



Proceeding Book

The 2nd Nommensen Health & Medical Sciences International Conference (NoHMSIC)

**13-14th October
2023**



Update on Tropical & Infectious Diseases

FACULTY OF MEDICINE
UNIVERSITAS HKBP NOMMENSEN

Organized by:



FACULTY OF MEDICINE
UNIVERSITAS HKBP NOMMENSEN

Participating Partners



Yakult



EDITORS

1. Dr. dr. Leo Simanjuntak, Sp. OG
2. dr. Prima Heptayana Nainggolan, Sp.N
3. dr. Terang Meliala, Sp.PD, DTM&H

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Authors: Theresia Septamaria Simalango, Ervina Julien Sitanggang, Novita H. Simanjuntak

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WELCOME SPEECH

WELCOME SPEECH CHAIRMAN OF THE SECOND NOMMENSEN HEALTH AND MEDICAL SCIENCES INTERNATIONAL CONFERENCE

Good morning ladies & gentlemen.

All praise & thanks be to the one true almighty God.

Thank you very much to distinguished guest speaker & the member of the organizing committee & sponsorship for the realisation of this 2nd NoHMSIC event.

As a doctor we have to upgrade our science every time, especially Indonesia where infection rate is still high.

Last but not least, as chairman of this prestigious event I wish good luck to all the participant of this symposium & workshop.

Hope everything will run well & smoothly.

Thank you.

Chairman

Ita L. Roderthani

WELCOME SPEECH RECTOR OF UNIVERSITAS HKBP NOMMENSEN

Praise to the Lord, the Almighty and the King of creation.

To the distinguished speakers,
most honoured guests,
respected dean and vice deans of Faculty of Medicine Universitas HKBP Nommensen,
honourable committee and participants.

I extend my warm welcome to all of you who participate to the 2nd Nommensen Health and Medical Sciences International Conference (NoHMSIC) 2023. It is a great honour for Universitas HKBP Nommensen to host the International Conference for Tropical Infectious Diseases.

As part of the vision and mission of Universitas HKBP Nommensen, this conference is our action to fulfil the university's commitment in promoting further understanding of important knowledge in the field that is very highly relevant to the lives of clinicians, academics and society in Indonesia, South East Asia and other international communities. This is also reflected on the vision and mission of the Faculty of Medicine that has specifically oriented on the Tropical Medicine.

Infections that are endemic to the tropical countries including Indonesia are the major issues in Tropical Medicine. The importance is confirmed from the three major Tropical Infectious Diseases including Tuberculosis, Human Immunodeficiency Virus (HIV)/AIDS and Malaria, that have significantly contributed to the morbidity and mortality. With this highlighted importance, the theme of the 2nd NoHMSIC 2023 is focused on Tropical Infectious Disease.

The university is grateful and honoured for the participations from our distinguished speakers. We are very delighted to know that Neurosurgery experts from Netherland, Pediatric Medicine and Surgery experts from Stanford University, USA, an ophthalmologist from India, an ears, nose and throat (ENT) specialist from Malaysia. and national speakers from various national universities will share their invaluable knowledge and expertise in this conference.

With the growing importance of artificial intelligence and lifestyle medicine in the world, the 2nd NoHMSIC 2023 also provides sessions dedicated for these topics.

Hopefully, this conference will give benefit for all the participants, the university and wider communities specifically in health services.

I would like to sincerely thank you to the committee, speakers and all participants who have contributed to the success of the 2nd NoHMSIC 2023.

Medan, October 13, 2023

Respectfully yours,

Dr. Richard A M. Napitupulu, ST.,MT

**WELCOME SPEECH DEAN FACULTY OF MEDICINE
UNIVERSITAS HKBP NOMMENSEN**

Distinguished speakers,

Distinguished Guest,

Participants,

Ladies & Gentlements, in person and virtually:

H o r a s.....

I am truly honored and thrilled to welcome you all in this valuable scientific meeting the 2nd Nommensen Health and Medical Sciences International Conference. On behalf of Faculty of Medicine Universitas HKBP Nommensen, I extend a warm and heartfelt welcome to each and every one of you.

Tropical medicine contributes to a high morbidity and mortality in particular due to tuberculosis, dengue shock syndrome, and in certain area Malaria. No wonder the organizing committee chosen the tropical infection as a main theme of this conference. This theme also is in line with the vision of Faculty of Medicine Universitas HKBP Nommensen namely “To Be Excellent in Tropical Medicine”

In these coming two days, the prominent speakers from USA, Netherlands, India, Malaysia and Indonesia would share their priceless experiences in dealing with tropical infection. Meanwhile on the second day the registered participants will guide by the experienced trainers on workshop about wound care, sonography and visum et repertum.

I would like to extend my sincere gratitude to organizer, sponsors and all those who have worked to make this event possible. I kindly invite Rector UHKBP Nommensen to officially open this conference by beating the GONG.

