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ABSTRACT

Background: Health *Badan Penyelenggara Jaminan Sosial* (Health BPJS) is a legal entity established to organize a national health insurance since early 2014. Individuals and family members who wish to participate in BPJS health insurance should register through various primary healthcare facilities, such as a community health center (CHC) that is located in every district. Primary healthcare facilities have an obligation to provide healthcare services that are in accordance with the provisions and service quality standards. If the patient does not get the appropriate services, the patient has the right to terminate the work contract with the facility. Patients can choose another primary healthcare facility other than the facility where the patient is currently registered after a period of three months. The study aimed at analyzing the relationship between quality of healthcare services and satisfaction of BPJS patients at a community health center.

Methods: This was an analytic observational study with a cross sectional design. Ninety-two BPJS patient registered at Sruweng CHC were recruited through consecutive sampling. Quality of healthcare service was measured by previously validated service quality instrument, consisting of five dimensions, i.e. *reliability*, *assurance*, *tangibles*, *emphaty*, and *responsivenes*. Satisfaction level of BPJS patients was measured by previously validated public satisfaction instrument. The relationship was analyzed with correlation Spearman Rho (rs).

Results: The analysis showed that there was a significant relationship between quality of healthcare service and patient satisfaction (sig2- tailed), i.e. $r=0.801$ ($p=0.000$).

Conclusion: Maintaining good quality of healthcare service provision at a CHC will positively affect satisfaction of patients registered at the CHC. Thus, this will ensure BPJS patients to continuously register at the CHC they are currently registered at.

Keywords: Health BPJS, quality of healthcare service, patient satisfaction, community health center

ID Number: ABS-2531

Prevalence of Vitamin D Deficiency for Young Men in Indonesia

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ABSTRACT

Background: The prevalence of Vitamin D Deficiency in the world is high. Vitamin deficiency can have a negative effect on use. The purpose of this study was to determine the prevalence of Vitamin D Deficiency in Young Men in Indonesia. **Method:** This research is a cross-sectional study. Data subjects consisting of height, weight, physical activity, and lipid profile laboratory data, and vitamin D levels were recorded in the study. BMI is defined as body weight in kg divided by height in meters squared. Physical activity is determined to be enough activity for 150 minutes per week for moderate exercise and 75 minutes per week for strenuous exercise. Dyslipidemia is diagnosed as an abnormal lipid level of 3 criteria: LDL > = 140 mg / dL, HDL < 40 mg / dL, and Triglyceride > = 150 mg / dL. Determine vitamin using the ELISA method by measuring the activity of 25-Hydroxyvitamin D using serum samples of subjects. **Results:** A total of 60 young men attending 19-25 years attended the study. A total of 30 subjects (50%) had difficulty with obesity with an average BMI of 29.65 kg / m². A total of 38 subjects increased dyslipidemia with the highest proportion having low HDL (15%). A total of 39 (65%) subjects had sufficient physical activity. Proportion of vitamin D deficiency events was consumed by 26 (43.3%) subjects, while incidence of vitamin D insufficiency was experienced by 31 (51.7%) subjects. Statistical analysis showed there was no correlation between the occurrence of vitamin D deficiency with obesity, dyslipidemia, and physical activity ($X^2 = 0.778$ $p = 0.6779$; $X^2 = 1.8$ $p = 0.4065$; $X^2 = 0.087$ $p = 0.575$). **Conclusion:** The prevalence of vitamin D deficiency in young men is quite high and is not associated with the incidence of obesity, dyslipidemia, also physical activity.

Keywords—vitamin D, young men, obesity, dyslipidemia, physical activity

ID Number: ABS-2540

Correlation between Psychological Factor and Nutritional Status with Premenstrual Syndrome in Adolescents in Yogyakarta

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ABSTRACT

Background: Premenstrual syndrome is still a problem in young women. Premenstrual syndrome itself is thought to be caused by several factors including Nutritional Status (BMI), depression, anxiety and stress.

Objective: To examine the relationship between psychosocial factor and Nutritional Status with Premenstrual Syndrome in Adolescents in Yogyakarta.

Methods: This study was an observational analytic study with cross sectional design among 155 senior high school students in Yogyakarta. Premenstrual syndrome was measured by Shortened Premenstrual Assessment Form (SPAFA). Depression Anxiety Stress Score (DASS-21) was used to measure the psychosocial factors. Nutritional status was measured by body mass index by age and sex using CDC growth chart.

Result: There is relationship between PMS and depression score (0,011), anxiety score (0,003) and Stress (0,000). There is no relationship between nutritional status with PMS and psychological factors. **Conclusion:** Premenstrual syndrome is related to depression, anxiety and stress in adolescents.

Keywords: Premenstrual syndrome, adolescent, nutrition, psychosocial

ID Number: ABS-2541

Correlation of Body Mass Index and Abdominal Circumference towards Hypertension in Adolescent

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ABSTRACT

Hypertension is associated with the risk of cardiovascular disease, metabolic syndrome and central obesity. Hypertension that occurs in adolescence will continue into adulthood. This study aims to identify the incidence of hypertension in adolescents and its relationship with body mass index and abdominal circumference. A total of 133 female students and 87 male students at SMA Negeri 6 Tangerang Selatan Indonesia were selected using proportional stratified random sampling to be subjects in a study conducted in January three August 2018. Blood pressure variables are grouped into normal and prehypertension / hypertension. Body mass index is classified into overweight and not overweight, abdominal circumference is grouped into central obesity and not obesity. The relationship between body mass index and abdominal circumference with prehypertension / hypertension was determined by Chi Square test at a significance level of 0.05. The incidence of prehypertension / hypertension in adolescent girls in the study population was 8.3% and 13.8% in adolescent boys. prehypertension / hypertension associated with obesity based on BMI ($p < 0.05$; CI 20.650; 2.392-178.306) and abdominal circumference ($p < 0.05$; CI 14.000; 1.77 - 110.57) in adolescent boys, whereas in adolescent girls, prehypertension / hypertension is associated with obesity based on BMI ($p < 0.05$). Key Words: Prehypertension, hypertension, BMI, Central Obesity, adolescent.

ID Number: ABS-2543

Health Literacy among Patient with Stage 2 Hypertension: A Survey in Rural Yogyakarta

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ABSTRACT

Background: Stage 2 hypertension is a significant risk factor for cardiovascular events and needs to be treated adequately. Despite the importance of patients' health literacy in hypertension management, data from patients living in rural area are lacking.

Objective: This study aimed to measure health literacy level of elderly patients with stage 2 hypertension living in Dlingo sub district.

Methods: A cross sectional observational study was conducted in 3 rural villages. Participants (n=108) were members of *Posyandu lansia* who diagnosed with stage 2 hypertension at least 6 months prior this study commenced. The REALM-R (rapid estimate of adults literacy in medicine) questionnaire (range score 0 - 10) and 3 screening questions were used to assess the level of health literacy.

Results: All participants had a low level of formal education; none of them graduated from junior high school. Most of them (85%) were categorized as low-literate patients (score REALM-R ≤ 6). The average REALM-R score was 2.25 ± 3.30 ; score 0 was found in 64 patients (59%). One-fifth patients only felt confident to fulfill health-related forms (screening 1). Further, 77% patients perceived problems to understand written materials (screening 2) and 61% needed some assistances to read health information (screening 3).

Conclusion: Inadequate health literacy was commonly found among elderly patients with hypertension in Dlingo sub district. Tailored-intervention strategies to increase the understandability of health information, therefore, is preferable.

Keywords: health literacy; hypertension; rural; Posyandu lansia

ID Number: ABS-2597

**Factors of Islamic Outlook, Eating Habits According to Family, Educators,
and Adolescents with Disabilities are Overweight**

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ABSTRACT

Overweight is a significant contributor to the global burden on chronic illness and disability. The prevalence of overweight in people with disabilities, including adolescence, is increasing. Obesity in disabilities is associated with eating habits, including perceptions of Islam, and a lack of physical activity in people living with disabilities. The general objective of the study was to determine the factors of Islamic outlook, Islamic food etiquette according to family, educators, and overweight disabled youth. This research uses a mixed method. The results obtained that there is no limitation of activity in children, though there are some obstacles so that children experience obesity, namely food control that is not by the etiquette of eating in Islam. Another factor is the child's willingness and ability to carry out sports is still lacking. Teenagers need to get support from their environment so that they can live their daily life with enthusiasm. Teenagers need to be supported to have the ability to have a healthy lifestyle. The role of the environment has a significant impact on the child's condition, both physically and psychologically. Positive energy from the surrounding environment will affect children's knowledge, attitudes, and behavior. Growth and physical-psychological development of children will always proceed to digest from what is heard and seen.

Keywords: disability, eating habits; Islamic view; Teacher; Teenagers; Overweight

ID Number: ABS-2713

A Syndemic between *O.viverrini* and *Leptospira* spp and Association with Regional Disease Burden

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ABSTRACT

A recent report confirmed a strong association between *Opisthorchis viverrini* and *Leptospira interrogans* in Lawa wetland, Khon kaen province. Here, we expand the scope of study involving 400 participants from 10 villages across four provinces in Northeastern Thailand. Of 400 sera collected, 235 (58.7%) were seropositive for pathogenic leptospirosis by immunochromatography. There are compelling evidence people infected with opisthorchiasis tend to get infected with leptospirosis ($P < 0.001$). We found seropositivity for *L. interrogans* infection significantly increased with the intensity of *O. viverrini* infection. ($P < 0.001$). We found occupation factor (farmer or fisherman) and being male significantly contribute to disease burden with adjusted OR=2.30 (1.14 – 4.81 95%CI, P-value 0.02) and 2.02 (1.34–3.05 95%CI, p-value <0.001) respectively. This study provides evidence of a syndemic of opisthorchiasis and leptospirosis, particularly in Northeast Thailand.

ID Number: ABS-2714

Time Series Analysis of the Regional Impact to *O.viverrini* and *Leptospira Spp* syndemic in Thailand

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ABSTRACT

Leptospirosis and opisthorchiasis are major public health problems in Thailand. Time-series epidemiology of the diseases could increase the understanding and suggest potential prevention and control measures. Data on human leptospirosis cases from all 77 provinces in Thailand were collected based on the national surveillance criteria. In this study, we tried to investigate how regional differences influence disease outcomes, particularly the impact of opisthorchiasis endemic area (northeast region). We found strong evidence northeast region consistently has the highest burden of morbidity rate on leptospirosis but relatively low to fatality rate for ten years' duration. Interestingly, our prediction for the incoming five years gives compelling evidence of the paradox phenomenon link to the role of opisthorchiasis.

ID Number: ABS-2725

The Determinant of Diphtheria Outbreak in Cirebon City

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ABSTRACT

Background: Indonesia Ministry of Health reported 3,944 cases of Diphtheria that occurred between 2011 and 2017, and 142 of them died. One of the cities with the most cases of diphtheria is Cirebon. This study aims to determine the factors related to diphtheria outbreaks in Cirebon

Method: This observational study used a case-control design, with descriptive analytic types. The total samples in this study are 33 with 11 case groups and 22 control groups. The independent variables are age, nutritional status, immunization status, sex, and source of transmission. The sources of research data are medical records and questionnaires. The data are analyzed by univariate, bivariate, and multivariate analysis with $p = 0.05$

Results: Variables that had a significant relation to diphtheria are immunization status ($p = 0.009$), age (0.022) and source of transmission ($p = 0.033$). Meanwhile, nutritional status ($p = 0.721$) and sex ($p = 1,000$) are not related to diphtheria. The most influential variable is immunization status with OR 22,727. The factors that cause people not performing immunizations or having incomplete immunizations are low education, poor knowledge, poverty, misconceptions, and certain religious beliefs where immunization is not allowed **Conclusion:** The factors that related to Diphtheria incidence are immunization status (the most dominant factor), age, and source of transmission.

Keywords: Determinant, Diphtheria, Outbreak

ID Number: ABS-2732

Description of Satisfaction Level of Anti-DM Medicine in Patients of Diabetes Mellitus Type-2 in Primary Service

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7 ABSTRACT

Diabetes mellitus is a chronic disease and requires long-term routine treatment. Satisfaction with anti-DM drug therapy can affect the quality of life and adherence to therapy in diabetic patients. This study aims to determine the description of satisfaction with anti-DM drug therapy for type 2 diabetes mellitus patients in primary care. The design of this study was an observational study, cross sectional approach. This study took 109 subjects. Data is collected in a perspective and carried out by collecting information from patients through face-to-face interviews using a questionnaire. The questionnaire used was therapy satisfaction (TSQM questionnaire). Data analysis used Statistical Tests with the help of SPSS version 25. Patient socio-demographic data included gender, age, education, marriage status, comorbidities, dietary habits, exercise habits, smoking habits, and therapeutic satisfaction (TSQM) were presented descriptively. The results of calculations with the help of SPSS version 25 are TSQM mean effectiveness domain $61,583 \pm 11,598$, side effects domain $54,011 \pm 32,340$, comfort domain $66,883 \pm 8,805$, global satisfaction domain $55,715 \pm 11,274$. Based on the research data it is known that the level of global therapy satisfaction of DM patients in primary health facilities is sufficient, with the lowest therapeutic domain of satisfaction is the domain of side effects and the highest domain is the domain of satisfaction with comfort in the use of drug therapy. Based on the results of this study it can be concluded that the level of DM patient satisfaction with anti-DM drug therapy is sufficient and patients need to be educated about the possible emergence of side effects due to drug use.

Keywords : Diabetes Mellitus type 2; Therapy Satisfaction; TSQM; cross sectional; primary health care

ID Number: ABS-2745

Risk Factors of Severe Covid-19

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ABSTRACT

Background: Coronavirus disease -19 (Covid-19) is a new disease, firstly detected at 31 December 2019 in Wuhan, China. Nowadays, it has been spreading over the world and become pandemic, with more than 20 million people who suffered and more than 700,000 people were died. Case fatality rate is 3,7% worldwide. It is important to understand the risk factors of severe manifestation and death among Covid-19 patients, in order to make considerations for clinician in managing Covid-19 patients to prevent mortality and to make policy of Covid-19 prevention.

Objective: This literature review is aimed to determine the risk factors of developing severe Covid-19 manifestation and death.

Method: Literatures were collected from Google Scholar using keywords: risk factors of severe covid-19. We find abundant sources but we only used 20 literatures that most relevant to the objective of this study. We also use the phrase of risk factors of death of Covid-19, risk factors of ICU admission of Covid-19 and risk factors of respiratory failure in Covid-19.

Result: From the literatures, we find that there are three domain of risk factors of developing severe Covid-19, they are: epidemiologic data, clinical manifestations, and laboratory findings. The epidemiologic data that correlated with severe Covid-19 were: male sex, older age than 60 years, obesity (body mass index more than 30 kg/m²), smoking, one or more comorbidities like: diabetes mellitus, hypertension, cardiovascular disease, chronic kidney disease, cancer, chronic respiratory disease like severe asthma, chronic obstructive pulmonary disease, tuberculosis, cystic fibrosis and bronchiectasis, uncontrolled HIV and history of transplantation or using high dose corticosteroid, poverty and crowded living, certain occupation and pregnancy. Clinical manifestations that correlated with severe Covid-19 were fever (chills), dyspneu, respiratory rates more than 24/minute, heart rate more than 125 beats/minute, SpO₂ ≤93%, PaO₂ and FiO₂ < 300 mm Hg. Laboratory findings that correlated with severe Covid-19 were: lymphopenia or reduced in CD4 and CD8 level, or absolute lymphocyte count < 1000/μL, with increase of neutrophil to lymphocyte ratio (NLR), D dimer > 1000, increase fibrinogen, increase inflammatory factors such as LDH, CRP, Procalcitonin, Interleukin 6, elevated Creatinine Kinase and Troponin, elevated Transferrin and decrease of Albumin.

Conclusion: We can conclude that epidemiologic factor like male, older age, smoking, obesity and having one or more comorbidity like diabetes mellitus, hypertension, cardiovascular disease, chronic kidney disease, malignancy, chronic respiratory disease, uncontrolled HIV, using high dose corticosteroid, poor clinical manifestations at arrival and more than one abnormality of laboratory results were the risk factors of developing severe Covid-19.

Key Words: Risk Factors, Severe Covid-19, Epidemiologic Factor, Comorbidity, Clinical Manifestation, Laboratory Result

ID Number: ABS-2817

Study of Antihypertensive Herbal Medicine and Clinical Characteristics of Hypertension Patients in Rumah Riset Jamu Tawang Mangu

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Hypertension is a public health problem in Indonesia. In addition to using conventional medicine, the management of hypertension is often treated with medicinal herbs. Empirically and in preclinical laboratories, Indonesia has several types of herbs with antihypertensive indications, but clinically it needs scientific proof. This study aims to describe the use of antihypertensive medicinal plants and the clinical characteristics of patients in the Hortus Medicus Tawangmangu Herbal Research House (RRJ).

This research type is observational with cross sectional design. Data were collected retrospectively. The sample consisted of 105 hypertensive patients at RRJ Hortus Medicus for the period January-June 2016. Inclusion criteria: the study subjects were hypertensive patients without complications, aged ≥ 18 years, and recorded in medical records for at least 2x visits. The analysis was carried out descriptively. Data is presented in tables or graphs.

The results showed that the antihypertensive herbs used included *Apium graveolens* (celery), *Centella asiatica* (gotu kola), *Orthosiphon stamineus* (cat's whiskers), and *Imperata cylindrica* (alang-alang). Of the 72 prescriptions used, it was found that the success rate of therapy (controlled blood pressure) was 70.9% visit II. Most of the patients are women, adults under the age of 60 years, working as farmers and entrepreneurs. Based on the research results, it is known that antihypertensive herbs have the potential to be developed into adjuvant antihypertensive therapy in Indonesia.

Keywords: Hypertension, antihypertensive medicinal plants, Tawang mangu herbal research house; gotu kola; celery; cat's mustache; reeds; therapeutic effectiveness

ID Number: ABS-2819

The Effect of Brief Counseling on Knowledge, Compliance, and Sugar Blood Fasting

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ABSTRACT

Diabetes mellitus has a high prevalence which is influenced by several factors, namely lack of knowledge, patients not adhering to medication, and uncontrolled diet. The aim of this study was to determine the effect of brief counseling on medication adherence, level of knowledge and fasting blood sugar (GDS) in outpatients with type II diabetes mellitus at Puskesmas Jetis I Bantul with a cross section design with a sample of 75 patients. Collecting data were prospective and interviewed using a knowledge compliance questionnaire. In addition, the patient's medical record is used to determine the patient's fasting blood sugar levels and used pill count to determine on compliance. Data analysis using SPSS, descriptive test with chi square and a significant level of 0.05. From the test results on the effect of counseling on the patient's knowledge, the p value was 0.659 where $p > 0.05$, so there was no significant difference knowledge values in the counseling groups and control groups, but the counseling group had a higher average knowledge value than the control group. There was no significant effect of providing knowledge counseling between the control group and the treatment group. P value = 0.063, so there was no significant difference in the difference between the value of adherence in the counseling and control groups, but the counseling group had a higher average value of adherence than the control group.

ID Number: ABS-2864

Time-Driven Cost Based Activity Based Costing in Hospital Surgical Unit

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ABSTRACT

Surgical unit is one of the most concerns of financial management in the hospital. Surgery is one of the most common procedures in hospital, with the hospital's financial risk. Payment of surgery service fees by BPJS for hospitals was carried out using a case model -mix Indonesian Case Base Groups (INA-CBGs). INA CBGs rates for surgical services such as obstetric gynecology are on average lower than real hospital rates. It is necessary to think about a method of determining the cost of a surgery that is in accordance with the real conditions in a private hospital so that the hospital does not suffer losses. The research objective was to determine the method of calculating the unit cost of surgical procedure at PKU Muhammadiyah Bantul Hospital based on the Time driven Activity Based Costing method.

This research design uses qualitative research with a case study approach. This study used a purposive sampling technique, with the research samples being the financial department, Central Surgical Installation Supervisor, surgeon, obstetrician, sanitation / waste unit, cleaning service coordinator and linen supervisor. The collection was carried out through interviews, focus group discussions and observations. Interview result data will be confirmed from financial records and observations.

The research results will be processed and declared as unit cost based on the service value chain and service time as well as surgical procedure at PKU Bantul Hospital. The results of the research on the cost of care for benign prostatic hyperplasia using Time Driven Activity Based Costing (TD-ABC) show that there are variations in patient care unit cost depending on the type of value chain that each patient passes. Based on the results of previous studies, it is expected that the unit cost of surgical procedure using TD-ABC is more in line with reality. Based on the research results, it is expected that TD-ABC can determine the unit cost of surgical procedure according to the real conditions in PKU Muhammadiyah Bantul Hospital.

Key words: INA-CBG; TD-ABC; cost analysis; case study

ID Number: ABS-2868

Primary School Student Online Video Competition Model to Improve Hand Washing Ability 6 Steps to Prevent Upper Tract Infection

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ABSTRACT

The prevalence of upper tract infection / ARI in primary primary schools is 15% in 2019. The ARI disease factor causes the absence of students from school the most compared to other disease factors. One of the most important causes of ARI is the factor of hand hygiene, therefore the skill of washing hands using soap is the most important effort to reduce the prevalence of ARI in primary schools. The purpose of this study was to determine the effect of the online video competition model on elementary school students to improve the ability to wash hands in 6 steps. The research design was an experimental control group, the number of research subjects was 30 students for the treatment group and 30 students for the untreated group. The length of the study is 1 month. The results showed that students who took part in online competitions experienced a significant increase in knowledge, attitudes and behavior towards washing hands using soap. These results were compared with groups that did not use video competitions as an educational medium about the 6-step hand washing habit. The video competition improves the ability to do hand washing in 6 steps, namely by doing, not only seeing and listening.

ID Number: ABS-2869

The Level of Stress and Fear of COVID 19 Decrease Hospital Visits at Universitas Sebelas Maret Hospital

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ABSTRACT

Background: In the current COVID -19 pandemic, the number of hospital visits was greatly decreased. There was a decrease in the number of outpatient visits from 9911 patients in January to 5586 patients in May 2020 in UNS hospital. This study aims to know association the level of stress, hospital service quality and fear of COVID 19 with hospital visits at UNS Hospital

Research methods: The study was conducted at UNS Hospital in July 2020 using the questionnaire method. Research tools with hospital service quality questionnaire, stress level questionnaire, fear for COVID-19 scale. The patient group was divided into two, the on-time outpatient group which always met the control schedule and the lost of follow-up outpatient, which was a late control to the hospital. Statistical test with the Mann Whitney test, $p < 0,05$

Results: The COVID-19 fear score (14.8 + 6.89) and the stress level (13.95 + 6.1) were higher in the out of follow-up outpatients compared to on-time outpatients. While the hospital service quality scores were quite good in all study groups and were not significantly different in the two groups (mean 21.70 + 2.08). The results showed that the lost follow-up outpatients were associated with COVID-19 fear scores ($p = 0.001$) and stress levels ($p = 0.001$), and were not related to hospital quality service levels. **Conclusion:** The level of stress and fear of COVID 19 decrease hospital visits at UNS Hospital

Keyword : level of stress, fear of COVID 19, quality of hospital services, hospital visits, UNS Hospital

ID Number: ABS-2870

The Comorbid Factors and Effects on Incidence Covid-19

1

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ABSTRACT

The world is shocked by the new health crisis that threatens the world with the emergence and spread of the 2019 coronavirus novel (2019-nCoV / COVID-19). The virus originated in bats and was transmitted to humans via an unknown intermediate animal in Wuhan, Hubei province, China in December 2019. The disease is transmitted by droplets and the incubation period ranges from 2 to 14 days. Symptoms include fever, cough, sore throat, shortness of breath, fatigue, malaise. This disease is mild in most people; in some (usually the elderly and those with comorbidities), it may progress to pneumonia, acute respiratory distress syndrome (ARDS) and multi-organ dysfunction. Many people have no symptoms. The estimated case fatality rate is between 2 and 3%. This virus spreads faster than SARS-CoV and Middle East respiratory syndrome coronavirus (MERS-CoV), but has a lower mortality rate. The global impact of this new epidemic is uncertain. There is still much controversy surrounding this disease, including comorbid factors and their effects on the incidence and impact of COVID-19. Therefore, we conducted a study on comorbid COVID-19 studies

Keywords: COVID-19, Comorbit, Pneumonia

ID Number: ABS-3380

Reducing Maternal Mortality: A Qualitative Study of Health Workers' Expectations in Urban Area, Indonesia

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ABSTRACT

Maternal mortality is a sentinel event used globally to monitor maternal health and the overall quality of reproductive health care. Globally, maternal mortality is mostly due to direct causes; apparently, it is not limited by the setting or geographic region. Indonesia failed to achieve the MDGs target to maternal mortality. This study aims to explore health workers' expectations and stakeholders in maternal health services to reduce maternal mortality in urban areas. This is qualitative research through naturalistic conducted in Indonesia in one of the regencies, which is the urban area with the highest MMR in one province by 2019. Data is obtained in the form of pieces of information from Focus Group Discussions (FGDs). FGDs are conducted with stakeholders at the Health Service level (n=3), first-level health facilities, or public health center (n=3), and advanced health facilities or hospitals (n=7). Data analysis in this study uses software (Nvivo Release 1.0) to utilize transcripts in coding and categorizing. The expectations that emerged from health workers' perspectives in the field, namely an integrated system of collaboration between health facilities, affordability Hospital Comprehensive Emergency Obstetric Care (CEmOC) in action for maternal-neonatal referral urgency, and the skills of health workers as a golden opportunity. Health workers' expectations can improve the quality of maternal health services in urban areas, thereby reducing the MMR with a system of collaboration between health facilities, taffordability of maternal-neonatal emergency referral facilities, and the availability of Obstetricians who stand by.