Thank You

Medan October 13, 2023

Best regards

Leo Simanjuntak

PROGRAMME SCHEDULE

Friday, October 13 th 2023 (WIB/GMT+7)	
07.00-08.00	Registration
08.00-08.30	Opening Ceremony: The National Anthem of Indonesia MC: Dr. dr. Christine V. Sibuea, M.Biomed
08.30-09.00	Opening Remarks
09.00-09.30	Plenary Lecture 1 <i>Lesson Learned from Covid 19, a threat for global and national security</i> Brigjend.TNI.(P).dr.Alexander K.Ginting, SpP(K),FCCP Moderator: dr.Pantas Hasibuan, M.Ked,Sp.P.Onk.T.(K)
09.30-09.40	Question & Answer
09.40-09.50	<i>COFFEE BREAK</i>
09.50-10.20	Plenary Lecture 2 <i>Lifestyle Medicine</i> Dr. Rusly Harsono, MD, MBA, MSc, FAAP Moderator: Dr.dr.Jenny Ria Sihombing,Sp.PK
10.20-10.30	Question & Answer
10.30-11.30	Symposium 1 <i>Tuberculosis Infection in Nervous System</i> Moderator: dr. Prima Heptayana Nainggolan, Sp.N
10.30-10.45	<i>Overview of Meningitis TB</i> Prof.Dr.dr.Kiking Ritarwan,Sp.S(K),MKT
10.45-11.00	<i>Neurosurgery Aspect of Brain Tuberculosis</i> Dr Indra Tjahja, MD, DTMH, DPH, DCH
11.00-11.15	<i>Overview of Spine TB</i> Dr. John G Wolbers, MD, PhD
11.15-11.30	Question & Answer
11.30-12.10	Symposium 2 <i>Latent Tuberculosis</i> Moderator: Dr. dr. Mutiara, MHA., MKT
11.30-11.45	<i>Latent TB Infection: An Overview, Diagnostic, Management</i>

	dr. Parluhutan Siagian,Sp.P(K)
11.45-12.00	<i>Diagnostic approach in latent TB infection: Focus on IGRA</i> Dr. dr. Christine V. Sibuea, M.Biomed
12.00-12.10	Question & Answer
12.10-12.25	Ethic Session <i>Artificial Intelligence (AI) in Medical Practice: Ethical Perspective</i> Prof. Paul Tahalele, MD, PhD, Sp.B, Sp.B-TKV (K)VE, FICS, FETCS Moderator: dr.Surjit Singh,Sp.F, DFM
12.25-12.45	<i>Lunch Symposium P&G</i> dr. Ita L Roderthani,Sp.THT-KL
12.45-14.00	<i>BREAK</i>
14.00-14.40	Symposium 3 <i>Update Immunization</i> Moderator: dr.Johan C Silaen,M.Ked(Ped),Sp.A
14.00-14.15	<i>Immunization Policy in Indonesia</i> dr.Prima Yosephine, MKM
14.15-14.30	<i>Update Immunization in Children</i> Prof. dr. Ayodhia Pitaloka Pasaribu, M. Ked(Ped), Sp.A(K), PhD (CTM)
14.30-14.40	Question & Answer
14.40-15.40	Symposium 4 <i>Diabetic and Complications</i> Moderator: dr.Owen Sitompul, M.Ked (Surg), Sp.B
14.40-14.55	<i>Diagnostic and Medication Approach in Diabetic Foot Infection</i> Prof.DR. dr.Dharma Lindarto,SpPD-KEMD
14.55-15.10	<i>Peripheral Arterial Disease</i> Dr.dr. Todung Silalahi, Sp.PD-KKV, FINASIM,FICA,FAPSIC, FACC,FSCAI
15.10-15.25	<i>Diet for Diabetics</i> dr. Wina Sinaga, M.Gizi,Sp.GK(K)
15.25-15.40	Question & Answer
15.40-15.50	CLOSING

Saturday, October 14 th 2023 (MIB/GMT+7)	
07.00-08.00	Registration
08.10-08.20	Welcome MC: Dr. dr. Christine V. Sibuea, M.Biomed
08.20-08.50	Plenary Lecture 3 <i>Ocular Tuberculosis</i> Dr Deepshikha Agrawal Moderator: dr.Surjit Singh,Sp.F, DFM
08.50-09.00	Question & Answer
09.00-09.30	Plenary Lecture 4 <i>Rhinosinusitis Chronic in Malaysia</i> Dr. Pravina Pospanathan Moderator: dr.Amran Simanjuntak,Sp.THT-BKL, Sub.sp Rino(K)
09.30-09.40	Question & Answer
09.40-10.10	Plenary Lecture 5 <i>Pediatric Acute Appendicitis</i> Prof. Dr. Thomas Hui, MD Moderator: dr.Terang Meliala, SpPD, DTM&H
10.10-10.20	Question & Answer
10.20-11.15	Symposium 5 <i>Role of Probiotic</i> Moderator: dr.Runggu Retno J Napitupulu, M.Ked
10.20-10.35	<i>Role of Probiotics in Infectious Diseases</i> Prof.Dr.Ir. Endang Sutriswati Rahayu, MS
10.35-10.50	<i>Implement Probiotic in Children in Daily Practices</i> Prof. dr. Badriul Hegar, Sp.A(K), PhD
10.50-11.05	<i>Probiotics in Bacterial Vaginosis</i> Dr.dr.Leo Simanjuntak, Sp.OG
11.05-11.15	Question & Answers
11.15-12.10	Symposium 6 <i>Update on HIV, What's new?</i> Moderator: dr. Maruatas M Silalahi, Sp.PD

11.15-11.30	<i>Epidemiology of HIV</i> dr. Helena Rugun N Naingolan, MKT
11.30-11.45	<i>Update in HIV Management</i> dr. Tambar Kembaren,SP.PD-KPTI
11.45-12.00	<i>HIV in Pregnancy</i> Prof.Dr.dr. Sarma Nursani Lumban Raja,Sp.OG(K)
12.00-12.10	Question & Answers
12.10-12.30	CLOSING

PARALLEL WORKSHOP (13.00-16.00 WIB)

FORENSIC	SURGERY	RADIOLOGY - SONOGRAPHY
Medicolegal Aspects of Visum et Repertum in Sexual Violence	Advanced Wound Dressing	<ul style="list-style-type: none"> - BASIS ABDOMEN USG - BASIC OBSTETRICS USG
Experts: <ul style="list-style-type: none"> - dr.Surjit Singh,Sp.F, DFM - dr. Dessy Harianja, Sp. F, - dr. Doaris, Sp.F 	Expert: dr.Owen Sitompul, M.Ked (Surg), Sp.B	Experts: <ul style="list-style-type: none"> - dr Rahel Sitorus, Sp Rad (K) - Dr.dr.Leo Simanjuntak, Sp.OG

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ORGANISING COMMITTEE

Chairman : dr. Ita L. Roderthani, Sp.THT-KL

Secretary : dr. Dina Octafrida Marpaung, M.Ked(Paru), Sp.P(K)-Onk

Treasurer : dr. Joice Sonya Gani Panjaitan, SpKK.

ABSTRACTS REVIEWER

1. Dr. dr. Leo Simanjuntak, Sp. OG
2. dr. Prima Heptayana Nainggolan, Sp.N
3. dr. Terang Meliala, Sp.PD, DTM&H

EDITORS

4. Dr. dr. Leo Simanjuntak, Sp. OG
5. dr. Prima Heptayana Nainggolan, Sp.N
6. dr. Terang Meliala, Sp.PD, DTM&H

Friday, October 13th 2023 (WIB/GMT+7)

PLENARY LECTURE 1: A Threat for Global and National Security: Lesson learned from COVID-19

Alexander K Ginting

Brigjen TNI Purnawirawan

Indonesia

ABSTRACT

The COVID-19 pandemic in Indonesia is part of the worldwide pandemic of corona virus disease 2019 (COVID-19) caused by severe acute respiratory syndrome corona virus-2 (SARS-CoV-2). It was confirmed to have spread to Indonesia on 2 March 2020, after a dance instructor and her mother tested positive for the virus and both were infected from a foreigner guest. The WHO dashboard reported on 27 September 2023 there have been 770 875 433 confirmed cases of Covid 19, including 6 959 316 deaths.

By 9 April 2020, the pandemic had spread to all 34 Provinces in the country at that time and Jakarta, West Java, and Central Java are the worst-hit provinces, together accounting more than half of the national total cases. On 13 July 2020, the recoveries exceeded active cases for the first time. According to the data of 3 July 2023, Indonesia has reported 6,812,127 cases, the second highest in South East Asia, behind Vietnam. With 161,879 deaths, Indonesia ranks second in Asia and ninth in the world. Review of data, however, indicated that the number of deaths may be much higher than what has been reported as those who died with acute Covid - 19 symptoms but had not been confirmed or tested were not counted in the official death figure.

Instead of implementing a nationwide modified lockdown, the government applied "Large Scale Social Restrictions" (Indonesian: *Pembatasan Sosial Berskala Besar*, abbreviated as PSBB), which was later modified into the "Community Activities Restrictions Enforcement" (Indonesian: *Pemberlakuan Pembatasan Kegiatan Masyarakat*, abbreviated as PPKM) and by 30 December 2022, the restrictions were lifted for all regions in Indonesia since satisfied population immunity exceeded the expectation, although it did not lift the pandemic status. Indonesia has tested 76,062,770 people against its 270 million population so far, or around 281,501 people per million. The World Health Organization (WHO) has urged the nation to perform more tests, especially on suspected patients

On 13 January 2021, President Joko Widodo was vaccinated at the Presidential Palace, officially kicking off Indonesia's vaccination program. As of 5th February 2023, at 18:00 WIB, the national task covid 19 force reported 204,266,655 people had received the first dose of the vaccine and 175,131,893 people had been fully vaccinated; 69,597,474 of them had been inoculated with the booster or the third dose. the WHO reported there have been 13 505 262 477 vaccine doses have been administered

The progress on Covid national recovery become clear as on 18 May 2022, the Governor of Bali requested that Bali receive an endemic status to COVID-19 in order to "accelerate the recovery of Bali's tourism and economy". The National Covid 19 Task Force on September 2022 reported Indonesia is posed to reach COVID-19 endemic stage and finally by June 14, 2023, President Joko Widodo announced that the country would end its COVID-19 emergency within the next two weeks preparation and transition into endemic status.

According to the Centre for Global Development the annual like hood of a pandemic is around 2-3% that means there is a 47-57% probability that the world will experience another deadly pandemic before 2050. Public health experts say that this increased risk is the result of globalization, the growing interconnectedness of countries and their economies from around the globe. There are any aspects of our globalized society like frequent travel, growing urbanization, climate change and our global food systems reliance on factory farming, greater meat consumption, over use antibiotics in human and animals that all contribute to the inevitability of the next pandemic.

Zoonotic diseases have been around for about as humans and animals have share the earth atmosphere, water and land together. However in recent history zoonotic diseases have dominated infectious disease event. The data from the Council on Foreign Relations reported that 60% of known infectious diseases are zoonotic in origin, as are about 75% of new or emerging communicable diseases. globally zoonotic diseases are responsible for billions of illness and millions of deaths annually.