Keywords: maternal mortality, emergency obstetric, health workers'

ID Number: ABS-3431

Exploring Diet Control and Physical Activity Practice of Housewives: A Case Study

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ABSTRACT

Background: There is a change in lifestyle caused by the era of globalization currently. This study aims to identify issues and perceptions concerning healthy food patterns and physical activity to control blood glucose in the housewife.

Material and methods: The design of this study used a qualitative method. This research was conducted by the community in Kotagede, Yogyakarta, Indonesia. The instrument used was a guideline depth interview. The respondents were 20 housewives, aged 26-65 years old. The in-depth interview was used to get answers about questions related to participants' physical activity and diet control, including barriers and their actions to control blood glucose.

Result: The majority of respondents did not do physical activity and control diet. Most of them only walking and cycling for at last 10 minutes every day.

Conclusion: Most housewives in the community still lack of diet control and physical activity practices due to lack of knowledge about healthy lifestyles.

Keyword: housewives, physical activity, diet control, blood glucose, healthy lifestyles

ID Number: ABS-3752

The Relationship Between Religious Knowledge And Hygiene And Healthy Living Behavior Towards Adolescents In Junior High School

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ABSTRACT

Introduction: Clean and Healthy Living Behavior is a concern for the government, can be seen from the placement of a Clean and Healthy Life Behavior as an indicator of health improvement achievements in the 2015-2030 Sustainable Development Goals (SDGs) program. In the SDGs, Clean and Healthy Living Behavior is a prevention strategy with a short-term impact on improving health at regional levels, namely school, family, and community (Ministry of Health 2015 on Indonesia Health Profile 2014). Clean and healthy living behavior in schools is an effort to empower students, teachers, and the school environment community to play an active role in realizing a healthy school. **Research Objectives:** This study aims to analyze the relationship between religious knowledge and hygiene and healthy living behavior in public junior high school. **Methods:** This study used a descriptive-analytic design, a cross-sectional approach with 220 respondents, and chi-square test analysis techniques.

Research Results: The results obtained from the analysis of p-value 0.000 that there is a relationship between religious knowledge and hygiene and healthy living habits of students at public junior high school. **Conclusion and Suggestion:** From the results of the study, there is a relationship between religious knowledge on students' hygiene and healthy living behavior. Recommended to further provide continuous and comprehensive health education to students and provide assistance to the development of their Clean and Healthy Living Behavior.

Keywords : Knowledge of Religion, Clean and Healthy behavior, Student

ID Number: ABS-3774

**Gambaran Asupan Energi dan Zat Gizi Mikro pada Balita Stunting Usia
6-36 bulan di Polewali Mandar**

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ABSTRACT

This study aims to analyze the food pattern, energy and nutrients intake on stunting children in the Wonomulyo of Polewali Mandar district. Methods: This study was analytic observational design. The total sample was 101 toddlers aged 6-36 months, divided into 78 stunted and 23 severely stunted group. That chosen by simple random sampling method from a total population of 141 children. Nutritional status was processed using WHO AntroPlus 2010, other data processing using Microsoft Excel 2007 and SPSS for windows. Food frequency and adequate levels intake of energy, protein, calcium, and iron nutrients are processed using Nutrisurvey Software. Data collection includes the measurement of the height of children under five with an infantometer, Lengthboard and microtois by researchers as well as Semi Quantitative Food Frequency Questionnaire (SQ-FFQ) interviews. Data were analyzed using the chi-square test. Results: Frequent food consumption from the type of carbohydrate source was 79.21%, the frequency sometimes from excessive animal protein food (48.52%), excessive plant protein food (41.58%), fruit (46.58%) drinks (43,6%) and snacks (47.52%), and the rare frequency of vegetables (44.54%). The average intake of energy (773,87 kcal), protein (18,19 gr), calcium (471,61 mg), and iron (8,15mg). There was no significant correlation between the means level of adequate energy nutrients, protein and iron and significant correlation energy ($p = 0.001$). Conclusion: There are no significant correlation between of protein, calcium and iron and energy was significant correlation with stunting. **Keywords:** Stunting, Food Pattern, energy and nutrients intake

TRACK 2

Bioscience
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ID Number: ABS-145

Protective effect of *Caesalpinia sappan* L. against H₂O₂-induced Oxidative Stress on HaCaT and its Formulation as Antioxidant Cream

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ABSTRACT

Reactive oxygen species cause oxidative stress, which could further lead to skin aging acceleration and skin inflammatory disorders development. Thus, developing cosmetics products containing potent antioxidants as its active ingredients are needed to encounter this problem. *Caesalpinia sappan* L., that demonstrated potent antioxidant activity in various *in vitro* scavenging free radical assays, is one of the medicinal plants which can be utilized as an active ingredient in cosmetics. The aim of the present study is to assess the antioxidant activity of *C. Sappan* in a biological system and formulate the extract into a cream. Powdered *C. Sappan* was macerated with 96% ethanol, and MTS assay was used to evaluate the extract for cytotoxic and antioxidant impact on the cell line of human keratinocytes (HaCaT). Several cream formulations containing a non-toxic concentration of sappan extract were made and evaluated. The cytotoxicity assay revealed that the extract had an IC₅₀ of $146.8 \pm 2.6 \mu\text{g/ml}$. The extract demonstrated a protective effect against H₂O₂-induced oxidative damage at a concentration of $15.625 \mu\text{g/mL}$, which was comparable to vitamin E. All the creams formulated were o/w type, homogeneous and had a white-pinkish color. The pH was ranging between 5.07 - 6.51 and the rheology was found to have shear-thinning properties. Upon the freeze-thaw cycle, these formulations were found to be stable as no significant changes were detected, except for the viscosity changes. This study shows that several cream formulas containing an effective concentration of *C. sappan* extract has been successfully developed.

ID Number: ABS-364

Hypoglycaemic and Hypolipidemic Effects of Red Rosella Flower Steeping on Diabetic Rats

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ABSTRACT

The prevalence and incidence of diabetes mellitus (DM) is still high. DM is a metabolic disease characterized by hyperglycemia and can occur dyslipidemia. One of the herbal plants that have antidiabetic and antidyplipidemic effects is red rosella flower. The aim for this study was to see the capacity hypoglycaemic and hypolipidemic of red rosella flower steeping on diabetic rats. This study was an experimental research with pre and post-test control design. The sample were male rats, divided into 2 groups, which consist of negative control group (alloxan 130 mg/kg) and treatment group (alloxan and rosella 2 ml/200g/day). The treatment was given for 14 days. Examination of levels of glucose, HDL, and LDL. The data is analysed by Paired T-test and Independent T- test. The results were decreasing in fasting blood glucose level and post prandial 2hour glucose level which was statistically significant in the treatment group at the beginning and end of the study ($p=0.0001$; $p=0.0001$), while the control group had no statistically significant difference ($p=0.391$; $p=0.313$). There was a statistically significant increase in HDL and triglyceride levels before and after treatment in the treatment group ($p=0.0001$; $p=0.0001$), while the control group had no statistically significant difference ($p = 0.06$; 0.0789). The conclusion of this study shows that the red rosella tea (*Hibiscus sabdariffa L.*) steeping can increase HDL levels and reduce triglyceride and blood glucose levels in diabetic rats.

Keywords: Blood Glucose, HDL, Triglycerides, Red Rosella (*Hibiscus sabdariffa L.*)

ID Number: ABS-368

Simple Nutrition Screening Tool (SNST) in Nutritional Assessment as a Risk Factor for Cardiovascular Disease in the Elderly

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ABSTRACT

Nutrition is needed for elderly people to maintain their quality of life. For elderly people who experience nutritional disorders are needed to cure and prevent complications in their illness. Nutrient intake is needed for healthy elderly people to maintain their quality of life. As for the elderly who are sick, nutrition is needed for the healing process and to prevent further complications. One of the biggest death factors in old age is Non-Communicable Disease which is cardiovascular disease. This research aims to determine the relationship between the simple Nutritional Screening Tool (SNST) in nutritional assessment with risk factors for cardiovascular disease in the elderly. This study used a cross-sectional method that was conducted for 3 months with a total of 51 respondents. Primary data collection is done by interviewing with a guide questionnaire. Secondary data retrieval is done to obtain anthropometric and biochemical data. The results showed that the results of measurements using the SNST obtained 92.20% results were not at risk of malnutrition and 7.80% were at risk of malnutrition. The Chi-Square Test between body mass index (BMI), blood pressure, LDL Cholesterol, HDL Cholesterol, blood sugar, smoking behavior, food intake, diet and eating frequency as a cardiovascular risk factor with the SNST no significant ($p > 0.05$). The conclusion shows that there is no relationship between SNST with body mass index (BMI), blood pressure, LDL Cholesterol, HDL Cholesterol, blood sugar, smoking behavior, food intake, diet and frequency of eating as cardiovascular risk factors at age continued.

Keywords: Simple Nutrition Screening Tool (SNST), Cardiovascular Risk Factors, Nutritional Assessment, Elderly People.

ID Number: ABS-369

Hydrogel Patch from Liquid Smoke and Vitamin K Collard Greens Extract for Wound Healing Applications

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ABSTRACT

Wound care by using wound dressing has been developed available in various physical forms including hydrogels with the highest global use reaching 43%. Nowadays, hydrogels are available at high cost and contain unsafe materials, so natural materials are needed to obtain antibacterial wound dressing. Hydrogels patch were developed from combination of natural and synthetic polymers. This study aims to analysis the hydrogel patch PVA/chitosan/starch infused liquid smoke and vitamin K from collard greens extract which are antibacterial effects and accelerates wound healing. This study was true experimental designs with post-test only control groups design. Collard greens were extracted by using the Direct Solvent Extraction II method. Membrane characteristic tests were SEM test. The antibacterial test method used was parallel streak on the growth of *Staphylococcus aureus*. The sample application was carried out on 28 male *Rattus norvegicus strain wistar* rats weighing 120-170 grams. They were given incisions 15x10 mm² in size and treated by a control group and 3 treatment groups. Wound dressing was applied once in two days and coated by non-woven plaster to keep it steady. The observation was done on day 4,7,11 and 14. The result revealed significant difference between the control group and the treatment 3 group with the value of $p < 0.05$ on the 4th and 7th day observation. In conclusion, hydrogel patch has a smooth and porous surface, can be inhibited the growth of *S. aureus*, and proven to completely heal animal wound in 11 days with increasing fibroblast calculation.

ID Number: ABS-501

Javanese Ginseng (*Talinum paniculatum* Gaertn.) Improves Hyperglycemia in Alloxan-Induced Diabetic Rats

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ABSTRACT

Javanese ginseng is Indonesian traditional herb, which contains saponin in its root. Saponin is known for its hypoglycemic effect since it induces regeneration of β cells of pancreatic islets. The present study was undertaken to examine hypoglycaemic effect of orally administered Java ginseng root infusion to the alloxan-induced diabetic rats. Twenty one male *Rattus Norvegicus* rats were divided into four groups: negative control (n = 3), positive control (alloxan only; n = 4), treatment (alloxan + Java ginseng root; n = 7) and placebo (alloxan + aquadest; n = 7). Alloxan was injected intraperitoneally with dose 80 mg/kgBW to induce hyperglycemia. Forty eight hours after diabetic models were established Java ginseng root or aquadest infusion was given orally with dose 1.8 mL/200 mgBW for 14 days to intervention or placebo group, respectively. Baseline and post intervention blood glucose were measured using colorimetric detection of glucose oxidase activity. One-way analysis of variance (ANOVA) was used to examine mean differences of blood glucose among groups. P-value < 0.05 was considered statistically significant. Baseline blood glucose did not significantly differ among groups (p = 0.57). Post intervention blood glucose differed significantly among groups (p = 0.0001). Tukey's post hoc test revealed that post intervention blood glucose of treatment group (116.75 ± 1.96 mg/dL) was significantly lower than of positive control group (220.93 ± 1.87 mg/dL; p = 0.0001) and of placebo group (220.99 ± 1.70 mg/dL; p = 0.0001), but significantly higher than of negative control group (80.46 ± 0.65 mg/dL; p = 0.0001). In conclusion, Javanese ginseng root infusion which orally given to alloxan-induced diabetic rats could improve hyperglycemia.

Keywords: Javanese ginseng, blood glucose, alloxan, diabetes mellitus, animal model

ID Number: ABS-704

Acid Fast Bacilli (AFB) Microscopic Conversion Depend On Anti-Tuberculosis Drugs Medication Adherence by Tuberculosis (TB) Patient

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ABSTRACT

Tuberculosis (TB) is the 9th leading cause of death in the world. This disease requires a long treatment so it requires patient adherence. One of treatment evaluation is Acid Fast Bacilli (AFB) microscopic examination. The purpose to determine an adherence of medication anti tuberculosis drugs by TB patient influence AFB microscopic conversion. Observational analytic research with a cross-sectional research design held on 35 outpatient TB patients at Rumah Sakit Paru Respira Yogyakarta and Balai Kesehatan Paru Masyarakat Kota Pekalongan. TB patient are 60% men, 26-45 years old are 40%. Tuberculosis diagnosis category are 88.6% new TB patients and 11.4% recurrent TB. An adherence of anti tuberculosis drugs medication are 74.3% obedient and 25.7% not obey. AFB Microscopic at an early treatment are 45.7 % +1, 22.9 % +2 and 31.4 % +3 , and at the end of the treatment AFB Microscopic are 82.9% negative and 17.1% +1. It means that there are 82.9% AFB microscopic conversion and 17.1% are not AFB microscopic conversion. Bivariate analysis between adherence of medication anti tuberculosis drugs medication by TB patient and AFB microscopic conversion obtained $p = 0.027$ ($p < 0.05$), there is a significant correlation between the adherence of anti tuberculosis drugs medication by TB patient with AFB microscopic conversion, which the risk of unconversion AFB microscopic are 9 times fold on the not obey TB patient (OR values of 9,600 (95% CI = 1,363-67,596)). Acid Fast Bacilli (AFB) microscopic conversion depend on Anti-Tuberculosis drugs medication adherence by TB Patient.

Keywords: tuberculosis, medication adherence, AFB microscopic conversion

ID Number: ABS-728

EFFICACY OF ETHANOL EXTRACT OF KERSEN LEAF (MUNTINGIA CALABURA L.) TO ENHANCE HDL LEVELS ON HYPERLIPIDEMIA RATS MODEL

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ABSTRACT

Background:

HDL (High Density Lipoprotein) is known as an anti-inflammatory agent to prevent atherosclerosis. High HDL levels will be inversely proportional to the incidence of atherosclerosis¹. Some dietary strategies are recommended to enhance HDL levels by consuming food sources that contain flavonoids and tannins², one of which is contained in kersen leaves (*Muntingia Calabura L.*).

Study aims:

This study aims to evaluate the effectiveness of the ethanol extract of kersen leaf (*Muntingia Calabura L.*) to enhance blood HDL levels in hypercholesterolemia rats model.

Methods:

This study was an experimental laboratory study with pre and posttest control group design. The subjects were 30 male wistar rats (*Rattus norvegicus*), aged 3-4 months with body weight approximately 200 grams. Hypercholesterolemia rats model were obtained by providing high-fat feed and PTU (Propylthiouracil). Rats divided into 5 groups with random sampling. The groups were negative control was not given any treatment, positive control was given simvastatin treatment, and (P1),(P2),(P3) group was given ethanol extract of kersen leaf 100, 200, and 400 mg/kgBW respectively. This study was held for 4 weeks. Blood HDL level was measured before and after therapy with cholesterol kit (CHOD-PAP reagen).

Keywords: Ethanol extract of Kersen Leaf, HDL blood level, hyperlipidemia rats mod

ID Number: ABS-816

Optimization of HPV DNA Isolation from Urine Samples of Cervical Cancer Patient at RSCM

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ABSTRACT

HPV screening is a secondary prevention of cervical cancer and has become a national program in various countries in the world. The use of urine samples for HPV DNA isolation is very promising as an easy non-invasive sampling method. The process of isolating HPV DNA from urine is a very important step in HPV screening activity. In this study optimization of HPV DNA isolation was carried out with several variations including initial urine volume, pellet volume, centrifugation speed, and storage time. The results show that the best method for isolating HPV DNA from urine samples without preservatives with a geneaid kit is 30 ml of initial urine, 200-500 μ l pellets, centrifugation speed of 13,000 rpm and should be isolated on day-1.

Keywords: HPV detection, cervical cancer, non-invasive sample, DNA isolation

ID Number: ABS-843

Subchronic Toxicity Test of Piperin in White Pepper (*Piper nigrum L*) on the Histology of Liver, Kidney and Lung in Mice (*Mus musculus L.*)

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ABSTRACT

Piperin is a compound that has many health benefits, but piperin has toxic effects that endanger the human body. This study aims to examine the toxic dose of subchronic piperin administration against the histological picture of the liver, kidneys and lungs of mice (*Mus musculus L.*). This type of research is a quasi-experimental with posttest only with control group design. The test material is a piperin compound from ethanol extract of white pepper (*Piper nigrum L.*). Thirty (30) male BALB / c mice were divided into 5 groups, namely the control group and 4 treatment groups of piperin dose 17.5; 35; 70 and 140 mg / kg body weight for 21 days. On the 22nd day, mice were sacrificed, then liver, kidney and lung organs were taken and preparations were made with HE staining technique. Data in the form of liver, kidney and lung damage scores. Data were analyzed by Anava one way followed by Tukey test. The results showed that the liver, kidney and lung histological damage scores had increased in line with the increase in Piperin dose. The liver damage score after giving Piperin doses of 35, 70 and 140 mg / kg BW showed significant differences with the control group. Kidney and lung damage scores showed no significant differences with the control group. It was concluded that the administration of Piperin dose 35; 70 and 140 mg/kg bw subchronically have toxic effects on the liver, but are non-toxic to the kidneys and lungs.

Keywords: piperine, toxicity test, liver, kidney, lungs

ID Number: ABS-868

Relationship Habit s Exercise to The Level of Emotional Intelligence

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ABSTRACT

Habits exercise development affected by some factors, such as personal experience, environment, culture, mass media, physical condition and personal emotion.

The purpose of this study was to determine the relationship of the level of emotional intelligence to habits exercise.

The implementation of this research was grouped into two groups: 10 people who regularly exercise and 10 people who never exercise. The two groups then measured the level of emotional intelligence. The two groups were each given emotional intelligence training with 4 stages. Each stage were consisted of 3 sessions. After the training was completed the two groups of emotional intelligence were measured.

Pair Sample Test results show that there is a significant increase in emotional intelligence ($p = 0.02$) in people accustomed to exercise. The results of the regression analysis show that there is significant effect of habits exercise on emotional intelligence ($p=0.005$). The results of the measurement of the level of intelligence indicate a significant relationship between exercise habits with emotional intelligence.

It can be concluded that exercise habits are related to the level of emotional intelligence

Keywords: emotional intelligence; habits exercise

ID Number: ABS-872

**EFFECT OF HYPERGLYCEMIA ON
OXIDATIVE STRESS AND OPTICAL NERVE DAMAGE IN RAT
MODEL OF DIABETIC
(Preliminary Study)**

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ABSTRACT

BACKGROUND

Hyperglycemia in Diabetes Mellitus will increase the activity of NADPH oxidase which further increase oxidative stress in the body. and at an advanced stage lead to apoptosis and cause damage to the optic nerve. The purpose of this study to determine the effect of hyperglycemia on MDA levels as a predictor of oxidative stress and damage to the optic nerve in the rat model of diabetic.

METHOD

This is the experimental study using male Wistar rats, 8-10 weeks old, body weight 200-250 grams. Diabetic induction using STZ (streptozocin) injection 45 mg / kg BW and NA (Nicotinamid) 110 mg / kg BW. The samples were divided 4 groups with each 3 rats. There are the control group (K) and induction groups with observations on the 14th day (P1), 21st day (P2) and 28th day (P3) The parameters measured were Blood Glucose Level, MDA level and histopathology of optic nerve damage. Data analysis using correlation with SPSS.

RESULTS

The results of this study in the control group showed normal condition On the observation day 14 and day 21 began an increase of MDA and optic nerve damage with increasing Blood Glucose Level. Significant increase in MDA levels and histopathological changes in the optic nerve occurred on the 28th day. There is a significant correlation between hyperglycemia with MDA level and the severity of damage to the optic nerve.

CONCLUSION

Hyperglycemia causes increased oxidative stress and optic nerve damage

Keywords: hyperglycemia, oxidative stress, MDA, optic nerve damage

ID Number: ABS-918

The Influence of Soybean Supplement Toward Glucagon Like Peptide-1 Gene Expression in Type 2 Diabetes Mellitus

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ABSTRACT

Objective. Soybean protein contains the ingredient of flavonoid, primarily genistein and daidzein. Genistein has an effect increase Glucagon Like Peptide-1 (GLP-1) blood level. The process increasing of GLP-1 may be promoted by release from L-cell or rise of gene expression either. The effect of GLP-1 gene expression on soybean usage not yet investigate. This study aims to see the impact of soybean supplement on GLP-1 gene expression.

Method. The study design uses randomized controlled open clinical trials to differentiate soybean supplement groups compare with placebo. Seventy-two subjects of Type 2 Diabetes Mellitus (T2DM) patient was given a soybean supplement or placebo at 7-8 a clock in the fasting condition. Officers conduct blood sampling before and 2 hours after the treatment of soybean supplements. Each blood sample keeps in a cold box after removal from the patient immediately continued storage at -20^o C. Real-Time PCR running to investigate GLP-1 gene expression after blood sample enough.

Result. The result of this study indicates that the normalized expression value of the soybean supplementation group vs. placebo after treatment was (2.3±0.8 vs. 2.1±0.4) times the expression compared with previous. The differentiation of GLP-1 gene expression of soybean supplement group vs. placebo statistically not significant.

Conclusion. The result of this study can not give robust evidence about the effect of soybean supplement to increase GLP-1 gene expression; it was necessary to study over again more carefully to the result of the study to acquire more convincing evidence.

Keywords: soybean supplement, GLP-1, gene expression, type 2 Diabetes Mellitus

ID Number: ABS-936

**THE EFFECTIVENESS OF ILER LEAF
(*Plectranthus scutellarioides* [L.] R.Br. folium)
ETHANOL EXTRACT OINTMENT APPLICATION TO HEALING PROCESS
(DIAMETER) OF BURN INJURY (*Vulnuscumbutio*) GRADE IA
ON WHITE MOUSE (*Rattusnorvegicus*) WISTAR STRAIN.**

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ABSTRACT

Background: Burns is the occurrence of tissue damage or loss due to contact with heat sources, which often occur in everyday life, specifically IA-degree burns. There is a natural ingredient that is fast and easy to get and also grows around us that could be an alternative medicine namely iler plant (*Plectranthus scutellarioides* [L.] R.Br.folium). The contents of iler leaf extract (*Plectranthus scutellarioides* [L.] R. Br. folium) such as the essential oils, flavonoids, and tannins could be used as wound medicine.

Objective: To discover the effects of iler leaf (*Plectranthus scutellarioides* [L.] R.Br. folium) ethanol extract ointment application on the healing process (diameter) of burn injury (*Vulnuscumbutio*) grade IA on white mouse (*Rattusnorvegicus*) wistar strain.

Method: This research is an experimental study with a cohort prospective design. The samples used were 30 white mice (*Rattusnorvegicus*) wistar strain which divided into 5 groups, the intervention group (2.5%, 5%, and 10% concentration), positive control group, and negative control group. Sibro ointments were given to the positive control group, the negative control group was given a solution of NaCl 0.9%, and the intervention group was given the iler leaf ethanol extract ointment (*Plectranthus scutellarioides* [L.] R.Br.folium) with 2.5%, 5%, and 10% concentrations. Measurements were done every two days for 21 days.

Results: Data analysis using the Friedman analysis test obtained a significance value < 0.001, this shows that the data is significant.

Conclusion: There is an effect of iler leaf extract ointment application (*Plectranthus scutellarioides* [L.] R.Br.folium) with concentrations of 2.5%, 5%, and 10% in the healing process of grade IA burns.

Keywords: iler leaf ethanol extract ointment, burn injury grade IA, wound healing

ID Number: ABS-946

THE CORRELATION BETWEEN COFFEE CONSUMPTION AND DRY EYES SYNDROME

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ABSTRACT

Dry eye is a multifactorial disease that related with the condition of tears and ocular surfaces that produce symptoms of discomfort, impaired vision, and impaired tear-film stability (tear layer). Many factors can cause dry eye and one of them is coffee. Coffee is known to decrease secretion of the tear film through the mechanism of releasing noradrenalin, that can stimulate sympathetic nervous system on the eyes. The purpose of this study to learn about the effect of coffee consumption to dry eye syndrome.

METHOD

This was observational analytic study with cross sectional method involving 60 subjects with ages between 40-49 years. In this study, the subjects fill the questionnaire and the secretion of the tear film was measured by Schirmer Test II. The data were analyzed by SPSS 16.0 using Chi-Square test to find out about the effect of coffee consumption to dry eye syndrome.

RESULTS

The subjects in this study are mostly in the ages between 40-49 years old (31,7%). There are 30 (50%) subjects who consume pure coffee, 27 (45%) subjects who consume mixed coffee and 3 (5%) subjects who consume both of them. The result of Chi-Square test obtained that there is no correlation between coffee consumption with dry eye syndrome with the p value = 0,067.

CONCLUSION

There is no correlation between coffee consumption with dry eye syndrome.

Keywords: Dry Eye Syndrome, Coffee, Schirmer Test II.

ID Number: ABS-1014

The Effect of *Phoenix dactylifera* Pollen on Histology Liver of *Rattus norvegicus* Exposed to Air Freshener

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ABSTRACT

Air freshener contains formaldehyde that has toxic effects on the liver. The damage can be reduced use antioxidants. Date palm pollen contains flavonoids and phytochemicals that are known to have hepatoprotective effects. ¹² research aimed was to assess the effectiveness of date palm pollen on liver histology due to exposure of air freshener. A quasi-experimental study with a post-test only controls group design. Thirtytwo male rats (*Rattus norvegicus*) divided into eight groups, the control group (C); exposed air freshener 4 hours/day (P); given date palm pollen with a dose of 120 mg/kg BW, 240 mg/kg BW, and 360 mg/kg BW (K1, K2, K3); and exposed to air freshener 4 hours/day and given date palm pollen with a dose of 120 mg/kg BW, 240 mg/kg BW, and 360 mg/kg BW (PK1, PK2, PK3). The treatment of the subject given for 30 days. The liver histological damage assessed use Manja Roenigk's scoring. Data analysis used statistical tests *One Way ANOVA* and *post hoc Duncan*. Exposure to date palm pollen has a positive effect on reducing liver histology damage scores in K2, K3, PK1, PK2, and PK3 groups, indicated by the absence of significant differences with C group. Group K1 had a score approach P group that significantly different from the C group.

Keywords: air freshener, *Phoenix dactylifera*, liver histology

ID Number: ABS-1016

Hypoglycemic effect of the Suweg Flour (*Amorphophallus campanulatus*) in Diabetic Rats (*Rattus Novergicus*) Induced by Streptozotocin

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ABSTRACT

Background: Diabetes mellitus (DM) is a chronic non-communicable disease that can cause various complications. Food intake is a key factor in managing DM. Suweg (*Amorphophallus campanulatus*) is a food with a low glycemic index that contains phenolic and flavonoid antioxidants, and glucomannan.

Objective: This study aims to determine the hypoglycemic effect of the suweg flour (*Amorphophallus campanulatus*).

Method: This experimental study using 25 male white rats wistar strains (*Rattus Novergicus*) was divided into five groups. The groups are normal (P1), positif control (P2), standart (P3), treatment groups with suweg flour 1.25 g/day (P4), and treatment groups with suweg flour 2.50 g/day (P5). The data were gained by measuring the level of glucose before and after receiving the suweg flour. The data were analyzed by paired sample t-test.

Results: This research showed a significant correlation between suweg flour and glucose levels ($p = 0.000$). A significant correlation was discovered in all treatment groups (P4 and P5).

Conclusion: It can be concluded that the administration of suweg flour (*Amorphophallus campanulatus*) have a hypoglycemic activity ($p < 0.05$).

Keywords— Diabetes Mellitus, Suweg (*Amorphallus campanulus*), hypoglycemic

ID Number: ABS-1032

Potential of Curcumin as Endometriosis Therapy Agent

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ABSTRACT

Endometriosis is a progressive disease of the female reproductive system with a high recurrence rate, the cause is still unclear. The two main clinical symptoms of endometriosis are intolerable pelvic pain and sub-fertility or infertility, which greatly affect the quality of life in women. Immune system, inflammatory and hormonal factor are known to be associated with the development and progression of endometriosis. Pro-inflammatory cytokines, growth factors, angiogenic factors, and molecules' adhesion such as TNF- α , IL-6, IL-8, TGF- β , and VEGF have been shown as inducers of implantation, proliferation, and neovascularization of endometrioic lesions. Non-steroidal anti-inflammatory drugs, GnRH analogues, aromatase inhibitors, progestins, estrogen- progestin combinations, and selective progesterone receptor modulators are a type of medical therapy that is often given. Diet is a risk factor of endometriosis which has the potential to be modified. Dietary and phytochemical components are a form of preventive and even therapeutic agents in endometriosis. Curcuma has been used long time ago in traditional medicine for various women's diseases such as gynecological problems and menstrual difficulties. Curcumahas more than 300 biologically active components such as polyphenols, sesquiterpenes, diterpenes, triterpenoids, sterols, and alkaloids. Curcumin has been shown to have strong anti- inflammatory, anti-oxidant, anti-angiogenic, anti-mutagenic and anti-metastatic properties. The nature of curcumin hormonal regulation has been widely agreed upon. This literature review discusses the potential of curcumin as one of the phytopharmaca for endomteriosis.

Keywords: endometriosis, curcumin, anti-inflammatory, anti-oxidant

ID Number: ABS-1067

The Correlation between Body Composition with Heart Rate Recovery towards Male Medical Student in Universitas Muhammadiyah Yogyakarta

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ABSTRACT

Background: The prevalence of cardiovascular disease and obesity is quite high in Indonesia. Medical students must always be healthy in carrying out the educational process and later, when working as a doctor. Body composition measurements can be used as parameters for early detection of cardiovascular risk. HRR (Heart Rate Recovery) is one of the predictors for mortality associated with the risk of cardiovascular disease. **Objective:** To determine the correlation between body composition and HRR in male medical study program students. **Methods:** This study is an analytic correlation study. The subjects were 83 male students. The parameters measured in body composition are body mass index, waist circumference, body fat percentage, and waist-height ratio. The HRR data measured after the Kasch Step Test. HRR used is HRR 1 minute (HRR1min). The Spearman correlation test used to find a correlation between body composition and HRR. **Results:** All body compositions were inversely correlated with HRR1min and showed a statistically significant relationship ($p < 0.05$). Waist circumference and body fat percentage are weakly correlated with HRR. Body mass index and waist-height ratio are moderately correlated with HRR. **Conclusion:** There is a correlation between every aspect of body composition with HRR in male medical students. Components of body composition that are considered to have a significant correlation are body mass index and waist to height ratio.

Keywords: body mass index, waist circumference, body fat percentage, waist to height ratio, heart rate recovery

ID Number: ABS-1069

Risk Factors Related to Vitamin D3 Levels in Children with Cerebral Palsy

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ABSTRACT

Background: Vitamin D deficiency is thought to be related to problems in obesity, insulin resistance, type 2 diabetes mellitus, cardiovascular disease and so on. The important role of vitamin D deficiency is to encourage research on various aspects, but data in Indonesia are still very limited. The incidence of vitamin D deficiency in various countries is reported to vary between 40% -52.4%. Vitamin D deficiency can occur due to lack of food intake, impaired absorption of vitamin D in the gastrointestinal tract or lack of ultraviolet exposure from sunlight. Lack of sun exposure can occur in children with disabilities, such as children with cerebral palsy or other disabilities. This study aimed to explore the risk factors associated with vitamin D deficiency in children with cerebral palsy. **Method:** Observational research was carried out using a cross-sectional approach. Subjects with cerebral palsy, aged 0-17 years and healthy measured serum vitamin D levels. Vitamin D status was classified as sufficient (normal, if serum vitamin D levels are 20-100ng/ml, insufficient if serum vitamin D levels are 15-20ng/ml) and deficiency if serum vitamin D levels are <15ng/ml, severe deficiencies of vitamin D levels <5ng/ml. All subjects studied risk factors thought to be related to vitamin D status, namely sun exposure and a history of taking vitamin D supplements, and a history of anti-epileptic medication. **Results:** The study involved 39 children with cerebral palsy, 20 boys and 19 girls. Fifteen subjects under the age of five years and 24 others aged five years to 17 years. Vitamin D deficiency was found in 13 subjects (33.3%). Nutritional status, history of sun exposure, history of consumption of vitamin D supplements were not proven to be associated with vitamin D deficiency. History of long-term anti-epilepsy treatment tended to increase the incidence of vitamin D deficiency, with a prevalence ratio of 1.42, but was not statistically significant. **Conclusion:** History of taking Anti-epileptic drugs (AEDs), not taking vitamin D supplements, lack of sun exposure and nutritional status are not factors associated with the occurrence of vitamin D deficiency in children with cerebral palsy.

Keyword: Cerebral Palsy, Risk Factors, Vitamin D3 deficiency

ID Number: ABS-1084

TNF- α Levels Response to the Onset and Duration of TNF- α Levels Response to the Onset And Duration of Prenatal Ischemic Hypoxia

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ABSTRACT

Prenatal ischemic hypoxia can increase mortality and morbidity. Prenatal ischemic hypoxia can affect the immune system. One form of immune response is tumor necrosis factor- α (TNF- α) levels. The cellular mechanism of immune response abnormalities due to prenatal due to hypoxia is unclear. 11-17day old fetus is a sensitive period of neural development. Brain ischemia will cause cell dysfunction and can even affect IL-1 β and TNF- α levels. How is TNF- α levels due to prenatal ischemic hypoxia in the fetus clear. The purpose of this study was to examine the effect of the onset and duration of prenatal ischemic hypoxia on TNF- α levels due to prenatal ischemic hypoxia. An experimental study with a post-test design control design. Thirty *Rattus norvegicus* induced prenatal hypoxic hypoxia (embryos aged 7, 12 and 17 days). Independent variable was prenatal ischemic hypoxic. The dependent variable was TNF- α level. TNF- α was measured using the ELISA technique. The TNF- α analyzed using ANOVA. The limit of significance was set at $p < 0.05$. The TNF- α and HIF1- α were increased. The conclusion shows that the TNF- α increased in prenatal ischemic hypoxic.

Keywords: hypoxia, ischemic, TNF- α , prenatal

ID Number: ABS-1086

The Correlation Between Uric Acid and HbA1c with NLR Values in DM Type 2 Patients

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ABSTRACT

Background: World Health Organization (WHO) reminded that the prevalence of diabetes in Indonesia has the potential to increase dramatically from 8.4 million people in 2000 to 21.3 million sufferers in 2030. NLR increases with increasing severity of glucose intolerance and is found to be positively correlated with insulin resistance which means that in patients with diabetes mellitus an inflammatory response occurs. hyperinsulinemia occurs in elevated serum uric acid levels because insulin plays a role in increasing uric acid reabsorption in the proximal tubule of the kidney. The higher the HbA1c level, the higher the risk of complications, and vice versa. **This study aim** to determine the relationship between uric acid levels and HbA1C with NLR values in patients with type 2 diabetes mellitus. **Method:** This type of research is observational analytic with cross sectional approach. The population of this study were all patients diagnosed with type 2 diabetes based on medical records from September 2015 to August 2017 at PKU Muhammadiyah Hospital Yogyakarta and a sample of 48 people. **Results:** Statistical test between uric acid levels with NLR shows the results of $p = 0.014$, it can be interpreted that there is a relationship between uric acid levels with NLR. Value $r = 0.354$, shows a positive correlation with weak correlation strength. A positive correlation means that the higher the uric acid level, the higher the NLR value and vice versa. The results of the analysis of the relationship between HbA1c levels with NLR results $p = 0.010$ and it means that there is a relationship between HbA1c levels and NLR levels. Value of $r = 0.366$, also shows positive correlation with weak correlation strength. **Conclusion:** There is a relationship between uric acid levels and HbA1c with NLR in patients with type 2 diabetes mellitus. These results can be a benchmark in providing appropriate treatment or intervention in patients with type 2 diabetes mellitus.

Keyword: Diabetes Mellitus, HbA1c, NLR, Uric Acid

ID Number: ABS-1456

Reducing Heavy Metals Content of Marine Biota by Yeast Consortium

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ABSTRACT

Marine biota such as green mussel, blood cockle, and giant mangrove crab are one of the food sources that are often consumed by the people but become the target of heavy metal accumulation due to increasing environmental pollution such as in Jakarta Bay. Biological activity using microorganisms is a promising alternative method to reduce heavy metal contamination. This research aims to analyze the content of heavy metals in the waters of the Jakarta Bay, to determine the heavy metals content in green mussel, blood cockle, and giant mangrove crab from this waters, and to find the best yeast consortium of isolates ES9.3, ES9.4, ES10.2 in reducing heavy metals content in those marine biota. The method used is a completely factorial randomized design with 11 levels of variation. Heavy metals content were analyzed using atomic absorption spectrophotometers. The results showed that the sample of Jakarta Bay waters, green mussel, blood cockle, and giant mangrove crab containing Fe, Zn, Mg, Cd, Co, Cr, Cu, Hg, and Pb were still below the threshold. The best consortia in reducing Fe and Zn were isolates ES9.3: ES9.4: ES10.2 with the ratio of 1: 1: 1 ratio, while for Mg is the consortium of isolates ES9.3: ES10.2 with the ratio of 1: 2 by an average reduction of 91.21% and 98.34%, respectively.

Keywords: Consortium, green mussel, blood cockle, giant mangrove crab, yeast

ID Number: ABS-1457

***Cupriavidus* sp. IrC4 as a Heavy Metals Bioaccumulator**

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ABSTRACT

Heavy metal pollution is a serious environmental problem because of its presence in nature endanger humans, animals, and plants. Bioremediation of heavy metals using bacteria is an effective method for removing heavy metals because some bacteria involve intrinsic ability such as bioaccumulation. *Cupriavidus* sp. IrC4 is an indigenous bacteria isolated from industrial waste containing heavy metals. This study aims to test the resistance of *Cupriavidus* sp. IrC4 in a medium containing cadmium, mercury, lead, copper, and its ability to accumulate heavy metal. Bacterial resistance was observed by growing bacteria on a medium containing various concentrations of cadmium, mercury, lead, and copper. The ability to accumulate heavy metals was measured using atomic absorption spectrophotometer. From the results, *Cupriavidus* sp. IrC4 could grow in solid medium containing 5 mM cadmium, 13 mM lead, and 4 mM mercury, also in 0.5 mM the mixture of these heavy metals. Bacteria could accumulate cadmium and lead by 5.8 mg and 254.4 mg heavy metals per gram of dry cell weight, respectively. In conclusion, *Cupriavidus* sp. Ir C4 is a promising bacterium to be used as a heavy metal bioremediation agent because of its resistance to heavy metals by developing resistance mechanisms through bioaccumulation.

Keywords—Accumulation, *Cupriavidus* sp. IrC4, growth, heavy metals, resistant.

ID Number: ABS-1505

Effect of Calcium Supplement With Vitamin D on Bone Mineral Density to Prevent Stress Fracture

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ABSTRACT

Background: Stress fracture is a fracture that occurs in the repetition period, when the load is given during exercise without adequate rest. One of the factors in stress fractures is bone density in individuals. The incidence of stress fracture in the military population can be estimated at between 4 - 7% in male sex. In 2016 at the Selopamioro Yogyakarta State Police School there were 9 stress fracture events from 239 students, this incidence increased by around 80% from the previous year, which was as many as 5 events.

Objective : To know low bone density can increase the incidence of stress fractures in the Selopamioro Yogyakarta State Police School and to find out the bone density difference with calcium supplementation with vitamin D.

Methods : This research method is quantitative research with observational analytic research method with cross sectional approach on 36 students of Selopamioro Yogyakarta State Police School consist of 18 students in class 2016 and 18 students in class 2017. Data were collected from student medical record data. Data were analyzed using Fisher's test to see the difference in low bone density rates with the incidence of stress fracture and using a paired sample t-test to see the difference in bone density rates with calcium supplementation with vitamin D.

Results : There is a difference between low bone mineral density and an increase in the incidence of stress fractures but it is not statistically significant ($p > 0.05$). Student bone density after calcium supplementation with vitamin D, the osteoporosis category became osteopenia by 3 (75%) and osteoporosis became normal by 1 (25%). The results of the number of students with osteopenia to normal is 3 (25%). There are differences in bone density rates with calcium supplementation with vitamin D ($p < 0.05$).

Conclusion : Stress fractures in osteopenia are greater than the number of stress fractures in normal people. Providing calcium supplements with vitamin D increases bone density and reduces the incidence of stress fractures compared to students without calcium supplements with vitamin D.

Keywords— bone mineral density; stress fracture; calcium

ID Number: ABS-1830

Expression of MicroRNA-155 in Hepatitis B Virus-related Hepatocellular Carcinoma

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ABSTRACT

Hepatitis B virus (HBV) infection is a global health problem and a major risk factor for hepatocellular carcinoma (HCC). MicroRNAs (miRNAs) consist of a small non-coding RNAs that regulate gene expression at the posttranslational level, thus participating in fundamental biological processes, including cell proliferation, differentiation, and apoptosis. MicroRNA-155 is known as an oncogene in some cancer cells and has a relationship with the severity of cancer cells. Here, we investigate the level of microRNA-155 expression in hepatocellular carcinoma patients associated with HBV infection. It was found that the expression of microRNA-155 in the blood plasma of HBV-related HCC patients was higher and up-regulated by 2.33-fold compared in the blood plasma of HCC patients without HBV infection. These results suggest that microRNA-155 may have a major regulatory role in hepatocarcinogenesis associated with hepatitis B infection and potentially be a prognostic marker for HBV patients developing HCC.

Keywords. MicroRNA- 155, HBV infection, Hepatocellular carcinoma

ID Number: ABS-1898

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**Ketogenic Diet Slows Down Weight Gain in Juvenile *Mus musculus*
Induced with Benzopyrene**

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ABSTRACT

The ketogenic diet (KD) has recently been used as a cancer nonpharmacological therapy that also slows weight gain. Benzopyrene (BZP) is a food contaminant that has been widely known to be a causative agent for several types of cancer. This study aims to analyze the ketogenic diet which slows down weight gain in juvenile *Mus musculus* induced with BZP. This is a true experimental study with a post-test only control group design that uses 36 female mice (*Mus musculus*), 6-8 weeks old, 15-25 grams. Mice were divided into six groups randomly, namely K1 (negative control), K2 (positive control), P1 (ketogenic diet 1), P2 (ketogenic diet 2), P3 (ketogenic diet 3) and P4 (ketogenic diet 4). Mice were induced with BZP subcutaneously in the right breast at a dose of 0.3mg/20gBB/day for 14 days. The ketogenic diet is carried out for 28 days. Data analysis techniques used the ANOVA and post hoc LSD test using SPSS. The ketogenic diet induced slower weight gain ($p=0.000$), increased ketone plasma levels ($p=0.000$) and decreased blood glucose levels ($p=0.005$). After 42 days, there was slower weight gain in the ketogenic diet mice because BZP induced neurotoxicity and the administration of the ketogenic diet in juvenile mice induced neurohormonal changes. The ketogenic diet increased ketone plasma level and reduced blood glucose due to ketosis state. In conclusions, the ketogenic diet slows down weight gain, increases ketone levels and decreased blood glucose. The lowest weight gain and highest ketone levels were found in groups with a fat:protein ratio = 60:30.

Keywords— ketogenic diet, weight gain, benzopyrene induced, ketone, blood glucose

ID Number: ABS-2022

Kadar Lipoprotein (a) sebagai Faktor Prediktor Trombus Koroner

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ABSTRACT

Penyakiardiovaskular (CVD) adalah penyebab kematian nomor satu di dunia yang diperkirakan menelan 17,9 miliar jiwa setiap tahun. Empat dari 5 kematian akibat CVD disebabkan oleh serangan jantung dan stroke, sepertiga dari kematian itu terjadi pada usia di bawah 70 tahun.

Faktor risiko tradisional seperti merokok, hipertensi, diabetes, dislipidemia dilaporkan hanya mempengaruhi 50% dari prevalensi dan derajat penyakit jantung koroner. Peneliti telah membuktikan faktor risiko non-tradisional lain untuk CVD; fibrinogen, *homocysteine*, aktivator plasminogen jaringan (t-PA), dan lipoprotein (a). Hal lain yang menarik adalah semakin tingginya level Lp (a) juga memicu trombus koroner dan restenosis setelah intervensi *ballon angioplasty*. Penelitian ini bertujuan untuk mengetahui hubungan kadar Lp (a) dengan adanya trombus koroner pada pasien penyakit jantung koroner di RSUP Dr. Sardjito Yogyakarta.

Ini adalah studi *cross-sectional*. Subjek penelitian adalah pasien berusia antara 20-60 tahun yang menjalani *angiography koroner* untuk STEMI, NSTEMI, angina pectoris tidak stabil, dan angina pectoris stabil. Korelasi antara kadar Lp (a) dengan ada tidaknya trombus diuji dengan uji Chi square. Subjek penelitian sejumlah 77 subjek (60 pria dan 17 wanita). Hasil penelitian menunjukkan perbedaan kadar Lp (a) pada subjek dengan adanya thrombus koroner, walaupun secara statistik tidak signifikan.

Kata kunci: *penyakit jantung koroner, lipoprotein (a), trombus koroner*

ID Number: ABS-2210

Immunological status of Sprague Dawley rats-induced by intraperitoneal and intranasal injections of *Staphylococcus aureus*

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ABSTRACT

Acute bacterial rhinosinusitis differs from acute viral rhinosinusitis but it is difficult to establish the clinical diagnosis. Inappropriate therapy of acute bacterial rhinosinusitis frequently results in serious complications so that the presence of animal model with acute bacterial rhinosinusitis is highly required. The aim of this study was to develop a rat model with acute bacterial rhinosinusitis and to evaluate its immunological status.