The virus known as SARs CoV2 which causes the disease Covid 19 is still spreading and The WHO keeps a list of viruses and bacteria with Pandemic potential based on two factors: their ability to spread and the ability of humans to treat the diseases. There are several future outbreak diseases and potential to be a pandemic disease: Nipah Virus, Crimean Congo Hemorrhagic Fever, Lassa Fever, Rift Valley Fever, Zika, Ebola and Marburg Virus Disease, MERS, SARS, and Disease X.

Keywords: Covid-19 Pandemic, National Task Force on Covid-19, Health Security, Zoonotic Disease, Outbreak Disease

PLENARY LECTURE 2: Lifestyle Medicine

Rusly Harsono

Faculty of Medicine, Stanford University

USA

ABSTRACT

In an era where chronic diseases loom large and healthcare costs escalate, the concept of Lifestyle Medicine emerges as a beacon of hope. In his session, Dr. Rusly Harsono, a pediatrician, a pediatric intensivist, and a lifestyle medicine certified physician from Stanford University, School of Medicine, will delve into the transformative power of lifestyle choices, offering a vital perspective that extends beyond conventional medical interventions. It's an approach that emphasizes the profound impact of daily decisions on our health and well-being. By addressing factors such as nutrition, physical activity, stress management, and sleep, Lifestyle Medicine presents a roadmap to not only prevent but also treat and even reverse a myriad of health conditions. As we convene for this session, we embark on a journey that recognizes the extraordinary potential of our everyday choices to foster lasting wellness, reducing the burden on healthcare systems, and empowering individuals to reclaim agency over their health.

Keywords: Life Medicine, chronic diseases, health condition

SYMPOSIUM 1: TUBERCULOSIS INFECTION IN NERVOUS SYSTEM

S1.1 Overview of Tuberculous Meningitis: Diagnosis and Management

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ABSTRACT

Central nervous system (CNS) infections have been a global burden with current most affected region are Africa, Western Pacific and Southeast Asia. Neuroinfectious diseases caused a significant morbidity, mortality and long-term disability. They can be classified either by clinical syndromes or type of the infection. Particular clinical challenges include their clinical signs often resembling one another which made it difficult to differentiate between themselves and a relatively isolated nature of the CNS and its protective mechanisms. When it comes to an approach, three general principles are needed: knowing associated symptoms, its localization and their context for relevant workups and diagnosis.

Tuberculous meningitis (TBM) is the most severe form of Tuberculosis. TBM is characterized by high inflammation and very few *Mycobacterium tuberculosis* can be found in cerebrospinal fluid. This combination creates a challenge for physicians. Microbiological confirmation is rare and treatment is often delayed. TBM is more common in developing countries and most frequently found CNS infection in the neurological ward. In later stage mostly in patient with persistent headache, sign of hydrocephalus must be looked for.

Conventional antituberculosis drug combined with dexamethasone therapy can improve cerebrospinal fluid cell count, protein content, glucose and chloride levels in patients with TBM.

Keywords: CNS infection, Tuberculous Meningitis, developing countries, Diagnosis, Management

S1.2 Neurosurgery Aspect of Brain Tuberculosis

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ABSTRACT

Tuberculosis is an infectious and potentially contagious disease caused by *Mycobacterium tuberculosis*. Tuberculosis is widespread in Africa and Asia, but also endemic in the other parts of the world. Over 90% of tuberculosis occurs in developing countries, however a global resurgence is also affecting developed countries. The epidemiology of tuberculosis is influenced by factors which include socio-economic development, lifestyle, geographic location and access to medical service.

The three important manifestations of brain tuberculosis that require surgery are brain tuberculomas, cerebral tuberculous abscess and hydrocephalus associated with tuberculous meningitis. Patients with brain tuberculomas present clinically with features of a brain mass, indistinguishable clinically from other space occupying lesions in the brain. Both CT scan and MRI might provide a probable diagnosis of a tuberculoma but most often a histological diagnosis is necessary.

Although the treatment of brain tuberculomas is essentially medical, surgery is required when the diagnosis is uncertain, or to reduce raised intracranial pressure and to obtain tissue for laboratory investigations. Stereotactic biopsy or craniotomy, CT-guided excision of superficial small tuberculomas and microsurgery with image guided are all the procedures used to manage brain tuberculomas.

The outcome in patients with brain tuberculomas is good if the tuberculous bacillus is sensitive to the anti-tuberculous regime. Tuberculous meningitis with hydrocephalus most often also responds to medical therapy. But surgery is required promptly for those who fail with the medical therapy.

Both ventriculoperitoneal shunt (VP-shunt) and endoscopic third ventriculostomy (ETV) are surgical options. ETV is more often successful in patients with chronic hydrocephalus.

Patients with tuberculous meningitis hydrocephalus are more prone to complications following VP-shunt than other patients. Early surgical treatments are desired for tuberculous brain abscess presented with altered mental status, focal neurological signs and increased intracranial pressure symptoms. But the most important one, is to prevent contamination with *Mycobacterium tuberculosis*. Not only social economic and hygiene conditions are determined for transmission of this devastated disease, but also the habits of local population.

The vaccination against tuberculosis can save lives. However, *Bacillus Calmette–Guérin (BCG) vaccine* is still an actual preventive strategy for combating the disease, but recently the new vaccine has been in developing.

Keywords: Brain Tuberculosis, Surgery

S1.3 Overview of Spine TB

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ABSTRACT

Tuberculosis is still an endemic disease in highly populated countries like India, China, Nigeria and also Indonesia. Predisposing factors are poverty, malnutrition, poor sanitation, overcrowding, close contact with TB patients, immunodeficient status. Caused by Mycobacterium genus complex, mostly by *M. tuberculosis*, the lungs are primarily infected as spreading is through the air by coughing, sneezing and spitting people.