This study used 7 male Sprague Dawley rats that aged three months and weighed 250 g. The rats were divided into three groups: 1 in control group, 3 in treatment (T1) group and remaining rats in the T2 group. In the day 1 experiment, all rats in the T groups were intraperitoneally injected with 0.1 ml bacterial *S. aureus* solution and followed by intranasal challenge with the same solution in both nasal sinuses. All rats in the T1 group were sacrificed at the day 14 experiment whereas all rats in the control and T2 groups were sacrificed at the day 21 experiment. Serum tumor necrosis factor (TNF- α) and malondialdehyde (MDA) levels were measured using enzyme linked immunosorbent assay kits whilst leukocytes infiltration in the nasal mucous was evaluated using a histological examination.

The average of TNF- α level in the T2 group (406.67 \pm 30.24 ng/L) was significantly higher than that of in the T1 group (281.33 \pm 46.46 ng/L) while a lower mean of MDA level was found in the T2 group, compared to the T1 group (0.34 \pm 0.03 vs. 1.36 \pm 0.43 ng/L; p= 0.008). Infiltration of mono and polymorphonuclear leucocytes occurred in left and right nasal mucous of T1 group but only mononuclear leucocytes infiltration was in both nasal mucous of T2 group with followed by fibroblast and epithel proliferations. In conclusion, *S. aureus* injections induce acute bacterial rhinosinusitis and systemic inflammation as time dependent manner.

Keywords: acute bacterial rhinosinusitis, *Staphylococcus aureus*, systemic inflammation

ID Number: ABS-2438

Antioxidant activity of self-nanoemulsifying drug delivery system (SNEDDS) of black cumin (*Nigella sativa* L.) seed oil extract

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ABSTRACT

Background: Black cumin (*Nigella sativa* L.) has been used as a traditional medicine for thousands of years because it has many benefits, one of which is as an antioxidant. Antioxidants are compounds that play important roles in the body's defense system mechanism to fight free radical attacks that can cause various diseases. In general, black cumin is packaged in oral preparations that have a low solubility, so as to reduce its therapeutic effect. Therefore, self-nanoemulsifying drug delivery system (SNEDDS) is developed to increase its solubility. This study was aimed to investigate antioxidant activity of black cumin seed extract (*Nigella sativa* L.) in SNEDDS formulation compared to that of non-SNEDDS.

Methods: This was an experimental laboratory study. The measurement of antioxidant activity was carried out using the 1,1-diphenyl-2-picrylhydrazyl (DPPH) method, by measuring the free radical scavenging activity. Percentage of free radical scavenging activity data was analyzed using one-way ANOVA to determine differences between SNEDDS preparations, and then analyzed by linear regression to obtain data on antioxidant activity in the form of the half-maximal inhibitory concentration (IC₅₀), using SPSS version 21 software.

Results: The ANOVA test obtained p value > 0.05, which showed no difference in the percentage of free radical scavenging activity between SNEDDS preparations. SNEDDS preparation of black cumin seed extract has antioxidant activity with an IC₅₀ value of $0.677 \pm 0.028 \mu\text{g/mL}$, much better than non-SNEDDS black cumin seed oil (IC₅₀ value of $18.126 \pm$

$2.260 \mu\text{g/mL}$), but still lower than the positive control of quercetin (IC₅₀ value of $0.595 \pm 0.015 \mu\text{g/mL}$).

Conclusion: There was no significant relationship between the concentration of SNEDDS preparations with percentage of free radical scavenging activity. The SNEDDS formula of black cumin seed extract has higher antioxidant activity than that of non SNEDDS, but it is still lower than that of quercetin.

Keywords: Self-nanoemulsifying drug delivery system (SNEDDS), *Nigella sativa* L., antioxidant, DPPH

ID Number: ABS-2478

Effect of Serum Cystatin C Levels on Increased Systolic and Diastolic Blood Pressure in Elderly with Normal Renal Function

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ABSTRACT

Increased systolic and diastolic blood pressure is a result of the degenerative process of blood vessels that often occurs elderly. Several previous studies have shown that cystatin C is a powerful protein predictor of the risk of cardiovascular events and death in elderly, but the mechanism is unclear. Studies support that Cystatin C levels increase in patients with decreased kidney function. **This study aims to determine the effect of** serum cystatin C levels on systolic and diastolic blood pressure in elderly with normal renal function. This research methods is an observational analytic research with cross sectional method design. Subjects were elderly with criteria aged > 60 years old, both men and women without impaired kidney function. The subjects were measured by systolic and diastolic blood pressure, then measured serum cystatin C levels. Performed statistical analysis with chi square test analysis or fischer exact test and stated significant when $p < 0,05$. From **the results of the study** were 40 elderly subjects. Mean systolic blood pressure was $147,750 \pm 23,258$ mmHg and mean diastolic blood pressure $88,250 \pm 11,353$ mmHg. The mean serum cystatin C level in this study was $1,106 \pm 0.006$ mg / l. From the results of statistical analysis, the relationship between serum cystatin c levels and systolic blood pressure of p-value was 0,030. While the relationship between serum cystatin c levels and diastolic blood pressure of p-value was 0.000. The conclusions of this study is an elevated serum cystatin C levels were associated with increased systolic and diastolic blood pressure in elderly with normal renal function.

Keywords - cystatin C, elderly; normal renal function; systolic and diastolic blood pressure

ID Number: ABS-2533

Effectiveness of Gel Hand Sanitizer Combination of Essensial Oil of Red Betel Vine (*Piper crocatum*) and Basil (*Ocinum santum L.*) with Excipients Na-CMC and Carbopol

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ABSTRACT

Background: Hand sanitizers have become an important commodity during the Covid-19 pandemic. Most hand sanitizers available in the market are alcohol-based, but this specific type of hand sanitizer often cause some users to feel uncomfortable due to irritation as well as worries that the alcohol content may enter food, thus stripping it of halal status. This study aims to provide an alternative to alcohol-based hand sanitizers by testing the effectiveness of the hand sanitizer gel containing a blend of red betel vine leaves and basil essential oils with Na-CMC and carbopol excipients.

Methods: The study design was quasi-experimental with pre-test post-test design. Sampling uses the fingerprint and rolling subject method. Making the gel was done by default. Concentration of Na-CMC excipient with 3 concentrations of P1: 0.13%, P2: 0.25%, P3: 0.50% while for Carbopol concentration P1: 0.25%, P2: 0.13%, P3: 0, 06%. Control group uses alcohol-based gel common in the market. The results of the colony count for each treatment group were then compared with controls. Data analysis was conducted using One Way Anova.

Results: Calculation results of hand bacterial colonies after and before for gels with Na-CMC excipients were equivalent to alcohol-based gels. Gels using carbopol excipients showed lower results than controls.

Conclusion: The formula of hand gel sanitizer containing the blend of red betel leaf and basil essential oils with Na-CMC excipient is more effective than one with carbopol excipient. The best result was shown at low Na-CMC concentrations (0.13%)

Keywords—Essential oils, Red betel vine, Basil, Hand Sanitizer, Na-CMC, Carbopol

ID Number: ABS-2537

Association Between Activity Index in Kidney Histological Examination with The Level Of Antibody dsDNA and C3 Complement Expressions In Lupus Nephritis Model

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ABSTRACT

Background: Lupus nephritis is a disease that until now there has been no definitive therapy. Index activity on histological examination aims to assess the degree of disease activity which is important for the evaluation and monitoring of therapy. At present there is no single laboratory that can explain disease activity. Therefore this study aims to determine the relationship between index activity in kidney histological examination with dsDNA antibody levels and the level of C3 complement expression in animal models of lupus nephritis

Research methods: The study was conducted on male mice. lupus induction using pristan intraperitoneal as much as 0.5 cc of pristan, then left for 4 months. at the end of the 4th month the mice were sacrificed and histological examination of the kidney of mice, dsDNA antibody levels and complement C3. Statistical test with Pearson and spearman correlation test, $p < 0.05$.

Results: activity index on histological examination of mice kidney, namely glomerular proliferation, Karyorrhexis and fibrinoid necrosis, cellular crescents, hyaline deposits, intersial inflammation associated with the levels of antibody dsDNA ($p=0.001$) and C3 complement expression in kidney tissue ($p=0.001$)

Conclusion: The study demonstrates that activity index in kidney histological examination associate with the level of antibody dsDNA and C3 complement expressions in lupus nephritis model

Keyword : Activity Index, Antibody dsDNA, C3 Complement, Lupus Nephritis Model

ID Number: ABS-2711

The Effect of Black Cumin Seed Oil (*Nigella sativa*) Consumption on the Number of Platelets and Leukocytes in Healthy Volunteers Smokers

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ABSTRACT

Cigarettes contain a lot of toxic compounds. Black Cumin Seed Oil (BCSO) has been widely used in various studies as an immunomodulatory supplement, which has a direct effect on the blood cell formation system. The purpose of this study was to see the number of platelets and leucocytes in smokers who had consumed BCSO for 30 days. This study used the open-label Randomized Controlled Trial (RCT) method with 36 test subjects divided into four groups. Group 1 was given a placebo 3x1 capsule/day, group 2 was given BCSO 3x1 capsule/day, group 3 was assigned BCSO 3x2 capsules/day, and group 4 was given BCSO 3x3 capsules/day. The intervention was carried out for 30 days, then on the 31st day of blood sampling. The number of platelets and leucocytes was determined using a hemoanalyzer. A different test for the mean number of platelets and leucocytes between groups was carried out by one way ANOVA, with a confidence level of 95%. The results showed that consumption of BCSO did not affect the platelet counts and leucocytes of healthy volunteers in smokers. The number of platelets and leucocytes in healthy volunteers who smoked after consuming BCSO for 31 days were within normal limits. The results of the different mean test results for the number of platelets and leucocytes showed that there was no difference between groups, namely 0.848 and 0.211. Conclusion: BCSO administration with three different doses did not affect platelet and leukocyte levels in general because they were still in regular numbers.

Keywords: thrombocyte; leucocyte; BCSO, smoker

ID Number: ABS-2715

**THE EFFECT OF GIVING AVOCADO FRUIT
BEVERAGE (*Persea americana* Mill) ON MORPHOLOGICAL AND
MOTILITY OF SPERM CELL AND TESTICULAR INDEX OF
HYPERCHOLESTEROLEMIA RAT MODELS**

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ABSTRACT

Introduction: Hypercholesterolemia is one of the risk factors of infertility in men. Avocado fruit (*Persea americana* Mill) is a tropical fruit that is one of the highest fruit commodities in the world fruit market. The purpose of this study was to determine the effect of avocado drinks on morphology and motility of sperm cells and testicular index of hypercholesterolemia rats.

Method: This research is a post-test only control group design. The subjects of this study were 18 rats (*Rattus norvegicus*) aged 2-3 months with a weight of 200-300 grams. The rat group was divided into 5 groups (K +, K-, P1, P2, P3). Four groups (K +, P1, P2, P3) were induced hypercholesterolemia for 4 weeks with quail yolk as much as 4 ml while the K-group was fed ad libitum. Then groups P1, P2, P3 were given 2, 3, 4 ml avocado juice drinks for 4 weeks. The rats were then terminated to look at the morphology and motility of the sperm cells and the rats testis index.

Result: Mean morphology of mouse sperm cells (%) was 37.50 ± 5.00 , 87.50 ± 5.00 , 68.75 ± 6.29 , 70.00 ± 8.66 , and 71.66 ± 2.88 ($p=0,006$). The mean motility of mouse sperm cells (%) was 47.50 ± 5.00 , 85.00 ± 5.77 , 61.25 ± 2.50 , 71.66 ± 1.28 , and 73.33 ± 2.88 ($p =0,003$). The average mouse testis index was 2.63 ± 0.06 , 2.80 ± 0.01 , 2.65 ± 0.23 , 2.74 ± 0.29 and 2.82 ± 0.17 ($p=0,485$). Based on data analysis by the Kruskal-Wallis test, significant morphological changes and sperm cell motility were changed ($p <0.05$) but the testis index was not significant ($p > 0.05$).

Conclusion: Avocado drinks have improved morphological and sperm cell motility effects, but were not significant in the testicular index of hypercholesterolemia rats.

Keywords—Avocado, hypercholesterolemia, morphology, motility, sperm cells, testicular index.

ID Number: ABS-2727

Effect of Diabetes Mellitus and High Fat Diet on Systolic Blood Pressure in STZ-induced

Diabetic Adolescent Rats

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ABSTRACT

Background:

Hypertension and diabetes mellitus are two major contributing factors in cardiovascular disease development. Insulin resistance, oxidative stress, and obesity are the common pathways that overlap in the disease mechanism. Insulin resistance can interfere blood pressure regulation results in an increase in systolic blood pressure by the increase of body fat. Previous studies have shown that insulin resistance is worse in obese youth than adults. In this research, we compared the effect of diabetes mellitus and high fat diet on systolic blood pressure between the normal, STZ-induced only and STZ with high fat diet-induced of adolescent rats.

Method:

This research was used an experimental method. The subjects are adolescent male *Sprague-Dawley* rats (*Rattus norvegicus*) aged 3 weeks with body weight 35 – 80 grams divided into 3 groups (K-, K+ and P) with pre – post test control group design. The negative and positive control group of rats fed standard rat chow *ad libitum* while the intervention group fed high fat diet with composition of 12% standard rat chow, 58% beef tallow, 10% quail egg yolk, and 20% high-fructose corn syrup. The diet and water intake was daily monitored. The positive group received 35 mg/kg STZ induction by intraperitoneal injection while the intervention group received the STZ induction after 14 days high fat diet treatment. The blood glucose was measured on animals in fasting of 12 hours, 3 days after STZ induction using the glucosimeter. Blood sample collected from plexus retro orbitalis under ketamine anesthesia. The systolic blood pressure was measured in all groups before the research and 3 days after STZ induction using the non invasive method of the tail-cuff plethysmography in conscious rats. All data were expressed as mean \pm SD were statistically analyzed using with statistic software type dependent sample t-test and Wilcoxon. Values were considered significant at $p < 0,05$.

Result:

There was a significant difference in rat systolic blood pressure before the intervention ($p = 0.03$) and after the intervention ($p = 0.02$). All groups experienced an increase in systolic blood pressure. Systolic blood pressure promotion in K- group was 3.00 mmHg (2.14%), the K+ group was 1.83 mmHg (1.45%) and the P group was 39.33 mmHg (36.87%).

Conclusion:

The increase of systolic blood pressure can occur massively in the STZ-induced diabetic adolescent rats with high-fat diet induced obesity. This could potentially explain the diabetic condition in youth might be give more severe progression in obese condition than the diabetic-only condition.

Keywords:

Diabetes mellitus; systolic blood pressure; obesity; youth

ID Number: ABS-2735

The Temperature Drops Difference in the Dead Body Induced by Methanol in the Forensic-animal Model Scene

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ABSTRACT

Dead body experience temperature drops following the surrounding temperature. This process hypothetically enhanced by methanol substance, which common cause of death due to poisoning in Indonesia. The purpose of this study is to evaluate temperature drops difference between methanol group and non-methanol group in the animal model (Winstar rats Sprague Dawley strain). We found that the methanol group has a statistically significant difference profile in decreasing body temperature ($p < 0.001$). Interestingly, gender difference also contributes to body temperature drop ($p < 0.05$), but the effect is negligible when adjusted with methanol effect. This finding highlight the importance of methanol abuse to accelerate body decomposition in a forensic crime scene.

ID Number: ABS-2736

ANTIGLICHEMIC POTENTIAL OF ETHANOLIC DURIAN (*Durio zibethinus*)

SEED ON HIPERGLICHEMIA RAT

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ABSTRACT

Chronic hiperglichemia is an initial sign of Diabetes mellitus disease. More over, untreated chronic hiperglichemia as risk factor for vascular comorbidities such as coronary artery disease, physical and cognitive function impairment, and mortality. Several important efforts were need to reduce high blood sugar levels including using parts of plants. Durio zibethinus contains of flavonoid, terpenoid and alkaloid the member of antioxidant. This study carry out to explore the potential antiglichemia of durio seed on the hiperglichemia rat. This research is a experimental research with pre and post test control group design. Subjects of the research used 30 male Wistar strain rats aged 2-3 months with a weight range of 170-195 kg divided into 6 groups randomly: control, negative control (DM), positive control (DM and Glibenclamid 5mg / kgBB), DM rats and were given ethanol extract of durian fruit seeds at dose of 100mg / kgBB, DM rats and were given ethanol extract of durian fruit seeds at dose of 200mg / kgBB, and DM rats and were given ethanol extract of durian fruit seeds at dose of 300mg / kgBB. All groups were acclimatized for 7 days, induction process for 3 days and given their respective treatment for 21 days. Blood glucose levels were measured before induction, after induction, and after 21 days of treatment. **Results of this research were** Blood glucose levels in DM rats treated with extracts of 100 mg / kg body weight, 200 mg / kg body weight, and 300 mg + kg body weight were tested using the subsequent test of Repeated ANOVA, the Post hoc pairwise comparisons test showed $p < 0.05$, which means there were significant difference between the time after induction and after 3 weeks of treatment. The **Conclusion were the** administration of durian seeds ethanol extract at doses of 100, 200, and 300mg / kgBB affected the blood glucose levels.

Keywords: Hiperglichemia Rat, Durio zibethinus, Antihiperglychemia

ID Number: ABS-2755

Correlation Between Renal Activity Index and C3 Complement Expression in Mice Lupus Nephritis Model

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ABSTRACT

Background: Lupus nephritis is a disease that until now there has been no definitive therapy. Index activity on histological examination aims to assess the degree of disease activity which is important for the evaluation and monitoring of therapy. At present there is no single laboratory that can explain disease activity. Therefore this study aims to determine the correlation between renal activity index and C3 complement expression in mice lupus nephritis model

Research methods: The study was conducted on male mice. lupus induction using pristane intraperitoneal as much as 0.5 cc of pristane, then left for 4 months. at the end of the 4th month the mice were sacrificed and histological examination of the kidney of mice and complement C3. Statistical test with Pearson and spearman correlation test, $p < 0.05$.

Results: activity index on histological examination of mice kidney such as glomerular proliferation, Karyorrhexis and fibrinoid necrosis, cellular crescents, hyaline deposits, interstitial inflammation associated with C3 complement expression in kidney tissue ($r=0,680; p=0,001$)

Conclusion: The study demonstrates that activity index in kidney histological examination correlate with C3 complement expressions in lupus nephritis model

Keyword : Activity Index, C3 Complement, Lupus Nephritis Model

ID Number: ABS-2756

The Effect Of Moringa Oleifera Leaf Extract On Mean Platelet Volume and Neutrophil To Lymphocyte Ratio in Autoimmune Patients

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ABSTRACT

Background: Moringa oleifera is one of promising novel treatments in autoimmune disease through anti inflammation and immunosuppression. Mean platelet volume and neutrophil to lymphocyte ratio used to measure degree of inflammation. Our study was aimed to identify the effect of moringa oleifera extract on the Mean platelet volume and neutrophil to lymphocyte ratio in autoimmune patients.

Research methods: This experimental study was conducted in 30 lupus patients, located in the rheumatology clinic at Moewardi General Hospital in January -March 2019. The study group was divided into two groups: the treatment research group received 2 grams of moringa extract per day and the placebo group. The study was conducted for 4 weeks and was evaluated when the study was completed. MPV and NLR examination using a hemocytometer. Statistical analysis was performed using paired T test, independent T-test. The p value was considered significant when the $p < 0.05$.

Results: The results shows that MO leaf extract decrease MPV (Δ MPV = 4.141; r 0.656; p -0.02) and decrease Neutrophil to lymphocyte ratio (Δ NLR = 4.1391; r 0.489; p -0.04)

Conclusion: The study demonstrates of moringa oleifera leaf extract decrease mean platelet volume and neutrophil to lymphocyte ratio in autoimmune patients

Keyword : moringa oleifera extract; mean platelet volume, neutrophil to lymphocyte ratio, autoimmune patients.

ID Number: ABS-2767

Mutation of KRAS and BRAF in Colorectal Cancer Patients in Bali

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ABSTRACT

Mutation in KRAS and BRAF gene plays a role in colorectal tumorigenesis. This study aimed to identify mutation of KRAS (exon 2, codon 12 and 13) and of BRAF (V600E) in colorectal cancer (CRC) patients in Bali. DNA was isolated from 50 FFPE CRC samples. PCR and sequencing were performed to identify KRAS and BRAF mutation. The results exhibited that 11 (22.5%) samples with mutated KRAS which was 9 (18.4%) and 2 (4.1%) samples mutated at codon 12 and 13, respectively and no mutation (V600E) of BRAF gene. Our results indicated that KRAS and BRAF mutation were exclusively occurred. This data gives contribution to the situation of KRAS and BRAF mutation in CRC in Bali whose data is yet limited. Further studies are required to identify correlation of KRAS and BRAF mutation with response of therapy.

Keywords: BRAF, colorectal cancer, KRAS, mutation.

ID Number: ABS-2778

Diversity of Mosquito in Demak, Central of Java, a Filariasis Endemic Area

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ABSTRACT

Filariasis is communicable disease. It cause permanent elephantiasis that decrease productivity and stigma, therefore one of health problem in Indonesia. It caused by nematode worm and transmitted by mosquito. The filariasis elimination program through mass preventive drugs has been carried out for 5 years but there is still transmission. The distribution, ecology, biology of vector mosquitoes and their potential for the spread of filariasis varies widely. Therefore, it is important to know the entomological aspects of vectors in the distribution of filariasis. The purpose of this study was to determine the diversity of mosquito in filariasis endemic areas, which have the potential to become vectors of filariasis transmission. The research was conducted in two villages in Demak Regency, Central Java Province, in April 2019 by Human Landing collection method, for 12 hours, starting from 18.00 until 06.00. Mosquito were dissected under dissection microscope and presence of filarial larva was observed. Six specieses of mosquito was obtained; Cx. quinquefasciatus, Cx. vishnui, Cx. tritaenorrhynchus, Cx. sitiens, Ae. aegypti and Man. Indiana. The highest diversity was Cx. quinquefasciatus. Man hour density (MHD) of Cx. quinquefasciatus ranged from 3,000- 8,667 mosquitoes / person / hour. There was no filarial larva was found in this study.

Keywords—filariasis, mosquito, Cx. quinquefasciatus, diversity, Demak

ID Number: ABS-2780

Invitro Pediculocidal Activity of The Kaffir Lime Infusion (*Citrus hystrix D.C*)

*Note: Sub-titles are not captured in Xplore and should not be used

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ABSTRACT

Pediculus humanus var. capitis infestation are prevalent especially among school children. Plant and fruit extract have been suggested as an alternative source of metabolite products for insect control. This research aims to study the pediculicidal activity of the kaffir lime peel infusion (*Citrus hystrix D. C*). A filter paper bioassay was carried out in order to determine the pediculicidal activity of the kaffir lime peel infusion (*Citrus hystrix D. C*). The death of head lice were monitored after 5 hours. The groups were consist of negative control (P0), positive control (P1), treated group of 20 % infusa concentration (P2), treated group of 30 % infusa concentration (P3) and treated group of 20 % infusa concentration (P4). The kaffir lime peel infusion (*Citrus hystrix D. C*) at 20%,30% and 40% can be causing 24%, 36% and 48% head lice death, respectively. The ANOVA analysis showed that there were significant differences between the treated groups (p < 0.01). These result can demonstrate the pediculicidal activity of the kaffir lime peel infusion (*Citrus hystrix D. C*).

Keywords— pediculicidal activity, Kaffir Lime peel, *Citrus hystrix*, *Pediculus humanus capitis*

ID Number: ABS-2795

The Effect of Basil (*Ocimum basilicum* [L.]) Leaf Ethanol Extract Lotion as a Repellent against Female *Aedes aegypti*

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ABSTRACT

Background: Dengue Hemorrhagic Fever (DHF) is disease cause of dengue virus and the *Aedes aegypti* mosquito is a vector of that disease. The use of repellent is one effort to avoid mosquito bites. Natural repellent is expected to be safer than synthetic repellent.

Objective: To determine the effect of basil leaves ethanol extract lotion as a repellent against female *Aedes aegypti* mosquitoes.

Method: This study is experimental with post test only control group design uses primary data in the form of the number of *Aedes aegypti* mosquitoes that perch on the probandus arm after being given a basil leaves ethanol extract lotion with a concentration of 5, 10 and 15% for three (3) hours. The study was conducted at the Health Research and Development Center Class 1 Banjarnegara. Hypothesis testing is done by the Kruskal Wallis and Mann Whitney tests.

Results: The difference in the number of mosquitoes that perched on the probandus arm between the five groups (control -, control +, and basil leaves ethanol extract lotion concentrations of 5, 10 and 15%) obtained p values <0.05. Significant difference in the number of mosquitoes perched between two (2) groups was shown by the control group (-) with the control group (+) and the third concentration of basil leaves ethanol extract lotion (p <0.05). Another significant difference was shown by the basil leaves ethanol extract lotion concentration 5% with a concentration of 10% and 15% and control (+), p <0.05. While the comparison between the other two groups was not significant (p > 0.05).

Conclusion: The basil leaves ethanol extract lotion affects as a repellent against female *Aedes aegypti* mosquitoes. A concentration 10% is an effective concentration with a protective power of 100%.

Keywords: Basil leaf, repellent, *Aedes aegypti*

ID Number: ABS-2823

**Comparison of three DNA extraction methods from cultures of
M.tuberculosis Indonesian isolates for in-house PCR.**

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ABSTRACT

Deoxyribonucleic Acid (DNA) extraction is the first stage and determines the molecular detection method of *M.tuberculosis* using the Nucleic Acid Amplification Test (NAAT) technique. This study aimed to compare the results of DNA extraction using the guanidine thiocyanate method in a commercial kit compared with the modified guanidine thiocyanate method and the extraction method using heating with 10% Chelex. Three cultures of Mtb H37Rv from Laboratory of Bacteriology, Center for Biomedical and Basic Health Technology in Lowenstein Jensen (LJ) media was used and dissolved in NaCl, then extracted using three extraction methods. The concentration of the extracted Mtb H37Rv DNA was measured using NanoDrop and amplification followed by the conventional Polymerase Chain Reaction (PCR) method. Furthermore, the electrophoresis system was used for detection.

The extraction results using the guanidine thiocyanate method with and without modification give in a higher concentration of Mtb DNA compared to commercial kits. DNA extraction with guanidine thiocyanate modified with the addition of proteinase K and 2-mercaptoethanol did not show better results than other methods. Extraction time using the Chelex heating technique was 10% faster than the guanidine thiocyanate method or the commercial kit. These results indicate that the DNA extraction method using the guanidine thiocyanate method without modification and heating with 10% Chelex has the potential to be further used and utilized in simple laboratory facilities.

Keywords: DNA extraction, *M. TB*, Guanidine Thiosianate, Chelex

ID Number: ABS-2853

ROSELLA (*Hibiscus sabdariffa L.*) EXTRACT CREAM 3% PREVENTS HYPERPIGMENTATION IN THE ULTRAVIOLET B-EXPOSED GUINEA PIG

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ABSTRACT

Hyperpigmentation is one of photoaging's clinical signs. The number of hyperpigmentation is high in Indonesia as a tropical country with strong sunlight. Rosella (*Hibiscus sabdariffa L.*) that contains flavonoids, phenols, anthocyanins, vitamin C, saponins, and tannin is thought to be useful to prevent hyperpigmentation. The purpose of this research was to prove that rosella extract cream prevents hyperpigmentation by decreasing the tyrosinase level and melanin expression of UVB-exposed guinea pigs. This study was an experimental randomized posttest only control group design using 3-4 months old of 36 male guinea pigs. The sample selection was carried out randomly, divided into 2 groups; 18 guinea pigs for the control group were given a base cream and 18 guinea pigs for the treatment group were given 3% rosella extract cream. Guinea pigs were exposed to ultraviolet B (UVB) light 3 times a week with a total dose of 390 mJ/cm², and the treatment was carried out for 14 days. After 14 days of treatment, tyrosinase levels were examined by the ELISA, while the calculation of melanin expression was examined by Masson-Fontana staining. The results showed that the median tyrosinase level in the control group was 79.06 ng/ml which was significantly higher than the treatment group 69.00 ng/ml ($p < 0.001$). Furthermore, the mean of melanin expression in the control group was $2.53 \pm 2.87\%$; it was significantly higher than the in treatment group $5.03 \pm 2.26\%$ ($p < 0.001$). Based on the results of this study, it can be concluded that rosella extract cream 3% prevented the increase levels of tyrosinase and melanin expression of UVB-exposed guinea pigs. It indicates that Rosella may be beneficial to prevent hyperpigmentation. Further studies are required to identify the mechanism and long-term effect of rosella extract.

Keywords: Rosella extract cream, tyrosinase, melanin, ultraviolet B.

ID Number: ABS-2860

ASTAXANTHIN INHIBITED DYSLIPIDEMIA IN PREADULT WISTAR RATS THAT WERE FED WITH A HIGH FAT DIET

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ABSTRACT

Astaxanthin is a natural red carotenoid pigment that has been proven to be the most powerful antioxidant and also has an anti-inflammatory effect by inhibiting *Tumor Necrosis Factor-alpha*, which plays an important role in dyslipidemia. This research aimed to analyze the effect of astaxanthin on inhibiting dyslipidemia in preadult male Wistar rats that were fed with a high fat diet. This experimental study used 36 male preadult (6-week old) Wistar rats (*Rattus norvegicus*). The sample was randomly divided into two equal groups; the control group which was given placebo of 1 ml glycerin and the treatment group which was given astaxanthin 0.1 mg/100g weight/day dissolved in 1 ml glycerin. Both groups were treated and fed with a high fat diet for 30 days. After 30 days of intervention, blood lipids were examined, included total cholesterol, LDL cholesterol, triglyceride, and HDL cholesterol levels. The results showed the mean of total cholesterol levels in the control group was higher (211 ± 22.4 mg/dL) compared to the treatment group (170 ± 19.1 mg/dL) ($p < 0.001$). The mean of LDL cholesterol levels in the control group was also higher (136 ± 24.4 mg/dL) compared to the treatment group (112 ± 22.4 mg/dL) ($p = 0.005$). However, no difference of the mean of triglyceride levels between two groups (121 ± 22.7 mg/dL versus 107 ± 27.2 mg/dL) ($p = 0.101$). In addition, the median of HDL cholesterol levels in the control group was lower (47 mg/dL) compared to the treatment group (60 mg/dL) ($p < 0.001$). In conclusion, astaxanthin inhibited the increase of total cholesterol and LDL cholesterol levels, inhibited the decrease of HDL cholesterol levels, but did not inhibit the increase of triglycerides levels in preadult male Wistar rats that were fed with a high fat diet.

Keywords: astaxanthin, total cholesterol, triglycerides, LDL, HDL, preadult male Wistar rats

ID Number: ABS-2863

Reliability of PHQ-9 and HADS Screening Tools for Measuring Depression in Tension Type Headache Patients

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ABSTRACT

Background: Tension-type headache has been reported to be the most common headache type with high recurrency. Almost 20.8% of worldwide population has experience this type of headache. The presence of tension-type headache was reported to be linked with the prevalence of depression. While the screening of depression has not routinely performed in tension-type headache patients. *Objectives:* To assess the reliability of Patient Health Questionnaire (PHQ-9) and Hospital Anxiety and Depression Scale (HADS) for measuring depression in tension-type headache patients. *Methods:* Consecutive patients with headache refer to our department during September 2017 were screened using the International Classification of Headache Disorders (ICHD) third edition. Patients met the criteria of tension-type headache completed the BDI (Beck Depression Inventory), PHQ-9, and HADS (n=36). Data were analysed to assess the sensitivity, specificity, and Receiving Operating Characteristic (ROC). *Results:* The prevalence of depression in tension-type headache using BDI (gold standard) was 36.1%. Of all patients with depression, 38.4% did not receive anti-depressant yet. Depression screening using PHQ-9 resulting 92.3% of sensitivity and 91.3% of specificity, with 88% of area under ROC curve. While screening using HADS resulting 84.6% of sensitivity and 91.3% of specificity, with 90.5% of area under ROC curve. *Conclusions:* The prevalence of depression in tension-type headache patients was relatively high. Both PHQ-9 and HADS demonstrated reliability, compared to BDI as gold standard. **Keywords:** depression, tension-type headache, BDI, PHQ-9, HADS.

ID Number: ABS-2873

The Effects of Okra (*Abelmoschus Esculentus L.*) Immersion Water on Changes in HDL and LDL Levels in Wistar Rats, a High Fat Diet Model

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ABSTRACT

The mortality rate due to cardiovascular disease is increasing which is one of the effects of hypercholesterolemia conditions, dyslipidemia, hypertriglyceridemia, and metabolic syndrome which are not handled properly and thoroughly so the researchers took this research topic. The general purpose of this research is to add insight into information for the prevention or treatment of cardiovascular disease by utilizing herbal ingredients, one of which is by using okra (*Abelmoschus esculentus L.*). One way to achieve the prevention or treatment of cardiovascular disease is by conducting laboratory research using experimental animals to determine the effect of giving okra (*Abelmoschus esculentus L.*) immersion water on changes in HDL and LDL levels in male wistar rats fed a high-fat diet. This type of research is a laboratory experimental research design with a pre-test-post-test control group design. The subjects of this study were male Wistar rats, aged 2-3 months with an average weight of 200 grams, healthy, active, and not defective. Statistical analysis test using SPSS. The results showed that there was an effect of giving okra fruit immersion water on HDL and LDL levels in Wistar rats with a high-fat diet model ($p < 0.05$).

Keywords: *Abelmoschus esculentus L.*; dyslipidemia; HDL; LDL; Wistar

ID Number: ABS-3270

Correlation Between Renal Activity Index and C3 Complement Expression in Mice Lupus Nephritis Model

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ABSTRACT

Background: Lupus nephritis is a disease that until now there has been no definitive therapy. Index activity on histological examination aims to assess the degree of disease activity which is important for the evaluation and monitoring of therapy. At present there is no single laboratory that can explain disease activity. Therefore this study aims to determine the correlation between renal activity index and C3 complement expression in mice lupus nephritis model

Research methods: The study was conducted on male mice. lupus induction using pristane intraperitoneal as much as 0.5 cc of pristane, then left for 4 months. at the end of the 4th month the mice were sacrificed and histological examination of the kidney of mice and complement C3. Statistical test with Pearson and Spearman correlation test, $p < 0.05$.

Results: activity index on histological examination of mice kidney such as glomerular proliferation, karyorrhexis and fibrinoid necrosis, cellular crescents, hyaline deposits, interstitial inflammation associated with C3 complement expression in kidney tissue ($r=0,680;p=0,001$)

Conclusion: The study demonstrates that activity index in kidney histological examination correlate with C3 complement expressions in lupus nephritis model

Keyword : Activity Index, C3 Complement, Lupus Nephritis Model

TRACK 3

Biomedical Engineering and
ElectromedicEnvironmental EngineeringMedical
Image Processing and Technology

TRACK DIRECTOR: DR. SRI NABAWIYATI NURUL
MAKIYAH, S.SI., M.KES



ID Number: ABS-1059

Initial Strain Dependent Stress Relaxation of Porcine Extensor Digitorum Longus Tendons

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ABSTRACT

Biomechanical understanding of tendon is not yet well understood. This study focused on the initial strain dependence stress-relaxation of porcine tendon. Here we show that the stress-relaxation function of porcine extensor digitorum longus tendons depends upon the initial strain levels that are applied to them. Twenty tendons were rapidly stretched (6%/s) using a universal testing machine to initial strains of 6%, 4%, and 2% and held for 100 s, and the stress was plotted as a function of time. Two-term Prony series were fitted to each relaxation curve and the five fitted parameters were tested for statistically significant differences between each initial strain level. It was found that there was a statistically significant difference in at least one parameter for each comparison (i.e. between 2% and 4%, 2% and 6%, 4% and 6%), with the greatest effect being on the short relaxation rate parameter.

Keywords: Animal-model, Mechanical-properties, Mechanical-test, Strain-rate, Stress-analysis

ID Number: ABS-1994

Thousands of Babies Saved by the Community Empowerment: Free Lending Home Incubator for All

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ABSTRACT

One of the 17 frameworks for the Sustainable Development Goals (SDGs) program is about a healthy life and encouraging prosperity for all people of all ages. The Indonesian government within the framework of SDGs targeting NMR can decrease to 12 deaths per 1000 births. The existence of an incubator as a premature baby warmer device is very important. But such health facilities in the area are still lacking. The Grashof Portable Home Incubator, which is one of the innovations from Universitas Indonesia, was lent free of charge as one of the product-based community engagement activities from 2012 to the present. It was lent freely to the mother's baby's home, from the lower-class community. The network of volunteer agents is at the forefront of implementing this activity in many locations in Indonesia. The volunteer agents replace the basic cost production of the incubator so the problem of funds can be overcome. Socialization and collaboration with all levels of society, both individuals and institutions, is carried out so that more premature babies can be helped. Since 2012 until now this activity has helped more than 3000 babies carried out by volunteer agents who already exist in 21 provinces spread over 94 cities/districts. This activity has increased to community empowerment, which directs or indirect helps government programs in reducing infant mortality. Public awareness to help others, especially poor people can make life's welfare better.

Keywords— SDG, People Empowerment, Infant Mortality Rate, Free Lending Incubator, Grashof Incubator

TRACK 4

Medical Rehabilitation
Physiotherapy and Clinical Medicine
Veterinary Medicine, Biology, and Sports Health

TRACK DIRECTOR: DR. GINA PUSPITA, M.SC., SP.A



ID Number: ABS-357

Translation and Validation of the Indonesian MD Anderson Dysphagia Inventory (MDADI) in Head and Neck Cancer Patients with Swallowing Disorders

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ABSTRACT

Background: Dysphagia is commonly found in head and neck cancer patients. Dysphagia is associated with significant morbidity, including quality of life. There are several instruments that can be used to assess the quality of life of dysphagia patients, including The M.D Anderson Dysphagia Inventory (MDADI) questionnaires is sufficiently valid and reliable to improve the quality of life of patients with neurological disorders and head and neck cancer. The purpose of this study were to perform adaptation and cultural translation and validation of the MDADI questionnaire for the Indonesian language.

Method: This was a cross sectional study to assess the validity and reliability of the MDADI Indonesian adaptation instrument in head and neck cancer patients with swallowing disorders in the Otorhinolaryngology clinic Dr.Sardjito hospital Yogyakarta from May - August 2019.

Results: Forty study subjects consisted of 31 men and 9 women. The MDADI instrument of Indonesian adaptation is valid and reliable as an instrument for assessing the quality of life of patients with head and neck cancer with swallowing disorders with r values ranging from 0.314 to 0.939. Internal consistency shows that Cronbach's alpha is 0.915, and test-retest reliability (intra-class correlation) ranges from 0.919-0.985.

Conclusion: The translation and validation of Indonesian MDADI instrument was performed and valid as an instrument for assessing the quality of life of head and neck cancer patients with swallowing disorders.

Keywords: Dysphagia, Quality of life, Head and neck cancer, M.D. Anderson Dysphagia Inventory, Indonesian Version.

ID Number: ABS-360

The Benefits of DUTCH (Dried Urine Test for Comprehensive Hormones) in Preventing Disease Related to Hormone Function

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ABSTRACT

Hormones released and absorbed by the human body in a balanced state will help create balance and health, while changes in hormone levels can cause various severe and chronic health problems. Hormone test is a method of measuring hormone levels in the body that can be used to diagnose and treat diseases, monitor patient health as a whole, or prevent the growth of certain health problems. We report DUTCH examination of women 46 years old to evaluated functional hormone test performed by the Precision Analytical (US). Estrogen hormone production in this sample within normal limit, with high level 2-OH estrone that prevent from estrogen dominance syndrome diseases, low 4-OH and 16-OH level showed the fluent methylation process that reduced the carcinoma risk factor. The progesterone level was high means good protection effect from malignancy caused estrogen dominance syndrome. Many hormone level that examine were testosterone, androgen, and organic acid test, with normal limit result.

Keywords: hormone, urine, estrogen, progesterone

ID Number: ABS-467

CASE SERIES

Handling Of Fertilization Program In The Cervical Polyp Case

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ABSTRACT

Background: A married couple (couples) who come to the Obstetrics & Gynecology clinic to undergo the pregnancy program as infertility cases range from 10-15%. The cause of infertility is due to uterine or cervical factors in the form of cervical polyps around 10%. Appropriate treatment based on the underlying cause will give success to the pregnancy program couple.

Objective: Delivering a case series of four cases of cervical polyps in pregnancy program patients. **Patients and Methods:** The first case, a primary infertile 1.5 years, POA0 is 27 years old, with irregular menstrual cycles, between 26 – 47 days. The results of the gynecological examination and ultrasound examination obtained cervical polyps. The second case, a 33-year-old P1A1 secondary infertile,

1. 12-year-old child, came with complaints of vaginal discharge and smell, sometimes bleeding after sexual intercourse. Gynecological examination shows cervical discharge and polyps. In the third case, a 10-year primary infertile, 33-year-old POA0 came to intend the pregnancy program. Gynecological examination shows discharge, cervical polyps, and erosions. The fourth case, a 28-year-old primary infertile, 54-year-old POA0, came with complaints of itching and smelling vaginal discharge. Gynecological examination shows cervical discharge and polyps. In the first and second cases, cervical polyps twisting and accompaniment curettage are performed, a month later successfully getting pregnant. The third case, cervical polyps twisting and accompaniment curettage are performed, four month later successfully getting pregnant. In the fourth case, due to age, infertile cases are not to be handled, but rather deal with vaginal discharge complaints.

Results: Following cervical polyp twisting and accompaniment curettage, the first case with primary infertile 1.5 years and the second case with secondary infertile 12 years successfully conceived the following month. The third case with primary infertile 10 years and successfully pregnant four months after the action. In the fourth case, it was concluded that the probable cause of infertility was due to cervical polyps which had not been diagnosed so far.

Conclusion: Appropriate measures of infertile causes in the form of cervical polyps twisting and accompaniment curettage provide an opportunity to successfully conceive in patients wanting the child due to cervical polyps.

Keywords: pregnancy program, cervical polyps, polyp twisting.

ID Number: ABS-480

The Effect of Initial Anti-tuberculosis Drug Therapy on Transaminase Enzymes

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ABSTRACT

Background: Tuberculosis is still a health problem in the world. TB treatment is carried out in 2 phases namely initial and advanced. Anti-tuberculosis drugs (ATD) in the first-line initial phase tend to have hepatotoxic effects including isoniazid, rifampifisin, pyrazinamide or ethambutol. This study aimed to determine changes in serum transaminase enzyme levels (SGOT and SGPT) in pulmonary TB patients before and after initial drug administration. **Method:** This study was an observational study with a cohort study design study. Observations were made on tuberculosis patients who received initial ATD therapy for 2 months for SGOT and SGPT enzyme levels before and after treatment. Subjects were new cases of pulmonary TB patients aged ≥ 16 years. Subjects received initial therapy in the form of isoniazid, rifampifisin, pyrazinamide and ethambutol. Recruitment of subjects through consecutive sampling methods with informed consent. SGOT and SGPT enzyme tests were performed on blood serum from the median cubital vein using a spectrophotometer. Data analysis used Wilcoxon Test. **Results:** The study subjects numbered 19 people with an age range of 16-65 years. 10 men and 9 women. The mean SGOT level before administration of ATD was 22.84 IU / L whereas after the administration of ATD was 58.63 IU / L, the analysis of different test $p = 0.023$ ($p < 0.05$). The mean SGPT level before giving OAT was 21.37 IU / L whereas after initial ATD administration was 80.84 IU / L, the analysis of different test $p = 0.007$ ($p < 0.05$). Of the 19 subjects there were 8 subjects (42%) with a significant increase in SGOT (compared to the reference value). There were 5 subjects (26%) who had a change in the form of a significant increase in SGPT (an increase compared to the reference value). Five cases that experienced an increase in SGPT were in line with an increase in SGOT. Three cases of SGOT increase did not increase SGPT. There was one case (5%) that had an increase in SGOT and SGPT > 5 times compared to the reference value. **Conclusion:** There is a significant increase in transaminase enzymes in the initial therapy of first-line anti-tuberculosis drugs.

Keyword: Anti-tuberculosis drugs, SGOT, SGPT

ID Number: ABS-481

4
**The Correlation Between Anti-Glaucoma Eye Drop
and Primary Glaucoma Patients Quality of Life in RSUD Kota Yogyakarta**

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4
Abstract - The healthy eyes are the needs of every human being. If disorders are found in someone's eyes, their quality of life would be decreasing. One of diseases that might distract human's visual function is glaucoma. There are many factors which cause the decrease of glaucoma patient's quality of life. This research aims to discover the correlation between the numbers of anti-glaucoma eye drop kinds used by glaucoma patients with the glaucoma patients themselves. This research is an observational-analytic research with cross sectional approach. The number of sample is 51 patients with the range of age between 20-70 years old by randomly selecting the glaucoma patients in the Eye Clinic RSUD Kota Yogyakarta. The independent variable in this research is the number of the kind of anti-glaucoma eye drop while the dependent variable is the glaucoma patients' quality of life. The controlled confounding variables includes age, non-pharmacological therapy for glaucoma, and the length of suffering glaucoma. The variables are measured by using questionnaires GQL- 15. The data are analyzed by using Spearman Rank Test. The measurement result of the correlation between the dependent variable and the independent variable by using Spearman Rank Test found that the signification value of 0,363. There isn't any significant correlation between the numbers of anti-glaucoma eye drop kinds with the primary glaucoma patients in RSUD Kota Yogyakarta.

4
Keywords: *Glaucoma, Quality of life, number of anti-glaucoma eye drop kinds.*

ID Number: ABS-636

FORENSIC LABORATORY EXAMINATION TO PROVE CASES OF SEXUAL OFFENCE

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ABSTRACT

Background: Sexual offence is one of social problem that happened in society. According to the National Commission on Violence Against Women (Komnas Perempuan) in 2018 violence against women increased by 406,178 cases, up about 14% compared to the previous year. Sexual offence is an event that is difficult to prove even though the case has been carried out an examination and collection of complete evidence.

Objective: Most sexual offence involves intercourse which is characterized by penetration of male genital organ (penis) into female genital organ (vagina). In an effort to prove that proof of intercourse, then in this case Forensic Science was an instrument in conducting the examination and to obtain an explanation for what happened medically.

Methods : Literatur review

Results : Finding spermatozoa in vaginal smear is one of the simplest technique in forensic examination to obtain authentic evidence about the occurrence of penetration and semen ejaculation on the victim.

Conclusion : The highest proof is if ejaculate is found in a forensic laboratory examination.

Keyword: Sexual offence, Forensic analysis, Spermatozoa

ID Number: ABS-669

**MEDICO-LEGAL ASPECT OF PATIENT SAFETY FOR ONLINE CONSULTATION AND
TELEMEDICINE**

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ABSTRACT

Background: COVID-19 is an infection disease that caused by SARS-CoV-2 which spread through droplet transmission. The nature of the virus makes it easy to spreads fast, especially from human to human interaction. It means that doctor-patient interaction in healthcare settings also prone to be one of transmission point. Telemedicine is used in order to decrease the transmission of COVID-19 in healthcare settings since health service will be done without human on human contact during the process and replaced by online interaction instead.

Objective: The changing between face to face examinations to online examination will change the course of health services on how examination should be done and what kind of consideration to take when treating the patient. This will raise a question on the legal aspect of safety and the quality issues of online examination.

Methods: Literature review with legal aspect of patient safety during online health care as main focus.

Results: Based on suggestion from Indonesian Doctor Association, a review on standard operational procedures is needed for online health service. This new standard will be focusing on how to build a good clinical practice that maintain aspect of patient safety of conventional practice while reducing the risk for COVID-19 transmission.

Conclusion: A new standard operational procedure which patient safety and quality of service become priority is needed so telemedicine can be developed to be used as an alternative in the COVID-19 pandemic era

Keywords: COVID-19, telemedicine, patient safety, standard operational procedure, medico-legal.