Extra-pulmonary sites (15%) results from hematogenous dissemination and 5% have spine involvement (Pott's spine), mostly of the lower thoracic and lumbar area and mostly in the first three decades of life with babies and children at high risk. Tuberculosis of the spine is characterized by bone destruction, spine deformity and (severe) neurological deficit. MRI + gadolinium is the preferred imaging.

Cold abscesses may occur and proper diagnosis often is delayed due to a low degree of suspicion. Pus can track in any direction, even far away from the spine. Treatment consists of anti-TB drugs (first-line, second-line), aspiration and instill of streptomycin+/- INH, ultrasound guided drainage, surgical opening.

Kyphotic deformity may lead to significant disability and to neurological deficit secondary to compression or to traction. In the absence of neurological deficit or instability treatment may consist of anti-TB drugs +/- spinal orthosis. Surgery is indicated in case of neurological deficit, progressive kyphosis and/or instability. Surgery includes anterior decompression, corpectomy, stut-/bone grafting, posterior and/or anterior plating, laminectomy.

TB is curable and preventable.

Keywords: Pott's diseases, Surgery

SYMPOSIUM 2: LATENT TUBERCULOSIS

S2.1 Latent TB Infection: An Overview, Diagnostic and Management

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ABSTRACT

Latent Tuberculosis Infection (latent TB infection) is defined as a state of persistent immune response to stimulation by *Mycobacterium tuberculosis* antigens without evidence of clinically manifested active. Latent TB is a condition in which the immune system of an infected person is unable to completely eliminate *Mycobacterium tuberculosis* from the body but is able to control TB bacteria so that no symptoms of TB disease arise. One third of the world's population is estimated to be infected with *M. tuberculosis*. The lifetime risk of reactivation TB for a person with documented LTBI is estimated to be 5–10%, with the majority developing TB disease within the first five years after initial infection. Latent TB infection is a challenge in tuberculosis eradication. Reactivation TB can be averted by preventive treatment. Tuberculosis Preventive Therapy (TPT) can prevent patients with latent TB becoming active TB. People live with HIV, close contact and other risk groups with negative HIV are the target of TPT. An approach and education are needed before latent TB infection examination and administering TPT. Currently available treatments have an efficacy ranging from 60% to 90%. The following treatment options are recommended for the treatment of LTBI: 6-month isoniazid, or 9-month isoniazid, or 3-month regimen of weekly rifapentine plus isoniazid, or 3–4 months isoniazid plus rifampicin, or 3–4 months rifampicin alone.

Keywords: Latent Tuberculosis Infection, treatment

S2.2 Diagnostic of Latent Tuberculosis with Interferon Gamma Release Assays (IGRA)

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ABSTRACT

Latent Tuberculosis Infection (LTBI) poses a significant global health challenge due to its potential progression to active tuberculosis. Early detection and effective management of LTBI are essential to prevent the progression of active tuberculosis disease. However, there still needs to be more clarity surrounding the accuracy of diagnostic tests due to the absence of a gold standard. Interferon-Gamma Release Assays (IGRA) emerged as promising diagnostic tools that showed high specificity for detecting LTBI. IGRA offers several advantages, including higher specificity than the Tuberculin Skin Test (TST), reduced cross-reactivity with Bacillus Calmette-Guérin (BCG) vaccination, and potential utility in various populations, including immunocompromised individuals, healthcare workers dan immigrants. However, the sensitivity of IGRAs may vary with factors such as immunosuppression level and TB prevalence. Moreover, an ongoing debate exists about their cost-effectiveness and feasibility in resource-limited settings. Many studies suggest that IGRA is valuable in LTBI diagnosis, particularly in low TB incidence areas and in populations where TST may yield false-positive results. Nevertheless, the limitations, including cost and the need for specialized laboratory facilities, should be carefully considered when implementing these tests. Future research should focus on refining the interpretation of IGRA results, exploring their utility in high TB burden settings, and developing standardized guidelines for their use in clinical practice. Interferon-Gamma Release Assays have shown promise as valuable tools for diagnosing Latent Tuberculosis Infection. Their specificity, cost-effectiveness and reduced cross-reactivity advantages make them attractive alternatives to the Tuberculin Skin Test. However, ongoing research is needed to address remaining questions about their sensitivity, cost-effectiveness, and applicability in diverse clinical settings.

Keywords: Latent Tuberculosis Infection (LTBI) , IGRA

ETHIC SESSION: Artificial Intelligence (AI) in Medical Practice: Ethical Perspective

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SYMPOSIUM 3: UPDATE IMMUNIZATION

S3.1 Immunization Policy in Indonesia

Prima Yosephine

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S3.2 Update Immunization in Children

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SYMPOSIUM 4: DIABETIC AND COMPLICATIONS

S4.1 Diagnostic and Medication Approach in Diabetic Foot Infection

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S4.2 Peripheral Arterial Disease

Todung Silalahi

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Indonesia

S4.3 Diet for Diabetics

Wina Sinaga

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PLENARY LECTURE 3: Ocular Tuberculosis

Deepshikha Agrawal

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ABSTRACT

Tuberculosis was first identified in eye in 1883, with hematogenous spread from a pulmonary focus being the most common mode of transmission. Anatomically, ocular tuberculosis can be classified as extraocular and intraocular. Extraocular manifestations can be seen in orbit, eyelids, conjunctiva, cornea, lacrimal glands and sclera. Intraocular manifestations like anterior and intermediate uveitis, multifocal choroiditis, choroidal tubercle and tubercular granuloma, occlusive retinal vasculitis and optic disc neovascularization can be seen. Ocular findings must be supported with appropriate history, ocular and systemic investigations like Mantoux test, IGRA (Interferon gamma release assay), chest radiography and PCR for diagnosis. Treatment of ocular TB is the same as for pulmonary TB, and concomitant steroid therapy is often required.