ID Number: ABS-695

Vaginal Discharge in Pregnancy: the Relationship of Uterine Contractions in the Case of Preterm Birth

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ABSTRACT

Leucorrhoea is one of pregnant women complaints that stimulate the emergence of uterine contractions (his). Undiagnosed contractions can cause more uterine contractions, then it could be preterm birth. Besides, the contractions getting stronger can increase the risk of premature rupture of membranes. Premature rupture of membranes increases the risk of infection in pregnant women and fetuses. The aim was to know the relationship uterine contractions with preterm birth cases . Observational research and cross-sectional design on pregnant women with vaginal discharge and without vaginal discharge based on criteria inclusion was gestational age 16 – 37 weeks and exclusion criteria was pregnant women with sexually transmitted diseases history. Data were taken for 3 months from May 2019 to July 2019 . The results showed there were 130 pregnant women, whom 77 (59.23%) with vaginal discharge complaints and 53 (40.77%) without vaginal discharge complaints. Majority of pregnant women were on first pregnancy (G1) and with 29 – 36 weeks gestational age. Uterine contractions (his) happened on 68.8% pregnant women with vaginal discharge complaints but unhappened on pregnant women without vaginal discharge complaint. Vaginal discharge in pregnancy carries the risk of uterine contractions, which may increase the incidence of preterm birth. Conclusion there is a relationship of vaginal discharge in pregnancy with preterm birth (p <0.000).

Keywords— vaginal discharge, uterine contractions, preterm birth.

ID Number: ABS-891

Correlation between Imaging Features of Cerebritis in Computed Tomography and Lumbal Functure Analysis

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ABSTRACT

Cerebritis is the early stage of a pyogenic infection of the brain developing brain abscess. Normal Computed Tomography (CT) imaging feature in the patient with a clinical sign of cerebritis can't exclude the possibility of cerebritis. Correlation with Lumbal Puncture (LP) analysis is considered as being essential in establishing a definitive diagnosis of cerebritis. Cerebrospinal Fluid (CSF) analysis can measure clarity, cells count, protein and glucose level. This research conducted at Dr. Sardjito Central General Hospital. The purpose of this study is to determine the correlation between imaging features of cerebritis in CT and LP analysis. CT scans were interpreted whether cerebritis or not. The subjects consisted of 35 subjects, 51,4% cerebritis and 48,6% non- cerebritis. The contingency coefficient correlation test between cell counts and cerebritis, concentration of protein and cerebritis, concentration of glucose and cerebritis and imaging features of cerebritis in CT and LP analysis showed weak and not significant positive correlation ($r = 0,097$, $p = 0,848$), ($r = 0,14$, $p = 0,404$), ($r = 0,016$, $p = 0,927$) and ($r = 0,154$, $p = 0,358$) comprisingly. There was no strong correlation between imaging features of cerebritis in CT and LP analysis. CT was less sensitive than MRI in diagnosing cerebritis, so MRI was more recommended.

Keyword-- Cerebritis, CT, Lumbal Puncture

ID Number: ABS-893

The Sensitivity and Specificity of Ultrasound Examination in Patients with Suspected Acute Appendicitis

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ABSTRACT

Acute Appendicitis is inflammation of the appendix, which manifests as pain in the lower right abdomen that can develop into an acute abdomen. This situation can end in the emergency room and require immediate surgical treatment. Ultrasound is the initial choice most often used for the diagnosis of Appendicitis as well as determining whether surgery is needed.

Objective: To identify the sensitivity and specificity of ultrasound as an imaging modality for the diagnosis of Acute Appendicitis at PKU Muhammadiyah Gamping Hospital in Yogyakarta. The results of this diagnostic test are essential to be used as an evaluation of the radiology skills, the ultrasound modalities used in health services, as well as being useful for improvement.

Method: This research study is a diagnostic test of ultrasound of suspected Acute Appendicitis with a gold standard. The result emerged from the histopathological tissue from the appendectomy. The research subjects consisted of 72 suspected Appendicitis subjected to ultrasound and continued with appendectomy and histopathological in 2014 - 2017. The sensitivity and specificity values of the ultrasound were calculated, which were useful for evaluating diagnostic services at PKU Muhammadiyah Gamping Hospital, Yogyakarta.

Results: The number of study subjects was 72, with positive ultrasound results of 52 and a negative ultrasound of 20 samples. The 52 respondents with positive ultrasound consisted of 25 adults and 27 children dominated by males. Twenty samples with negative ultrasound results consisted of 9 adults and 11 children dominated by females. The results of sensitivity and specificity values of ultrasound were 82.7%, 33.33%, and 53% of accuracy. The results of this value can be used as an evaluation of ultrasound in cases of Acute Appendicitis in PKU Muhammadiyah Gamping, Hospital, Yogyakarta in Indonesia.

Conclusion: Ultrasound has a good sensitivity value for the diagnosis of Acute Appendicitis. However, it has a low specificity value. It shows that the ultrasound can be used as a modality for diagnosing Acute Appendicitis, which has a role in screening the diagnosis. Ultrasound cannot be used as a screening for suspected patients with Acute Appendicitis who are entirely normal or in good condition. It will be the researchers' evaluation of the cause of the low specificity value to improve the diagnosis of suspected Appendicitis.

Keywords--Acute Appendicitis, ultrasound, sensitivity, specificity, accuracy, histopathology

ID Number: ABS-1031

Checklist of Patient Mortality Factors for Cardio Pulmonary Resuscitation

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ABSTRACT

Chronic and life-threatening illnesses occur more and more due to the development of medical science. Palliative care is an approach for patients with end-of-life illness that cannot be cured anymore, by referring to improving the quality of life of patients and their families at the end of their lives. Patients with palliative diseases such as cancer, HIV, heart failure and neurological diseases often enter the hospital through the hospital's emergency room (ED) due to complaints of shortness of breath, unable to urinate, loss of consciousness, until cardiac arrest that requires resuscitation. There is a dilemma when determining whether to resuscitate or not, and where to treat after resuscitation due to palliative diseases that can no longer be treated. This study will look for any factors related to the death of resuscitated palliative patients, so that the patient's survival data for accurate and accurate medical decision making can be found. Data was taken from medical records of patients who died in the emergency room of Gamping PKU Hospital in 2019.

ID Number: ABS-1043

Relationship between Maternal Anxiety Level and Ejection of Breast Milk in the First 24 hours of Postpartum Period

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ABSTRACT

Breast milk is a very important food for baby's health. Many factors affect the success of breastfeeding, one of those factors is maternal anxiety. The infant mortality rate in Tegal is the highest in Central Java. The problem in breastfeeding contributes to the high number of infant mortality rate. This study aims to determine the relationship between anxiety levels of primiparous mothers with breast milk ejection in the first 24 hours postnatal period. This Cross sectional analytical studies performed on 65 mother after giving birth at the Islamic General Hospital in Tegal, Central Java. Anxiety level were measured using the Hamilton Anxiety Rating Scale (HARS). Bivariate analysis used a chi-square test to determine the relationship between anxiety and breast milk ejection. There were 89.2% of respondents who experienced anxiety could not eject breast milk in the first 24 hours postnatal period. In contrast 89.5% of respondents who are not anxious able to eject breast milk successfully. Statistical test results using the chi-square method showed that there were significant differences in the success of breastmilk ejection in both groups ($p < 0.05$). Which means there is a relationship between anxiety level of primiparous mothers with breast milk ejection in the first 24 hours postnatal period.

Keywords: anxiety, breast milk, postnatal, breastfeeding.

ID Number: ABS-1044

CASE REPORT

Misdiagnosis Case of Nasopharyngeal Carcinoma in Patient with Chronic Rhinosinusitis: Family Doctors Awareness is Essential

ABSTRACT

Introduction:

Nasopharyngeal carcinoma (NPC) is the most common head and neck malignancy in Indonesia. It's commonly misdiagnosed in the early stages, because of nonspecific signs and symptoms as well as a difficult anatomic site to examined. Inflammation and infection in the upper respiratory airway such as chronic rhinosinusitis will obscure the cancer. NPC misdiagnosed will results in a high morbidity and mortality rate due to it being diagnosed in a later advanced stage.

Case report:

A 58 year old male with history of nasal blockage and nasal bleeding, accompanied by hearing problem and ear fullness. He also complained of a severe headache as well as the appearance of a left neck mass since a few months prior. The patient has been repeatedly seek medical assistance in primer health care due to nasal blockage. During nasopharyngocopy a gelatinous mass in the right nasal cavity and a nasopharyngeal mass extending to both nasal cavities was found. The biopsy results were polyp nasi Hellquist Type I and Undifferentiated Nonkeratinizing Carcinoma. CT with contrast showed the nasopharyngeal mass has extended intracranially. Patient was diagnosed as chronic rhinosinusitis with nasal polyp and nasopharyngeal carcinoma stage IVA.

Conclusion:

More than 80% of NPC's therapeutic success occurs in the early stages with five-year survival rate around 72%. It's sign and symptom can mimic as an inflammation of upper respiratory airways. Therefore it is important for Family doctors or general practitioners in primary health care to detect in early stage then manage it properly. So periodic refreshing to diagnose the disease must be done continuously.

Keywords: nasopharyngeal carcinoma, nasal polyp, misdiagnosis, family doctors

ID Number: ABS-1049

Single Ring Enhancing Computerized Tomography-Detected Brain Lesion in Patient with Acute non-Progressive Cephalgia

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ABSTRACT

Single ring-enhancing lesion of the brain is one of the most common encountered abnormalities on neuroimaging procedures using radiocontrast. This lesion is not pathognomonic for any specific neurological entities. It can be caused by a variety of infectious, neoplastic, inflammatory or vascular diseases. Since the medical and surgical management of these conditions is quite different, it is critical to establish an accurate diagnosis before therapy is instituted to the patient. The combination of history, physical examination, laboratory, and radiologic examination using the parameters included ring thickness variability, outside ring diameter, lesion-to-ring ratio, maximum ring thickness, and CT mean value in the ring center can be used to establish the correct diagnosis. We present a 52-years old woman patient with acute non- progressive cephalgia. The imaging result from head CT scan revealed a single ring-enhancing lesion in the right temporoparietal lobe. Based on the clinical and radiological evaluation, the lesion is concluded to be a brain metastatic lesion from intraductal carcinoma in situ of the breast. This case illustrates the need to substantiate a presumptive diagnosis based on these clinical and radiographic criteria when the patient presented of single ring-enhancing lesion of the brain on post contrast head CT scan.

KEYWORDS--ring-enhancing lesion, brain metastatic lesion, head CT scan

ID Number: ABS-1072

Nontraumatic Intracranial Hemorrhages in Children (A Case Report)

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ABSTRACT

Nontraumatic intracranial hemorrhages are uncommon in children, but important and often causes of death or lifelong disability. The risk factors for nontraumatic intracranial hemorrhages have been detected. Intracranial vascular anomalies like arteriovenous malformations were the most frequent risk factor, followed by congenital heart disease and brain tumors. Clinical presentations in children with nontraumatic intracranial hemorrhages include presenting signs of mental status changes, respiratory distress, decreased movement/weakness, headache, focal neurological deficits, nausea or vomiting, convulsions, etc.

Medical therapy of intracranial hemorrhage is principally focused on adjunctive measures to minimize injury and to stabilize individuals. The data had suggested that the right treatment limited the growth of the hematoma, reduced mortality, and improved functional outcomes. Surviving children had a broad range of outcomes, but most of the survivors had relatively mild deficits.

Keywords: hemorrhage – nontraumatic – intracranial – children – therapy

ID Number: ABS-1082

Occurrence of Proteinuria in Preeklampsia: A Proof of the Latest Guidelines

*Note: Sub-titles are not captured in Xplore and should not be used

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ABSTRACT

Preeclampsia is a hypertensive disorder in pregnancy which involves multisystem symptoms and marker with new-onset hypertension after or close to 20 weeks of gestation. Hypertension and proteinuria in preeclampsia occurs because of vascular dysfunction caused by factors released by maternal preeclamptic-abnormal placenta. Prolonged hypertension was known to lead into nephrosclerosis which could promote further proteinuria. In the newest task force guideline from the American College of Obstetricians and Gynecologists 2013, proteinuria (dipstick) was erased from main diagnosis criteria of preeclampsia. This study was being conducted to determine the relationship between proteinuria (dipstick) and hypertension stages in preeclampsia. This study used retrospective approach, crosssectional method and used medical record as data sample. A total of 278 sample were collected from PKU Muhammadiyah Gamping Hospital, PKU Muhammadiyah Bantul Hospital, and PKU Muhammadiyah Kota Yogyakarta Hospital. The data were analyzed with

Spearman method to determine significance of the relationship between proteinuria (dipstick) and hypertension stages. The study results show no significant relationship between proteinuria (dipstick) and hypertension stages ($p>0,292$). Further studies with more samples and more variables are needed to further describe the population in Yogyakarta. (Abstract)

Keywords— Preeclampsia, hypertension, proteinuria (key words)

ID Number: ABS-1437

Addition of Topical Anesthesia to Local Anesthesia Procedures Could Reduce *Visual Analog Scale* in Circumcision Patient

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ABSTRACT

Background: Circumcision could be painful from before, during, and after the operation was done. The use of local anesthesia is often used in medical practice which aims to reduce pain during the circumcision procedure, one of which is topical anesthesia. The mechanism of topical anesthesia works by eliminating pain sensation after direct application on the skin.

Objective: To investigate visual analog scale score based on the use of topical anesthesia for circumcision

Method: The study was a descriptive study using cross sectional design. The research was carried out at the Rumah Sunatan Clinic Purwokerto Conducted from July 2019 to March 2020. This study used secondary data.

Results: Descriptive test results on the research subjects were 127 (70.6%) in Mild Category VAS, Moderate Category were 26

(14.4%), and Severe Category were 27 (15%).

Conclusion: Topical anesthesia application for circumcision could reduce the value of Visual Analog Scale.

Keywords— Circumcision, Visual analog scale, Topical Anesthesia

ID Number: ABS-1486

**REVIEW OF ENTRANCE AND EXIT GUNSHOT WOUND CASES IN FORENSIC
MEDICINE AND MEDICOLEGAL INSTALLATION OF Dr. SOETOMO
HOSPITAL IN 2019**

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ABSTRACT

Background: A gunshot wound is a wound caused by penetration or contact of a bullet with the body. Victims of violent gunshot wounds are still common. There were 10 death cases with gunshot wounds from the forensic medicine and medicolegal installation of the Dr. Soetomo hospital in 2019. In post mortem examination, the most important part was distinguishing between entrance and exit gunshot wounds and also determining the range of gunshot wounds.

Objective: The aims of this paper are how to differentiate entrance wounds and exit wounds, how to determine gunshot wound range in post mortem examination. It can help forensic pathologists and general practitioners to diagnose gunshot wounds.

Methods: Literature review based on the text book and result of the visum et repertum in forensic medicine and medicolegal installation of the Dr. Soetomo hospital.

Results: There are eight cases of ten cases which the number of entrance gunshot wounds are equal to the number of exit gunshot wounds. The range of gunshot wounds are distant range.

Conclusion: Entrance gunshot wounds have different characteristics from exit gunshot wounds. The range of the gunshot wound can be determined based on pattern of the wounds.

Keywords: gunshot, entrance wound, exit wound, post mortem

ID Number: ABS-1516

HISTOPATHOLOGICAL FEATURES IN STAB WOUNDS CASE

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ABSTRACT

Background: Violence carried out using sharp objects, can result in death, especially if the violence causes damage to organs. Stab wounds are sharp type of violence that can cause death. In addition to the autopsy examination, supporting examinations such as histopathological examination, are very helpful in determining the cause of death. Histopathological examination can distinguish the injury occurred before or after the victim died.

Objective : To find out the histopathological features in cases of death due to stab wounds.

Methods: The following is a case report of a 45-year-old woman who died from 16 stab wounds. Vital stab wounds on the left chest and abdomen. Other puncture wounds are found in the upper and lower extremities.

Results: From external examination found stab wounds in the chest, abdomen. From the autopsy, found penetrating injuries to the lung organs, liver and spleen. The results of histopathological examination of the left lung injury showed dilation of blood vessels and alveoli filled with erythrocytes.

Conclusion: From visum et repertum it is concluded that cause of death is a stab wound in the left chest that penetrates to the lungs, the manner of death is an unnatural death, the mechanism of death is bleeding.

Keywords: Stab wound, autopsy, histopathological examination

ID Number: ABS-1789

Management Maternal & Surveillance Infection Covid-19 for Pregnant Women who visits to a Gynecologist

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ABSTRACT

Stay at home is one of the health protocols for prevention of Covid-19 transmission. Pregnant women check the pregnancy to the doctor for Ante natal Care. The aim of the study was to identify the effect of pregnant women on covid incidence 19 especially who come to the obstetrician & gynecologist for Covid-19 and to monitor the incidence of Covid-19 in pregnant women who Suspect categories. The research method was carried out in 2 stages, namely, phase 1 was carried out cross sectionally, by collecting patient data using a questionnaire, the second stage was conducting surveillance with a Prospective Cohort approach on patients, by evaluating the results of existing questionnaires, so that the incidence of Covid-19 was known in pregnant women who come to control obstetricians. Data were collected during May and June 2020. Results: 212 respondents were obtained. Maternal age and mother's last education did not have a significant influence on the incidence of Covid-19. Travel history 1 month earlier had a significant positive effect on Covid-19 with a p value of 0,000. Conclusion: Travel history 1 month before, influenced the Covid-19 incident with p value 0,000

Keywords — Pregnancy, Suspect Covid-19, Management Maternal.

ID Number: ABS-1853

Correlation Of Liver Ultrasonography With AST and ALT Value In Suspect Hepatitis

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ABSTRACT

Liver ultrasonography (USG) is often recommended in hepatitis patients. Hepatitis is liver inflammation caused by infection with microorganisms, drugs and alcohol. Hepatitis can cause liver cell damage and sometimes shows changes in the structure of the ultrasound. Changes in the structure of liver parenchyma affect the value of Aspartate Aminotransferase (AST) or Alanine Aminotransferase (ALT). The purpose of this study was to obtain an association of liver ultrasound with AST / ALT values in patients with suspected hepatitis? The research method is Cross Sectional, the relationship of liver ultrasound which includes liver structure, liver size, edge or surface of the liver, portal vein, vesic felea with AST and ALT values in patients with suspected hepatitis. The subjects of the study were patients with suspected hepatitis from PKU Muhammadiyah Hospital Yogyakarta, 2015-2018, 18-60 years and liver function examination (ALT and AST) and proposed ultrasound examination of the liver and Vesika Felea. A sample of 100 consisted of 68 men and 32 women. Sample size 73, plus 10% drop out to 80. Liver enzyme examiners and ultrasound to one another do not know the results of this examination (blind). The relationship between the two variables, the Chi Square test was analyzed. The results of this study show a significant relationship between liver ultrasound which includes the structure, size, portal vein dilation with AST and ALT values, p value for echostructures to AST 0.051 and ALT 0.023. The p value of liver size with AST value of 0.029 and p value of portal venous wall with AST 0.06 and with ALT of 0.017.

Conclusion: There is a significant relationship between echostructure, liver size and portal vein wall with AST and ALT values. The liver surface edge and VF have no significant relationship with AST and ALT values.

Keywords-- ultrasonography, hepatitis, aspartate aminotransferase, alanine aminotransferase

ID Number: ABS-2046

11
Correlation between Physical Activity Level and Therapeutic Success on Patients with Type 2 Diabetes Mellitus in Dr. Soetomo General Hospital Surabaya

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ABSTRACT

Diabetes mellitus is a group of metabolic diseases characterized by high blood sugar levels that occur due to abnormal working/secretion of insulin. Meanwhile, physical activity plays a significant role in regulating blood sugar levels in type 2 diabetes mellitus (T2DM) patients. During physical activity, insulin resistance decreases because when muscles contract, membrane permeability increases and glucose can enter the cells. This study aimed to determine the correlation between physical activity level and the therapeutic success of T2DM patients. This cross-sectional study sample was all T2DM patients in Dr. Soetomo General Hospital internal polyclinic with a sample size of 87 people taken by consecutive sampling. Data was collected by direct interviews using the IPAQ questionnaire. The study variables were the therapeutic success and physical activity level of T2DM patients. Results showed that at a low level of physical activity, 69.8% of respondents had not met the therapeutic success criteria, at a moderate level, 56.0% have met the criteria, at a high level, 66.7% have not met the criteria. In conclusion, there is no correlation between physical activity level and the therapeutic success of T2DM patients at RSUD Dr. Soetomo Surabaya ($p=0.086$).

Keywords— cross-sectional analysis, diabetes mellitus, IPAQ, physical activity, therapeutic success

ID Number: ABS-2424

**PERFORMANCE OF LABORATORY CRITICAL VALUE ON CLINICAL
LABORATORY SERVICES IN SUPPORTING PATIENT SAFETY**

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Background

Patient safety is a guarantee of health care quality, including clinical laboratory services. Patient management which is oriented to patient safety is the responsibility of all service lines, both in the aspects of diagnosis, therapy, and prognosis. One form of clinical laboratory service that is concerned about patient safety is laboratory results in the form of critical values. The aim of this study is to describe an overview of the appearance of the critical value of clinical laboratories, which are expected to influence patient safety.

Method

This study is an observational study with a cross-sectional design. The research method used in this study is analytic observation by pulling data from the laboratory information system and then processed using univariate analysis.

Result

This research acquired 1000 critical value data, and 768 of them which fulfilled the requirements are analyzed. The critical value reported is 100%. Categories of examination results consist of hematology, clinical chemistry, blood gas analysis, and electrolytes. Among the highest frequencies as critical values are platelet count, sodium level, pH of blood and total bilirubin level. Turn-around time of 4 categories consecutively is blood gas analysis (1 minute 21 seconds), clinical chemistry (1 minute 23 seconds), electrolytes (1 minute 12 seconds), and hematology (1 minute 20 seconds). After that, this study performed ANOVA test resulted in $p > 0.05$ which means that the four categories are not significantly different.

Conclusion

Critical value reporting has been done well, but has not differentiated between pediatric and adult patients. This result supports of the patient safety program.

Suggestion

It needs regular monitoring & evaluation (*monev*) on the management of laboratory critical values to improve patient safety.

Keywords: Laboratory clinical value, patient safety, turn-around time

ID Number: ABS-2488

Neutrophil-to-Lymphocyte Ratio and Hs-CRP predict mortality in Covid-19 Patients

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ABSTRACT

Background: Inflammation plays a key role in the development of COVID-19 and is likely an important factor in its prognosis. The innate immune response to respiratory infection is characterized by an influx of neutrophils to the lungs, particularly the alveoli. A sustained release of anti-inflammatory cytokines may lead to widespread apoptosis of lymphocytes, resulting in lymphopenia. Hs-CRP is a marker of covid-19 inflammation. The aim of this study to analyse Neutrophil-to-Lymphocyte Ratio and Hs-CRP to predicts mortality in COVID-19 patients

Research methods: This research was conducted at UNS Hospital and Moewardi Hospital in July 2020. The inclusion criteria were COVID-19 patients. Neutrophil to lymphocyte ratio is neutrophil divided by lymphocytes using a hematology analyzer. Examination of HsCRP by elisa method. Statistical test with independent T test and cox proportional hazard analysis with $p < 0.05$.

Results: The results showed that HsCRP and NLR increased in COVID-19 patients who later died and obtained lower levels in survivors ($p = 0.001$ and $p = 0.11$). HsCRP increased the risk of death for COVID-19 patients ($p = 0.18$; HR = 1.036) and NLR also increased the risk of death for COVID-19 patients ($p = 0.08$; HR = 1.34)

Conclusion: Neutrophil-to-Lymphocyte Ratio and Hs-CRP predict mortality in Covid-19 Patients

Keyword : Neutrophil-to-Lymphocyte Ratio, Hs-CRP, mortality, Covid-19

ID Number: ABS-2490

Association between CD30 Expression and EBV-DNA Detection Status with ABVD Chemotherapy Response in Classic Hodgkin Lymphoma Patient

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ABSTRACT

CD 30 is a member of tumor necrosis factor receptor superfamily. It is expressed in Hodgkin lymphoma (HL). Research efforts has focused on understanding its contribution to lymphomagenesis through anti-apoptotic mechanism, and its effect on cell survival. A pathogenesis role for Epstein-barr virus (EBV) positive cases, as an early event in HL development, has been suggested. The presence of EBV associated with prognosis. More than 40% patient of Hodgkin lymphoma (HL) are chemoresistance and show early relapse. The purpose of this study is to determine if there is an association between CD30 and EBV-DNA in HL with doxorubicin, bleomycin, vinblastine and dacarbazine (ABVD) regimen response therapy.

This study is a cross-sectional study that was conducted at 3 hospitals in Bandung, Indonesia. We analyzed paraffin sections from 60 cases with histologically diagnosed with classic Hodgkin lymphoma. ABVD chemotherapy response was evaluated by RECIL criteria. Detection of EBV-DNA by Real-Time PCR and CD30 expression using immunohistochemistry with semiquantitative evaluation were performed to all samples. All data were analyzed using Chi-Square test with p-value <0.05 of significant level.

From 60 cases, 28 cases (46,7%) with complete/partial response and 32 cases (53,3% with no response to ABVD regimen. EBV-DNA present in 33 cases (55%), 10 cases from the complete/partial response group and 23 cases from no response group. Low CD30 expression distribution ($\leq 25\%$) dominate complete response group (68%), whereas high CD30 distribution ($> 25\%$) dominate nonresponse group (68,7%). The result showed a statistically significant of EBV-DNA detection status ($p=0.009$) and CD30 expression ($p=0.009$) between complete/partial response and nonresponse group.

In conclusion, the ABVD chemotherapy response of CHL associated with CD30 expression and EBV-DNA Infection.

ID Number: ABS-2708

The Relationship of Bupivacaine and Ropivacaine with The Smoothness of Breast Milk in Maternity Patients at Muhammadiyah Gresik Hospital

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ABSTRACT

Introduction: Breast milk is the most important nutrient source before the baby can digest solid food, in which there are important substances to the child's immunity from various diseases. On the other side, in Indonesia people ignore the importance of breast milk.

Pain during childbirth is still an issue that should still be sought for completion. Pain during childbirth is very disturbing for the psychiatric of the mother too will result in disruption of the production of breast milk.

The medical world always seeks to find the right method to reduce pain during childbirth, one of which is by the Intrathecal Labor Analgesia (ILA) method. In this method one of them is to use a choice of compounds bupivacain and ropivacain.

Considering the importance of breast milk, besides in the effort to relieve pain in the mother while undergoing childbirth, so it is necessary to do analysis and evaluation of the risk of disruption to the smooth breast milk caused by the use of Bupivacain or Ropivacain in the Intrathecal Labor analzers (ILA) method.

Purpose: Analyzing the relationship of bupivacain and ropivacain compounds to the smoothness of breast milk in maternity patients at Muhammadiyah Gresik Hospital.

Method: Using an observational quantitative analysis. The subject of research was taken by simple random sampling method in 32 maternity patients from 198 childbirth in a month at Muhammadiyah Gresik Hospital. The subject were given analgesia using Bupivacain and Ropivacain . The subject is observed of the smooth breast milk within 24 hours post childbirth.

Result: Obtained significance value of 0.298 ($P < 0.05$) with the value of the coefficient of contigence of 0.181 in the Chisquare test to see the relationship of Bupivacain and ropivacain to the smooth breast milk. The results of the analysis showed a very low relationship on the compound administration Bupivacain and ropivacain to the smooth breast milk.

Conclusion: There is no relationship on Bupivacain and ropivacain to the smooth breast milk in maternity mothers who given the Intrathecal Labor Analgesia (ILA) method.

Keywords: bupivacaine, ropivacaine, breast milk, maternity

ID Number: ABS-2757

Neutrophil to Lymphocyte Ratio and HsCRP predict mortality in Covid-19 Patients

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ABSTRACT

Background: Inflammation plays a key role in the development of COVID-19 and is likely an important factor in its prognosis. The innate immune response to respiratory infection is characterized by an influx of neutrophils to the lungs, particularly the alveoli. A sustained release of anti-inflammatory cytokines may lead to widespread apoptosis of lymphocytes, resulting in lymphopenia. Hs-CRP is a marker of covid-19 inflammation. The aim of this study to analyse Neutrophil-to-Lymphocyte Ratio and Hs-CRP to predicts mortality in COVID-19 patients

Research methods: This research was conducted at UNS Hospital and Moewardi Hospital in July 2020. The inclusion criteria were COVID-19 patients. Neutrophil to lymphocyte ratio is neutrophil divided by lymphocytes using a hematology analyze Examination of HsCRP by elisa method. Statistical test with independent T test and cox proportional hazard analysis with $p < 0.05$.

Results: The results showed that HsCRP and NLR increased in COVID-19 patients who later died and obtained lower levels in survivors ($p = 0.001$ and $p = 0.11$). HsCRP increased the risk of death for COVID-19 patients ($p = 0.18$; HR = 1.036) and NLR also increased the risk of death for COVID-19 patients ($p = 0.08$; HR = 1.34)

Conclusion: Neutrophil-to-Lymphocyte Ratio and Hs-CRP predict mortality in Covid-19 Patients

Keyword : Neutrophil-to-Lymphocyte Ratio, Hs-CRP, mortality, Covid-19

ID Number: ABS-2776

Effectiveness Diagnosis of TB in Children Based on Clinical Symptoms

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ABSTRACT

Diagnosis of tuberculosis (TB) in children is still a challenge because the gold standard by examining sputum AFB is difficult. TB scoring using tables is the choice of TB diagnosis in children. Often the diagnosis of TB in children is also done only with clinical symptoms appearing. The aim of this study was to see the effectiveness of diagnosing TB in children based on clinical symptoms. This study was an observational analytic study with a retrospective cross-sectional design and the sampling method used was consecutive sampling from the medical records of cases of pediatric TB patients at Panembahan Senopati Hospital, Bantul for the period January 2014 - December 2016. The number of samples was 73 children with a TB diagnosis score of 41.1% (n = 30) and the clinical diagnosis was 58.9% (n = 43). Based on their recovery of the two groups from TB, it is known that there is no difference in sex, age and group domicile. There was a difference but not significant, namely in the lack or bad of nutritional status (malnutrition), long cough, and chest X-ray. The difference between the two groups was found in symptoms of fever and enlarged lymph nodes. Differences were also found in TB contacts and the Mantoux test but this could be a recall bias because in the diagnosis group this is rarely done. The sequential scoring parameters from the most common were chest X-ray, malnutrition, cough, enlargement of lymph nodes, fever, contact TB and the Mantoux test. Improvement of symptoms (cough, fever, lymph nodes and chest X-ray) after 6 months of therapy occurred 100% in both groups. The recovery parameters of the two groups diagnosed with TB by scoring or based on clinical symptoms did not show significant differences, so it can be concluded that the diagnosis of TB in children based on clinical symptoms can be used as an effective alternative.

ID Number: ABS-2779

The Relationship between the Rasonality of Antibiotics and Length of Stay in Typhoid Fever on PKU Muhammadiyah Gamping Hospital

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ABSTRACT

1 Antibiotics are the main substances that used to treat infectious diseases such as typhoid fever. Evaluation of antibiotic use is needed to reduce the occurrence of resistance. Antibiotic resistance can be fatal. Failure respond to treatment can lead to prolonged illness, increased risk of death and extend the length of stay. Besides having an impact on morbidity and mortality, antibiotic resistance also made economic and social impact. This study is to **1** examine the relationship between rasonality of antibiotics in typhoid fever and the length of stay. Method: A Retrospective non-experimental study with cross-sectional design. Medical records were assessed the rasonality of antibiotics by Gyssens criteria. From 75 medical records that fulfill the inclusion criteria, 61 patients had the right duration of antibiotics. Length of stay varies from 2 days to 7 days. The most widely used single antibiotic was levofloxacin 27 (36%). The results of the chi square analysis obtained a value of $p > 0.05$. The conclusion: there is no relationship between the rasonality of antibiotics and the length of hospital stay.

Keywords: typhoid fever, the rasonality of antibiotics, length of stay

ID Number: ABS-2783

The Effectiveness of using an Endoscope Camera in Combination with a Modified Standard Laryngoscope in Endotracheal Tube Installation

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ABSTRACT

Background: Emergency is a critical condition that requires accuracy and speed when taking action. Intubation is one of the most frequently performed actions in an emergency department. The success of intubation has a big influence on the success of the emergency department. Many factors influence the success of intubation, one of which is the technique of mastery of intubation. Laryngoscopy is an important supporting tool required for intubation, therefore it requires expertise in its use. This study aimed to determine the effectiveness of video laryngoscopy for intubation.

Method: This study used an experimental design with a post-test only control group design. 30 study subjects acted as operators in the trial of intubating mannequins using standard laryngoscopy compared to video laryngoscopy. Successful intubation was defined as the insertion of an Endotracheal Tube right into the airway as evidenced by chest expansion within a maximum of 120 seconds. The analysis of the significance of the difference in time and ease of use of video laryngoscopy used the SPSS version 24.0 statistical test.

Results: Statistical analysis was carried out in stratified, the Shapiro Wilk test was performed first to determine the normality of the data distribution and abnormal results were obtained, therefore the significance test of the time of intubation was carried out with Wilcoxon and it was found that there was no significant time difference in the use of direct intubation. laryngoscope versus video laryngoscope ($p = 0.811$). However in the analysis test of the ease of use of video laryngoscopy, significant results were obtained with the Chi-Square test ($p = 0.00$).

Conclusion: The study results show that the use of video laryngoscopy is not significant for insertion time, but the ease of analysis shows significant results.

Keywords: Direct Laryngoscopy, Emergency Department, intubation, Video Laryngoscopy

ID Number: ABS-2821

**Wet Cupping Therapy to Blood Glucose and Uric
Acid Level of Health Adults:
pre and post-test Design Study**

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ABSTRACT

Introduction: Cupping Therapy (CT) or Al-Hijamah Arabic or Bekam in Bahasa has been part of community/traditional medicine including in Indonesia. There are not many studies explained the advantage of using CT for managing levels of uric acid and blood glucose which are part of the main cause of cardiovascular disease worldwide.

Method: This was a pre and post-test design study. The healthy adults were recruited purposively when they visit the Dr Abdurrahman CT clinic during December 2019 to January 2020. Al-Hijamah CT protocol applied to the respondents. We check the blood glucose and uric acid level before and after the protocol.

Result: There are 44 respondents for blood glucose group which were 26 (59.1%) male and the mean age was 42.75 years old. Before CT, the mean level of blood glucose at random was 161.3 mg/dL and after the CT, the mean of blood glucose level was 123.66 mg/dL. For the uric acid group, there are 44 respondents where the main respondents were male 35 (79.5%) and the mean age is 42.39 years old. The mean level of uric acid at random before the CT was 6.67 mg/dL and after the CT, the mean level of uric acid was 5.69 mg/dL. Respondents expressed no side effect after the procedure.

Conclusion: Al-Hijamah procedure to the health adults reduced the level of blood glucose uric acid without side effect.

Keywords—wet cupping therapy, Al-Hijamah, blood glucose, uric acid, healthy adults

ID Number: ABS-2856

The Relationship between AVM Location and Headache Characteristics

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ABSTRACT

Background: Headache was reported to be the chief complaint in most arteriovenous malformations (AVMs) patients. Headache characteristics were vary among the patients. Some patients experienced migraine-like headache, while the others experienced not migraine-like headache. *Objectives:* To analyse the relationship between AVM location and headache characteristics. *Methods:* We performed an observational study of angiographic and headache characteristics of 19 patients with AVMs who has been admitted to our department during January until December 2018. Headache was classified using The International Classification of Headache Disorders (ICHD) third edition. We analysed the relationship between angiographic findings and headache characteristics. *Results:* Headache, seizure, and decrease of consciousness were found to be the first clinical presentation in 73.7%, 21.1% and 5.2% patients consecutively. Migraine-like headache was found in 42.9% patients with headache presentation, while not migraine-like headache was found in 57.1% patients with headache presentation. The AVM location was significantly associated with migraine-like headache presentation and the occipital lobe was the predominant site. *Conclusions:* The occipital location of AVM could have clinical presentations similar to migraine, may be linked with the spreading depression mechanism. **Keywords:** *headache, AVM location*

ID Number: ABS-2859

Ibuprofen for Headache Abortive Treatment in Multiple Sclerosis Patients

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ABSTRACT

Background: Headache has not been considered as major symptom in multiple sclerosis patients, whereas the prevalence was vary among studies. Headache in multiple sclerosis patients might imply an inflammatorial process. Ibuprofen, an anti-inflammatory drug, has a good efficacy as abortive treatment in non multiple sclerosis patients. *Objectives:* To analyse the efficacy of ibuprofen for headache abortive treatment in multiple sclerosis patients. *Methods:* We performed an observational study of 20 patients with multiple sclerosis who has been admitted to our department during January until December 2018. All patients were screened for the presence of headache. Headache were treated using ibuprofen 400mg as abortive treatment and evaluated. *Results:* Of 20 patients, 13 (65%) reported having headache. Most patients suffered from throbbing and pulsating headache (53.8%), 30.8% reported stabbing, 15.4% reported dull and constrictive headache. Pain free after 2 hours ibuprofen medication was reported in 15.4% patients. Improvement of visual analogue scale (VAS) was reported in 84.6% patients. Reccurency was reported in 35.8% patients, and ibuprofen still has consistent effect. *Conclusions:* Ibuprofen has a good efficacy as headache abortive treatment in multiple sclerosis patients. The treatment of headache in multiple sclerosis patients should be addressed in the same fashion as in non multiple sclerosis patients. **Keywords:** ibuprofen, headache, abortive treatment.

ID Number: ABS-2866

Case Report : Meningoencephalitis Caused by Human Herpesvirus 6 in Woman With Tuberculosis Pulmonum

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ABSTRACT

Background: Human herpesvirus 6 (HHV-6), the causative agent of exanthema subitum in childhood, can also induce meningoencephalitis in immunocompromised individuals. In contrast, HHV-6 encephalitis in immunocompetent patients is rare, and the clinical syndrome not well defined. *Case report:* We reported a 32-year-old woman with complaints of headache since 1 week before admission to the hospital, the headache was getting worse day by day. In addition, the patient also complained of intermittent fever and weakness in the left limb. He was a referral from a private hospital with the diagnosis of suspect tuberculous meningitis and pulmonary tuberculosis. In the previous hospital, the patient was treated with anti-tuberculosis drugs, antibiotics for bacterial meningitis and steroids but there was no improvement. On physical examination, it was found GCS E3V3m5, crackles and wheezing throughout the lung fields, neck stiffness (+), left hemiparesis, clonus of the left lower leg. The patient's laboratory results showed an increase in leukocytes, anti-HIV is reactive, and a positive PCR for Human Herpes Virus 6 in the cerebrospinal fluid. On the CT scan of this patient there were multiple hypodense lesions in the pons and right internal capsule as well as communicating hydrocephalus. In Moewardi hospital this patient was treated with Valgancyclovir 900 mg/ 12 jam, steroid, anti-tuberculosis drugs and symptomatic treatment. During 1 week of being treated the patient began to show improvement, the patient began to be able to communicate and was able to be outpatient. *Conclusions:* Meningoencephalitis HHV6 should be suspected in all cases, lumbar puncture is needed to confirm the diagnosis. Early diagnosis may prevent prolonged hospital admissions, unnecessary investigations, and exposure to unnecessary medications, with the associated considerable costs. Treatment with Valgancyclovir may be beneficial in decreasing the severity of these cases. *Keywords:* HHV6, Meningoencephalitis

ID Number: ABS-2874

Bronchiectasis as a Sequealae from COVID-19

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ABSTRACT

Background: Coronavirus disease 2019 (COVID-19) is an infectious disease caused by severe acute respiratory syndrome coronavirus 2 (SARS -COV-2). Ground glass opacity, fibrous stripe, and thickening of adjacent Pleura is a frequently reported sequealae of COVID-19. COVID-19 causing severe bronchiectasis in a previously healthy individual with no underlying lung conditions has not been reported in literature yet. Therefore, the aim of this case report was to highlight the importance of COVID-19 infection causing unusual lung changes such as bronchiectasis.

Case report: This case, a 44 year old woman came to the UNS hospital complaining of shortness of breath, fever and cough. The patient had no previous history of lung disease. The results of chest Xray when he entered the ER showed bilateral pneumonia. After further examinations, the COVID-19 nasopharyngeal RT-PCR swab was confirmed and was obtained with comorbid chronic heart failure. During the treatment, the sputum culture was examined and *Pseudomonas aeruginosa* was found. Two weeks after being declared cured of COVID-19, a chest X-ray and CT scan were performed, and a bronchiectasis was obtained.

Discussion: The long-term sequelae of COVID-19 infection is still being studied. Bronchiectasis is one of the scars of COVID-19 infection which can appear rapidly during the course of COVID-19 infection. The predisposition for a sequela to COVID-19 in the form of bronchiectasis still requires further research, possibly due to the severe manifestations of COVID-19 infection. Comorbid and the development of bacterial pneumonia as secondary infection were still suspected as predisposing factors for bronchiectasis in this case.

Conclusion: Bronchiectasis is an atypical sequela of COVID-19 which gives a poor prognosis in post COVID-19 patients because it reduces the patient's quality of life.

Keyword : COVID 19, Bronchiectasis, UNS Hospital

ID Number: ABS-2884

The Prevalence of Infection in Neurocritical Patient at Neuro-High Care Unit, Dr. Moewardi Hospital Indonesia

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ABSTRACT

Background: Neurological disease is one of the health problems that occur both in developing and modern countries. The prognosis of neurological patients depends not only on the severity of the disease itself, but also depends on complications that can occur in the course of the disease. Infection is a major complication that causes high mortality, prolongs treatment, and worsens outcomes in neurological patients. For patients receiving intensive care there are particular risk factors for acquiring one or more nosocomial infections. It rates mainly depend on the severity of illness and the exposure to invasive devices. However, there are only very limited data available on the incidence of infection in neurology and especially in the neurointensive care. *Objective:* Obtain a pattern of infection in patients with neurological disorders who are treated in intensive care unit and high care unit at Dr. Moewardi Surakarta from January 2018 - December 2018. *Methods:* Descriptive research with data obtained from the Clinical Microbiology laboratory and medical records of Dr. RSUD Moewardi. Subjects were patients with neurological disorders who are treated in intensive care unit and high care unit at Dr. Moewardi Surakarta from January 2018 – December 2018. *Result:* 324 neurointensive patients were obtained, and 178 patients (54.9%) patients were diagnosed with infection. The most common diagnoses of infection were pneumonia (61.2%), bloodstream infections (31.5%), urinary tract infections (23.6%), and central nervous system infections (6.2%). The most common pathogenic organism is *Klebsiella pneumoniae* (24%). The most sensitive antibiotics are Amikacin, Tigecycline, Meropenem, and Gentamicin, while the antibiotics that cause the most resistance are ampicillin, Cefazolin, ampicillin / sulbactam, and trimethoprim / sulfamethoxazole. *Conclusion:* 55% of neurology patients treated in the intensive care room had a diagnosis of infection. Most diagnosed with pneumonia with the most common pathogen is *Klebsiella pneumoniae*. The most sensitive antibiotic is Amikacin, while the antibiotic that most causes resistance is ampicillin. *Keywords:* Infection, Neurocritical, Neurointensive,

ID Number: ABS-2887

The Profile of Electrolyte disturbances of Stroke Patients in Neuro- High Care Unit Dr. Moewardi Hospital Indonesia

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Abstract. *Background:* Electrolyte disturbances are common in stroke patients. This condition can appear as a side effect from the use of drugs such as diuretics, the presence of Syndrome of invalid ADH secretion (SIADH), increased Brain Natriuretic Peptides (BNP), an imbalance between fluid intake and discharge, which can manifest in seizures and death. *Objective :* evaluating electrolyte disturbances in acute stroke patients who are treated in the stroke ward Dr. Moewardi Surakarta in 2018 - 2019. *Method :* This study is an analytical retrospective study with the subjects of this study were acute phase stroke patients who were treated at HCU Neurology and stroke unit Dr. Moewardi Surakarta in 2018 - 2019. The data were obtained from the status of the medical records of patients treated at Dr. Moewardi Surakarta. *Results :* Acute stroke patients were obtained with a total of 423 patients, with a proportion of 46% male and 54% female. There were 169 patients (40%) who experienced sodium disturbance, 12 patients (3%) hypematremia, and 243 patients (57%) with normal sodium values. Potassium examination was performed on 423 patients with hypokalemia as many as 87 patients (20%), hyperkalemia in 20 patients (5%), and patients with normal potassium values as many as 317 patients (75%). Calcium examination was performed in 423 patients with hypocalcemia results in 228 patients (60%), hypercalcemia in 9 patients (2%), and patients with normal calcium values were 140 patients (37%). Chloride examination was carried out on 184 patients with the results obtained by 42 patients (23%), hyperchloride 40 patients (22%), and 102 patients (55%) with normal chloride values. *Conclusion :* Acute stroke patients tend to experience electrolyte disturbances. From this study, it was found that the most electrolyte disturbances were hypocalcemia, then hyponatremia, and hypokalemia. *Keywords :* Electrolyte Disturbances, Stroke, Neurocritical, Neurointensive.

ID Number: ABS-2888

2
**Influence Of Body Height On Central Motor Conduction Time Using
Transcranial Magnetic Stimulation**

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ABSTRACT

Background: Transcranial Magnetic Stimulation (TMS) is a non-invasive device that stimulates electrical nerve tissue, including the cerebral cortex, spinal cord, cranial nerves, and peripheral nerves. When TMS stimulates the motor cortex at the right stimulation intensity at the right time, motor evoked potentials (MEPs) can be recorded from the contralateral limb muscles. The motor threshold is the lowest TMS intensity required to generate motor evoked potential (MEP) in the target muscle by the time a single stimulation is applied to the motor cortex. Because of the significant influence of body height on the conduction time needed for impulses along the corticospinal tract, the authors are interested in finding out whether there is an influence of body height on central motor conduction time throughout TMS stimulation.

Method: This was an observational analytic study conducted at the Neurorestoration Polyclinic of Dr. Moewardi General Hospital

Using Transcranial Magnetic Stimulation (TMS) with neuronavigation from May - June 2019.

Results: n (32) respondents with mean central conduction time of 10,06ms. From the analysis and discussion, there is a statistical relationship between body height on central motor conduction time (CMCT) based on stimulation performed on the abductor pollicis Brevis muscle (APB) with a significance value of $p = 0.09$ ($p < 0.05$).

Keywords— Transcranial Magnetic Stimulation, motor evoked potential, central motor conduction time, body height

ID Number: ABS-2891

2
**Comparison of Dominant and Non-Dominant Hemisphere Cortical
Excitability Using TMS**

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ABSTRACT

Background: TMS can directly assess cortical areas, providing a cheaper and faster way to determine the neurophysiological nature of cortical neurons. It becomes a question whether cortical excitability of dominant and non-dominant hemispheres will have a difference considering that dominant hemispheres have more active motor activation of the dominant hand.

Objective: To determine the difference in cortical excitability between dominant and non-dominant hemispheres.

Method: This research was an observational analytic study. This research was conducted at the Neurorestoration Polyclinic of Dr. Moewardi Regional Hospital from July to August 2019 using a Transcranial Magnetic Stimulation (TMS) tool with neuronavigation. The subject consisted of thirty-two samples that were declared healthy by neurology specialists with right-hand dominance. This study compares cortical excitability through the magnitude of resting motor threshold dominant and non-dominant hemispheres using TMS. Statistical analysis used paired T-test with a confidence level of 95% and $p < 0.05$.

Results: The study subjects consisted of 17 men (53%) and 15 women (47%) with 100% dominance of the right hand (left hemisphere). The average ratio of the left and right motor threshold is the same, which is 48%. There was no difference in cortical excitability between the left hemisphere and the right hemisphere ($p = 0.015$).

Conclusion: There is no difference in cortical excitability between dominant and non-dominant hemispheres using resting motor threshold measurements using TMS.

Keywords—: cortical excitability, resting motor threshold, dominant and non-dominant hemisphere.