Keywords: Tuberculosis, Ocular

PLENARY LECTURE 4: Chronic Rhinosinusitis in Malaysia

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ABSTRACT

Definitions:

Sinusitis is inflammation of the sinus or nasal passage occurring for more than 12 weeks.

Classifications:

Chronic sinusitis may present as, chronic sinusitis without nasal polyps, and chronic sinusitis with nasal polyps.

Etiologies:

Viruses and bacteria are the most common etiologies for sinusitis. Streptococcus, pneumococcus, Hemophilus, and Moraxella are the most common bacterial causes.

Epidemiology:

Asian region the prevalence rate reported in Korea, China and Singapore are 7%, 8% and 2.7% respectively.

Clinical Diagnosis:

CRS is diagnosed when at least two of the following four symptoms are present, purulent drainage, facial pain, nasal obstruction, hyposmia. Sinusitis as one of the aforementioned major symptoms plus two or more minor criteria such as a headache, ear pain, pressure, and halitosis CRS can be diagnosed by history taking, anterior rhinoscopy, nasal endoscope using rigid scopes and CT Paranasal sinuses.

Treatment of CRS:

Nasal toileting in ORL clinics using endoscope, swab cultures, intranasal steroids, antihistamine, nasal douching using alkaline douching as well. Oral antibiotics does not play a role in CRS unless its acute symptoms according to the Malaysian CPG. Surgery is mandatory if persistent symptoms even after treatment is started. Functional endoscopic sinus surgery is warranted for patients with persistent CRS.

Keywords: Chronic Rhinosinusitis, Clinical Practice Guidelines (CPG)

PLENARY LECTURE 5: Pediatric Acute Appendicitis

Thomas Hui

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USA

ABSTRACT

Acute appendicitis is a common cause of hospitalization in children who present with abdominal pain. In this presentation, Dr Thomas Hui (pediatric general surgeon at Lucile Packard Children's hospital Stanford University) will discuss the current diagnostic methods for pediatric acute appendicitis. Emphasis on the use of the Pediatric appendicitis score (PAS) to guide imaging and early surgical consultation decision will be discussed as well as the pros and cons of the various imaging modalities. Surgical and medical treatments of pediatric acute appendicitis, as well as the management of patients in the postoperative period with emphasis on discharge criteria after appendectomy and potential early and late complications after surgery will also be discussed.

Keywords: Acute Appendicitis, Pediatric

SYMPOSIUM 5: ROLE OF PROBIOTIC

S5.1 Role of Probiotics in Infectious Diseases

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ABSTRACT

Probiotics are defined as live microorganisms which when administered in adequate amounts confer a health benefit on the host (FAO/WHO, 2001). While criteria used for probiotics are: accurate taxonomy identification, safety (nonpathogenic)/GRAS, ability to colonize in the host, adherence to intestinal epithelial, produce antimicrobial components against pathogens, inability to exchange materials (antibiotic resistance genes), and have potential benefits to host. The main mechanism of probiotics in maintaining the health, especially the digestive tract, is through balancing the gut microbiota. Currently, many diseases are linked to the dysbiosis of gut microbiota in the digestive tract. Probiotics could be used a solution. While mechanisms of how probiotics help protect a host from infections include strengthening of the epithelial barrier, increasing adhesion to the intestinal mucosa, synthesizing antibacterial substances, inhibiting pathogen adhesion, reduction pathogenic microorganisms, modifying toxins or toxin receptors, and stimulating nonspecific and specific responses to pathogens.

Very important indigenous of *Lactobacillus*. We have done long time research for searching the indigenous probiotics, and there are several candidates belong to genera *Lactiplantibacillus* and *Lacticaseibacillus* (new taxonomy name). In silico based on whole genome sequence, together with *in vitro* as well as *in vivo* have been thoroughly studied to obtain the characteristic, safety and potentials of these indigenous probiotics. *Lactiplantibacillus plantarum* Dad-13 (FNCC 0461), one of our probiotic strains, isolated from *dadih* (spontaneous fermented milk) consider as safe and has an ability to grow in intestine, adhere to epithelial cell, produce bacteriocin which important to inhibit the growth of pathogenic bacteria. This Dad-13 also has several physiological functions, such as reducing cholesterol, producing folic acid and GABA, as well as antioxidant activities as immunomodulator. Human clinical trials for the consumption of Dad-13 strain was conducted in children, adult and

elderlies' subjects. The consumption of probiotic product (probiotic powder, jelly probiotic and other probiotic food) was reported to relate health beneficial properties of this strain, including higher short-chain fatty acids production, lower fecal pH and better nutritional status of subjects, when compared to the placebo group. Intervention this probiotic to OTG covid-19 patients has shown that DAD-13 was able to reduce diarrheal cases in the intervention group, compare to the placebo, after 2 weeks treatment during pandemic. Based on the requirements for probiotic strains, currently, *Lactiplantibacillus plantarum* Dad-13 has been included in the BPOM positive list.

Keywords: Probiotics, infectious disease, *Lactiplantibacillus plantarum* Dad-13

S5.2 Implement Probiotic in Children in Daily Practices

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ABSTRACT

Imbalanced microbiota is related to many gastrointestinal problems. Multiple randomized trials and meta-analysis have been conducted to examine the efficacy of probiotics in the treatment of acute diarrhea and prevention of antibiotic-associated diarrhea (AAD). Small or single randomized trials pada prevention of ulcerative colitis, necrotizing enterocolitis prevention and reduced severity, alleviation of symptoms associated with irritable bowel syndrome, and colic. Individual randomized controlled clinical trials in children using various probiotic bacteria in the treatment of acute diarrhea showed the reduction in incidence varies significantly 15-75%.

Some specific strains of probiotics exert efficacy for treatment of infantile colic through anti-inflammatory roles. A specific strains of probiotics may introduce as a therapeutic strategy for the management. In some conditions, probiotics are also used as complementary therapy for chronic functional constipation in childhood. Significantly beneficial effect for symptoms related to gas content and dysbiosis, incomplete defecation. Bifidobacterium mixture supplementation has been reported to be associated with improvements in abdominal pain and quality of life in children with irritable bowel syndrome.

Specific strains have also been reported to be effective in reducing the incidence of NEC in preterm infants. In AAD, several probiotics are effective for a moderate reduction in duration

of diarrhea and appear most appropriate for preventing AAD in children. The microbiota composition disorders as a cause of disease and not as a result. Microbiota composition changes in every situation. Evidence of clinical benefit is accumulating, although still missing in many areas. Misuse and use of unvalidated products is a potential drawback.

Keywords : Microbiota, gastrointestinal, probiotic

S5.3 Bacterial Vaginosis (BV) in Pregnant Women with Symptomatic Vaginal Discharge

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Nommensen Medan

Indonesia

ABSTRACT

Background:

Bacterial vaginosis is a common lower genital tract syndrome defined as a shift from normal hydrogen peroxide-producing lactobacilli to mixed anaerobes. The majority of cases of BV are asymptomatic and remain unreported and untreated. BV has been related to many gynecologic conditions and complications of pregnancy.

Objectives:

This study aimed to determine the incidence of Bacterial Vaginosis (BV) among the symptomatic vaginal discharge of pregnant women and associated factors.

Materials and Methods:

This is a cross-sectional study conducted at antenatal private maternity clinic in Medan, Indonesia from May to September 2023. The vaginal fluid sampling using a sterile cotton bud, immediately smear onto the object glass slide, air dried and sent to laboratory for Gram staining and evaluation. The diagnosis of BV made according to Nugent scoring system of bacterial morphotypes from a Gram stain of vaginal fluid. A score of 0 – 3 is defined as normal, 4 – 6 as intermediate, and 7–10 is considered as BV. The Gram staining and microscopic evaluation carried out at research laboratory Faculty of Medicine Universitas HKBP Nommensen Medan. Data was analysed using Mann-Whitney test to analyses continuous variables between BV and no-BV group and Chi-square test to determine the association between parity status and BV incidence.

Results:

As many as 382 (40,7 %) out of 939 presented with symptomatic vaginal discharge and evaluated for BV by using Gram staining to analyze morphotype and scoring according to Nugent. As many as 168 (44 %) out of 382 met the criteria of BV with Nugent score 7-10. There is a significant mean maternal height differences between BV (156.4 cm) and no-BV group (157.8 cm). There is no significant mean maternal age, gestational age, weight, and BMI differences between BV and no-BV group. There was also no association between parity status and BV incidence.

Conclusion:

The incidence of symptomatic vaginal discharge in this study was 40,7%, the incidence of BV among pregnant women during the study period was 15,7%, and among the symptomatic vaginal discharge was 44 %. There is no significant mean maternal age, gestational age, maternal weight, and body mass index differences between BV and no-BV group. There was also no association between parity status and BV incidence.

Keywords: Bacterial vaginosis; Vaginal discharge, Pregnancy

SYMPOSIUM 6: UPDATE ON HIV, WHAT'S NEW?

S6.1 Epidemiology of HIV and AIDS in North Sumatera Province

Helena Rugun N. Nainggolan

ABSTRACT

Human Immunodeficiency: Virus or HIV is a virus that attacks white blood cells in the body (lymphocytes) which resulted in the decline of the human immune. PLWHA who loss to follow up or stop taking ARV will increase resistance to antiretroviral, increase the risk of transmitting HIV to others, and increase the risk of death.

HIV is virus that attacks blood cells white matter in the body (lymphocytes) resulting in decreased immunity man. People who are in his blood present of the HIV virus can appear healty and does not necessarily require treatment. Nevertheless, the person can transmit the virus to other people if engaging risky sex and share the use of syringes with others.

Acquired Immune Deficiency Syndrome or AIDS is a group symptoms of disease that arise due to decreased immunity caused by HIV infection. Consequence decreased immunity in someone then

that person is very susceptible to diseases such as tuberculosis, candidiasis, various inflammations of the skin, lung, digestive tract, brain and cancer.:

Since the beginning of the epidemic, 85.6 million (65.0-113.0 million) people have been infected with the HIV virus and about 40.4 million (32.9-51.3 million) people have died of HIV.