ID Number: ABS-2922

The Relationship between Median Nerve Damage and Working Period for Written Batik Craftsmen in Surakarta

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ABSTRACT

Background: Written batik craftsmen are a common occupation, especially in batik-producing cities such as Surakarta. Written batik craftsmen who have a longer working period are at risk of experiencing damage to the median nerve due to repetitive movements while working. The frequent damage is also characterized by complaints such as pain and numbness in the palms and atrophy of the hand muscles. For this reason, researchers are interested in seeing a relationship between median nerve damage in batik workers in Surakarta.

Methods: This study was a cross sectional study conducted in the electrophysiology department of Dr. Moewardi towards 30 written batik workers in the city of Surakarta from April - May 2020. **Results:** There was a significant medium positive correlation between working period and nerve injury ($r=0.572$; $p=0.001$). While the complaints were also correlated with the working period, the association was not statistically significant ($p=0.355$)

Keywords--- Median Nerve Damage, Batik Craftsmen

ID Number: ABS-3273

Association Carboxyhemoglobin (COHb) of Packed Red Cells (PRC's) Storage Blood Transfusion for ICU Patients with Septic Shock

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ABSTRACT

Purpose: To determine, retrospectively, the quality of storage packed red cells (RBC's) units transfused to patients admitted to the ICU with the diagnosis of septic shock and to correlate COHb with patients outcome.

Methods: All patients treated in the ICU during 2019 with a diagnosis of septic shock were chosen. The criteria for septic shock are based on established guidelines. All PRC units transfused for each patients were recorded for their length of storage, COHb levels, blood volume before and after the sepsis episode were recorded.

Results: Of the 29 patients treated in ICU with septic shock, 20 died and 9 survived. No significant differences between survivors and non-survivors (died) were found with respect to the COHb level and the PRC shelf life, Apache IV score and total volume transfused in each patient. The average of CoHb level was 5 % to 10 % at the expected physiological range (25). The average length of storage of PRC transfused to survivors was 14 days and 20 days for patients who died (P <0.0001).

Conclusion: This study report a weak correlation of COHb levels and the length of storage of PRC blood as a cause of death due to sepsis receiving transfusion. If this association is confirmed by a prospective randomised trial, it would have major implications for the consideration of the length of storage of PRC criteria and COHb levels in sepsis in ICU.

Keywords: COHb, length of storage, Packed Red Cell, septic shock, ICU

ID Number: ABS-3893

Management of Diet with Low Glycemic Index, Diabetic Foot Exercise, and Diabetic Foot Care for non-Pharmacological Therapy for Type II Diabetes Mellitus Patients: A Case Report

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ABSTRACT

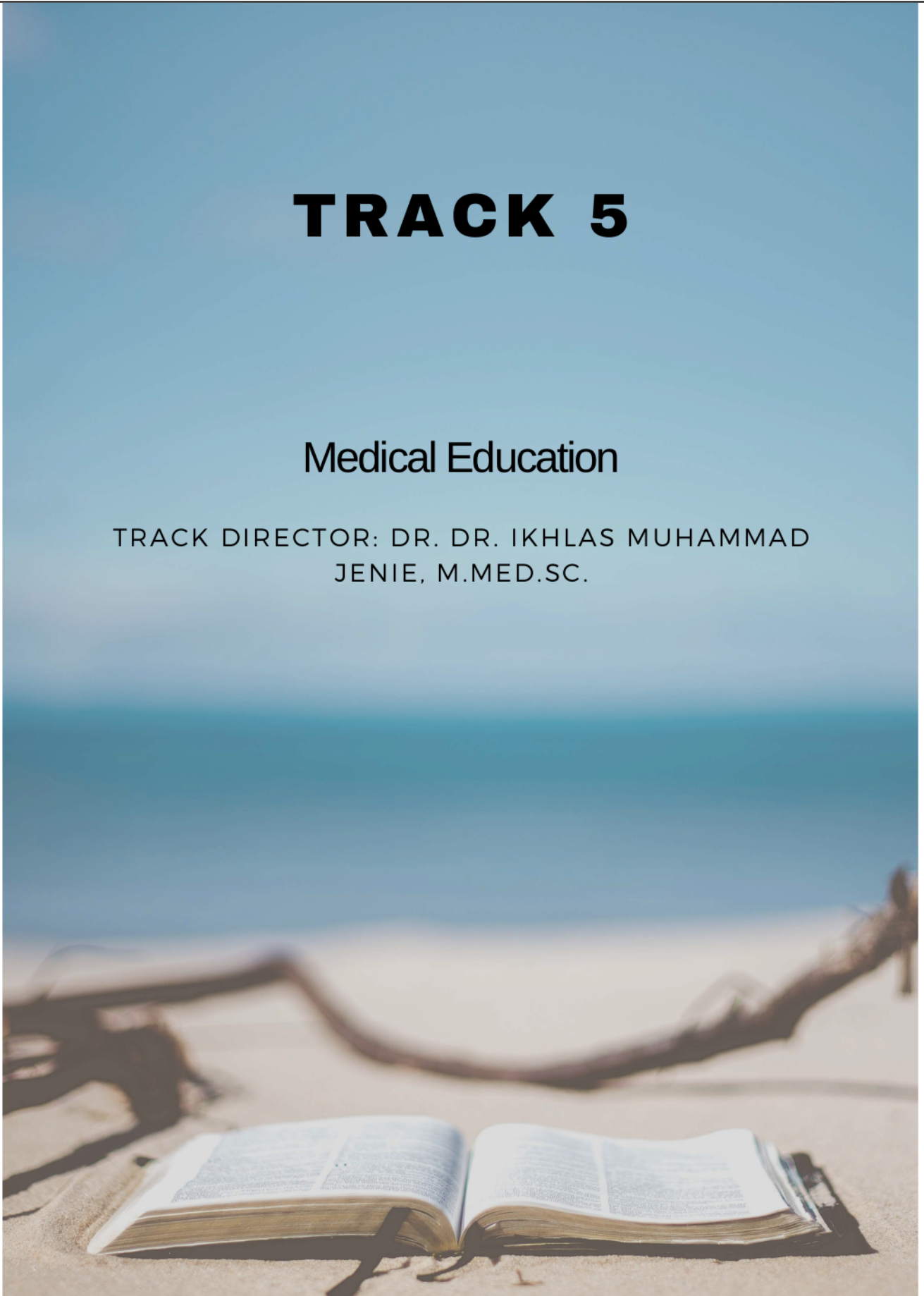
Proper nutritional diet, regular exercise, and quitting smoking are non-pharmacological interventions because they can reduce blood glucose levels. Control of HbA1c levels reduces the risk of complications in patients with Type II Diabetes Mellitus. The study design used case reports exploring non-pharmacological therapies for this disease. The patient had a history of Diabetes Mellitus for about five years. Patients regularly come for control to Level 1 health facilities; besides, patients routinely consume drugs every day. Interventions and observations were carried out for one month. The results obtained were that the patient's clinical condition was getting better. Non-pharmacological therapy carried out in these patients is the consumption of foods with a low glycemic index, such as Ambon banana, boiled red beans, sorghum rice, steamed kepok banana, brown rice, cooked green beans, steamed corn, and steamed breadfruit. Prevention of foot ulcers is carried out through screening, diabetes foot care education, and diabetic foot exercises.

Keywords: non-pharmacology, Diabetes Mellitus, therapy, Glycemic Index

TRACK 5

Medical Education

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ID Number: ABS 256

KAHOOT! APPLICATION IN MEDICAL EDUCATION: QUALITY OF LECTURES IMPROVEMENT

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ABSTRACT

Efforts to improve the quality of lectures with technology implementation are increasingly needed to overcome the problems of large-scale classes, one of them are Kahoot!. This reaserch aim to measure and compare the improvement quality of lectures between the biomedical and clinical science groups on medical school of FKIK UMY after the implementation of Kahoot!. Non-control quasi experimental pre-post -test method with total sampling. Quality of Lectures questioner that used has been declared and validated by Quality Assurance Unit School Of Medicine FKIK UMY. The data analysis method uses paired t-test followed by unpaired t-test. The result of paired t-test showed an increase of 7.4% ($p = 0.001$), 7% ($p = 0.005$), 7.2% ($p = 0.003$) and 6.97% ($p = 0.085$) on aspects of the quality of lecture material, delivery methods, communication & interactions, and class schedules & facilities, in sequence. The results of the unpaired t test showed that there were unsignificantly differences in quality improvement between the biomedical and clinical science groups ($p > 0.05$). **Conclusion** : There was a significant improvement in all four aspects of lecture quality after the implementation of Kahoot!. Quality improvement in the biomedical science group is unsignificantly better than clinical science .

Keywords—Kahoot!, Quality Lectures, Medical Students, Biomedical, Clinical

ID Number: ABS-651

**INFLUENCE OF EDUCATION ABOUT KIDNEY TRANSPLANTATION ON
KNOWLEDGE AND ATTITUDE ABOUT KIDNEY TRANSPLANT ON CHRONIC
KIDNEY FAILURE PATIENTS AT MUHAMMADIYAH PKU HOSPITAL OF
GAMPING**

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Background: The kidney transplantation therapy has better end results than the hemodialysis therapy in patients with chronic kidney failure, both in the quality and quantity of life; in addition, the total average cost to be incurred also smaller. Among the obstacles of transplantation are the economic limitation on the operating cost, the lack of donated organs, and limited medical, surgical, and nursing **7** personnels with the necessary expertise. The majority of chronic kidney failure therapy is by hemodialysis. The purpose of this study was to educate about the urgency of kidney transplantation to increase the knowledge and attitude about the importance of kidney transplantation on patients with chronic kidney failure.

5
Research Method: This is a quasi-experiment research with the one group pretest-posttest design. This research used one group that was given an educational intervention with the lecture method. The number of samples in the intervention group was 60 people. The sample collection tool was questionnaires. The test was conducted by the Wilcoxon's nonparametric statistical analysis.

Results: The statistical test result on the knowledge with 60 respondents obtained the p value of 0.001 ($p < 0.05$); there was a significant difference between the pre-test and the post-test results on the knowledge about kidney transplantation.

The statistical test result on the attitude about kidney transplantation with 60 respondents obtained the p value of 0.166 ($p > 0.05$), **12** there was no significant difference between the pre-test and the post-test results.

Conclusion: There is an influence of education on the knowledge about kidney transplantation, and there is no influence of education on the attitude about kidney transplantation.

Keywords: education, kidney transplantation, chronic kidney failure, knowledge, attitude

ID Number: ABS-787

Can academic potential test predict students' learning outcomes ?

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ABSTRACT

School of Medicine is one of favourable department study programs at Universitas Muhammadiyah Yogyakarta. Thus, the department increase the students' input standard to keep the quality. There are various kinds of tests for the selection of new students including course tests, psychological tests (TPA and MMPI), health tests, and interview tests. Test methods which used to measure students' cognitive abilities at PSPD are final block exams and tutorial mini-quiz. 5th types of tests use Multiple Choice Question (MCQ). The purpose of this study was to determine the correlation of academic potential tests with the cognitive abilities of students illustrated through 7th mini-quiz scores and block test scores. The method used is an analytic observational research design using a cross sectional approach. The sample of the research was 97 students. Based on data analysis, it can be concluded that there is no relationship between the values of verbal, numerical, spatial and overall value of the landfill with mini-quiz values. The conclusion of this study is that there is no relationship between the academic potential tests on the mini-quiz scores of students in the Medical Education Study Program (PSPD), but the results of this TPA have a positive correlation on numerical sub-tests with the results of their block tests, even though the spatial and verbal sub-tests do not correlate.

Keywords—Academic Potential Test, Verbal Subtest, Numerical, Spatial, Mini-quiz Value, Test Score

ID Number: ABS-867

4
The Effect of Psychological Aspects on the Success of Student Competency Test for Doctor Professional Program (SCTDPP) Medical Students of Universitas Muhammadiyah, Yogyakarta

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ABSTRACT

Background : The success of Student Competency Test Of Doctor Professional Program (SCTDPP), is one indicator that also determines the success of the doctor professional education. Various factors influence the success of young doctors in the SCTDPP, one of which is a psychological factor. The aims of this study to identify the effect of psychological aspects on the success of SCTDPP.

Method: This is an observational analytic with a cross-sectional design. The research was conducted in Faculty of Medicine and Health Sciences Universitas Muhammadiyah Yogyakarta in 2018. The samples were male and female students 20-26 years old. The psychological instruments were optimism test, motivation test, depression test, anxiety test, fighting spirit test and the MMPI test. Data were analysed by using bivariate, univariate and multivariate tests with the application of the SPSS computer program.

Results: The results showed that the passing rate of CBT and OSCE reached more than 80% (CBT 82.3%; OSCE 84.9%). Supportive psychological aspects indicate that the students have very high optimism (43.8%), high optimism (35.4%), no depression (54.2%) and mild anxiety (39.6%) The MMPI test showed that students who passed the SCTDPP were those who did not have a mental disorder and only had mild depression and anxiety as well as a moderate level of behaviour and thinking pattern.

Conclusion : An optimism is the strongest aspect ($r = 0.9$, $p 0.000$) to success of SCTDPP

Keywords— anxiety, depression, fighting spirit, motivation, optimism, SCTDPP.

ID Number: ABS-995

**The Role of The Learning Environment in Teaching Hospital in Achieving Doctor
Competence: A Qualitative Study**

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ABSTRACT

Clinical stage medical education requires teaching and learning hospitals to achieve the expected competencies. Various studies show the learning environment in teaching hospitals consists of many different components, according to the type of education. This qualitative research aims to learn more about the components and the role of the teaching hospital environment in achieving medical education competency.

This study uses the phenomenology method by means of focus group discussions (FGD) with lecturers and students from 3 teaching hospitals used for Clinical stage medical education of Universitas Muhammadiyah Yogyakarta (UMY). The number of each group is 6-12 people. The results of the FGD are coded and categorized to determine the environmental components of the teaching hospital that play a role in achieving the competency of doctors.

The results showed that the components of the teaching hospitals environment that were most frequently cited as contributing to the achievement of medical education competencies were students and lecturers. The characteristics of students and lecturers are widely explained by the discussion participants, including the attitudes and behavior of lecturers and students, which are important in medical education. Other components found are patients, hospital management, curriculum, physical facilities such as libraries with search facilities for scientific articles, discussion rooms, examination tools, educational aids, and friends a group or contemporaries. The learning environment component found and in line with UMY's vision is the religious or Islamic value practiced by the lecturer in managing patients. But this value can also hamper the process of achieving competence.

Keywords: learning environment, teaching hospital, medical education,

ID Number: ABS-1012

IS PLAYING ONLINE GAMES ON SMARTPHONES GIVE EDUCATIONALLY BENEFICIAL TO MEDICAL STUDENT

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ABSTRACT

Recently, internet users in Indonesia are getting higher. About 10% of these users are online gamers. Playing games on video or computer is believed to be educationally beneficial, but this is still limited to educational games for learning activities. This study aims to determine the relationship between the frequency of playing commercial online games on smartphones with academic achievement of students of Medical Faculty of Universitas Muhammadiyah Yogyakarta.

Method:

This is a quantitative study with cross sectional research design. Data on the frequency of playing online games on smartphones, and academic achievements were taken using a questionnaire. Data analysis used Spearman's correlative test to find out the correlation between the frequency of playing online games on smartphones with academic achievement.

Results:

The frequency of playing online games on smartphones gets results with category: non-gamers 46.6%, infrequent gamers 24.3%, regular gamers 17.4%, and frequent gamers 11.7% . There is a negative relationship between the frequency of playing online games with academic achievement with a p value of 0.002.

Conclusion:

The frequency of playing online games on smartphones is negatively correlated with the academic achievements of students of Medical Faculty of Universitas Muhammadiyah Yogyakarta.

Keywords--Frequency of playing online games; academic achievement; medical student.

ID Number: ABS-1042

Improving a Simple Interrupted Sutures Technique Skills with The Home Assignment for Medical Students

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ABSTRACT

Background: The limited-time to practice during practicum becomes a problem for students to have a good surgical skills. The home assignment of performing sutures, such as a simple interrupted sutures technique is expected to be a solution.

Method: A quasi experimental study was carried out on a sample of 20 students, divided into two groups. Group A, a group of 10 students, received a tutorial of a simple interrupted sutures technique and was given the assignment to do the sutures at home every day and the supervisor will check their assignment in the next day, for seven days. Group B, a group of 10 other students, only received a tutorial of a simple interrupted sutures technique with the opportunity to practice independently during practicum at skills laboratory. After one week, an assessment was made based on the time it takes for each student in making a simple interrupted sutures technique.

Result: The data were analyzed with an independent T-test. There were significant differences between pre and post practices in time consumed during suturing in group A ($p < 0,05$). The average time for group A is 533 seconds on the first day and 335 seconds after the home assignment in a week.

Conclusion: The home assignment can improve the speed of sutures skills.

Take home message : The home assignment is effective to improve sutures skills for medical students, especially for limited time of practicum conditions at skills laboratories.

Keywords : *The Home Assignment, Improving Sutures Skills*

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The Correlation between Learning Environment at The Teaching Hospital with The Achievement of Clinical Stage Student Competencies

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ABSTRACT

Teaching hospitals as a place for clinical stage medical education have an important role in achieving the expected competencies. There are many components in the hospital environment that contribute to the achievement of medical education competence. Because it needs to be examined more deeply how much the relationship between the learning environment in teaching hospitals with student learning outcomes.

¹ The cross-sectional study was carried out with the subjects of the clinical stage in the Universitas Muhammadiyah Yogyakarta (UMY) students who had completed the national board test. The characteristics of 6 teaching hospitals were measured by DREEM questioner, while the achievement of competencies was based on the scores of national boards. The Spearman correlation analysis was conducted to analyze the relationship between the characteristics of the teaching hospital and achievement of competence.

¹ The results showed a DREEM score was 137,41 and CBT 80,12. The statistical analysis showed no relationship between the characteristics of hospitals with achievement of competence ($p = 0.96$). The value of the characteristic components of the hospital is the learning process 3.3 (more than expected), 3.3 lecturers (giving lectures that are very well structured), learning environment 3.2 (generally good), social environment 2.9 (not bad) and academic ability of students 3.3 (confident). This study shows the learning environment of teaching hospital that were used as a place for the clinical stage students UMY is quite satisfying. However, the learning environment is not related to the achievement of competencies obtained by students.

Keywords: medical education, competency, DREEM, teaching hospital, computerized based test

ID Number: ABS-2266

Comparing Problem-Based Learning (PBL) and Cased-Based Learning (CBL) Tutorials in Stimulating Cognitive Skills

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ABSTRACT

Introduction: One of Problem Based Learning (PBL) objectives is stimulating clinical reasoning, which is a part of cognitive skills. Case-Based Learning (CBL) is a learning method developed from PBL. It could be an alternative to stimulate students in integrating basic science in clinical knowledge. However, to the authors' knowledge, currently, there is no research comparing the effectiveness of PBL and CBL in stimulating cognitive skills, which refers to brain capacity associated with knowledge acquisition, manipulation of information, and reasoning. This research aimed to identify the differences between PBL and CBL in stimulating cognitive skills through verbal analysis.

Methods: The study was conducted quantitatively at the Faculty of Medicine Universitas Islam Indonesia (FM UII). The subject population was fourth-year students (n=21) who joined voluntary in this study. The subjects were then separated randomly into two groups, PBL (n=10) and CBL group (n=11). Each tutorial group conducted the discussion in two sessions facilitated by a tutor, who was experienced in both PBL and CBL tutorials. All of the tutorial processes were recorded and then analysed using a coding scheme adapted from previous research. The coding was then analysed descriptively. The verbal interaction was categorized into five types: exploratory questioning, cumulative reasoning, handling conflict about knowledge, procedural interaction, off task/ irrelevant interactions.

Results: Most of the interactions performed by the students in both PBL and CBL tutorials were sharing cumulative reasoning. Exploratory questioning was more frequent found in PBL tutorials especially session 1. Students were very restricted in spending the time to handle conflict about knowledge, which is a type of high order thinking. Beside cognitive skills, Students spent quit lot of their time in procedural interaction, especially in CBL. In PBL and CBL tutorials, they also performed irrelevant interactions even though very time limited (around 1,5 % of the total discussion time).

Conclusions: Both PBL and CBL tutorials could facilitate students to apply cognitive skills. However, students showed limitations in applying high order thinking in both of these tutorial methods.

Keyword: PBL-CBL-Verbal interaction-cognitive skills

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Effects of Education using Active Learning and FGD Methods on the DAGUSIBU Knowledge of MA Nurul Ummah Students, Yogyakarta

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ABSTRACT

Research in Manado in 2014 showed that 44.77% of the local population did not procure drugs properly, 75.9% received the wrong ones, 25.3% did not store them as suggested, and 72% did not use them correctly. As an attempt to avoid drug management mistakes in the community, the Indonesian Pharmacist Association has introduced a program termed DAGUSIBU, short for 'to get, use, store, and discard'. DAGUSIBU contains information on the procedures to receive, use, store, and dispose of drugs correctly; hence, immediate dissemination or education is highly suggested. High school students were used as the main cadre in the research because adolescents are at the age of rapid physical and mental development and, thereby, vulnerable to misinformation. This study set out to determine the effects of DAGUSIBU education on the knowledge of MA Nurul Ummah students in Yogyakarta.

This experimental study involved pharmacists in providing education using the active learning method (CBIA) and focus group discussion (FGD). Student's knowledge of DAGUSIBU was assessed before and after the education using a questionnaire that had been tested for validity. Meanwhile, differences between the pre- and post-education knowledge were quantified using a paired sample t-test in the SPSS v.16 program.

The results indicated that the average of the knowledge level increased after receiving education on DAGUSIBU. Through the active learning method, this figure nearly doubled from 4.6308 (pre) to 7.9231 (post) ($p = 0.000$), and after the FGD, it also increased from 4.933 to 7.0167 ($p=0.000$). In conclusion, there are significant differences in the knowledge of DAGUSIBU among the MA Nurul Ummah students after receiving this education through active learning (CBIA) and FGD methods.

Keywords: DAGUSIBU, knowledge, active learning, CBIA, FGD

ID Number: ABS-2569

STUDENT ENGAGEMENT IN ONLINE LEARNING ENVIRONMENT IN MEDICAL FACULTY UNIVERSITY OF MUHAMMADIYAH MAKASSAR

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ABSTRACT

The student centered, problem based, integrated, community based, elective, systematic (SPICES) approach is applied in almost all medical colleges with various learning models. Implementation of SPICES is done conventionally, online, or a combination of both / blended learning. The conventional learning model is learning that tends to use the classical method where interaction leads to teacher centered, done face-to-face in a room, question and answer, and assignments. While the online learning model (e-learning) is learning using internet media and technology-based. E-learning learning refers to online learning, virtual learning, distributed learning, or network (web) based learning[1]. The rise of Covid-19 in Indonesia caused the majority of educational institutions to close and organize learning processes online. This is done to reduce the cluster spread of the virus[2].

It is very important to understand the level of student engagement during the online learning process. The retention rate of online learning engagement is reported to be lower than direct face-to-face learning[3]. One indicator of the success of online learning with teleconferencing media is the level of participant involvement both quantitatively and qualitatively. Quantitative shows the number of participants and qualitative shows the interaction between lecturers and students in the question and answer session. The level of student engagement is defined as the mental and emotional involvement of a person in a group situation that encourages them to support the achievement of learning objectives.

AIM

This study aims to determine the relationship between student engagement in online learning and grade of course at the Faculty of Medicine, Muhammadiyah University, Makassar.

METHOD

The research method used was cross sectional analytic. Data obtained from these results are then described based on the research objectives to be achieved. The study was conducted at the Faculty of Medicine at the University of Muhammadiyah Makassar in April - August 2020. The respondents consisted of 251 students, men and women. Sampling uses probability sampling with a simple random sampling method where first the number of subjects in the population to be chosen is the subject of the research sample and then randomly selected. Inclusion criteria are students with a minimum 80% attendance in the course and exclusion criteria are students who have incomplete attendance in the tutorial, lecture, practicum and exam processes.

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