Globally, 39.0 million (33.1-45.7 million) people were living with HIV at the end of 2022. An estimated 0.7% [0.6-0.8%] of adults aged 15–49 years worldwide are living with HIV, although the burden of the epidemic continues to vary considerably between countries and regions. The WHO African Region remains most severely affected, with nearly 1 in every 25 adults (3.2%) living with HIV and accounting for more than two-thirds of the people living with HIV worldwide.

At the end of 2022, 76% [65–89%] of people living with HIV were accessing antiretroviral therapy, up from 24% [21–29%] in 2010. Globally, there were 1.2 million [940 000–1.5 million] pregnant women with HIV in 2022, of which an estimated 82% [64–98%] received antiretroviral drugs to prevent mother-to-child transmission. At the end of 2022, there were 1.5 million [1.2–2.1 million] children living with HIV globally, down from 2.5 million [2.0–3.5 million] in 2010.

The trend in the number of new HIV infections in Indonesia has been drop. In calculating the Ministry of Health's estimates in 2020, the number of PLHIV in 2020 is as many as 526,841. Lower than the count The previous estimate was made in 2016. Meanwhile, the 2018 STBP noted that the prevalence of HIV in Indonesia varies greatly according to population 25.8 percent in among men who have sex with men, 28.8 percent among people who inject drugs (PWID), 24.8 percent among the transgender population, and 5.3 percent among female sex workers.

Estimated PLWHA in North Sumatra: 27,772 people. HIV + North Sumatra from 1994 to February 2023: 23,696 people. Cumulative HIV per District/City in North Sumatra Province as of April 2023 HIV cases are spread across 31 Districts/Cities In North Sumatra Province Case. Only Nias Has 0 HIV cases. The most cases are in Medan, namely 14,309.

S6.2 Update on HIV Management

Tambar Kembaren

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S6.3 Assessment and Treatment of Maternal HIV-AIDS

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ABSTRACT

Maternal HIV-AIDS is a critical public health concern in Indonesia, posing significant challenges to maternal and child health. Commencing with an analysis of HIV-AIDS prevalence among pregnant women in Indonesia, the presentation explores the potential routes of HIV transmission from mother to child. It scrutinizes prevailing prevention strategies, including Prevention of Mother-to-Child Transmission (PMTCT) programs and antiretroviral therapy (ART), evaluating their effectiveness in reducing vertical transmission rates and improving neonatal outcomes. A significant portion of Assessment & Treatment of Maternal HIV-AIDS is dedicated to addressing the guidelines between Indonesian Cases to Another Guideline dimensions that impact HIV-AIDS management during pregnancy. It advocates for a patient-centered approach that respects individual choices while promoting comprehensive healthcare delivery. By enhancing prevention efforts, strengthening healthcare systems, improving accessibility to treatment, and fostering a supportive environment, we can significantly reduce the burden of HIV-AIDS on mothers and their unborn children, ultimately advancing the prospects of a healthier future for the affected population in Indonesia. During the recent years, universal HIV prenatal testing, antiretroviral therapy (ART), scheduled cesarean delivery for HIV positive women with elevated viral loads, appropriate ART for infants and avoidance of breastfeeding have shown encouraging results, and the Centers for Disease Control and Prevention now aims to eliminate HIV transmission from mother to child by reducing its incidence to <1 infection per 100,000 live births.

Keywords: HIV-AIDS, Antenatal care, PMTCT, Indonesia

RESEARCH ABSTRACTS

RA.1 The Relationship Between Obesity And The Incident Of Benign Prostatic Hyperplasia (BPH) at Dr. Pirngadi Medan Year 2019

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Background: Benign Prostatic Hyperplasia (BPH) is the presence of hyperplasia of the stromal cells and epithelial cells of the prostate gland. Enlarged prostate gland is one of the most common diseases in aging men and can interfere with normal daily activities. BPH is a disease that is second in urology cases in Indonesia after urinary tract disease. Obesity is one of the factors that are thought to increase the risk of developing BPH.

Objective: This study aims to determine the relationship between obesity and the incidence of benign prostatic hyperplasia in Dr. Pirngadi Medan in 2019.

Method: This study is an analytic study with a cross-sectional design. The sample selection used total sampling method and obtained 301 samples. The data obtained are secondary data from medical record data contained in RSUD Dr. Pirngadi Medan. Data analysis using the chi-square test.

Results: The results of this study indicate that patients with BPH are obesity (11.6%) and non-obesity (12.6%). In the bivariate analysis, it was found that the value of $p = 0.000$ ($p < 0.05$) with the value of the prevalence ratio (PR) = 1.785.

Conclusion: There is a relationship between obesity and the incidence of benign prostatic hyperplasia (BPH) in Dr. Pirngadi Medan in 2019.

Keywords: Benign prostatic hyperplasia (BPH), obesity

RA.2 Description of The Incident of Foreign Objects of The Ear, Nose and Pharynx at Pirngadi Hospital Medan From January 2018 to December 2019

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Background Foreign bodies are objects originate from inside or outside the body that normally does not exist in the body and consist of exogenous foreign bodies and endogenous foreign bodies. Exogenous foreign bodies vary, can be in the form of organic substances such as seeds (from plants) and bones or spines (from animals) and inorganic substances such as cotton, paper, and others. Foreign objects can also be found in various organs of methods such as ears, nose, pharynx, and others. The types of foreign objects that are often encountered are beads, cotton buds, fish spines, insects, cotton and others.

Objective To describe the incidence of foreign ear, nose, and pharynx in Pirngadi Hospital from January 2018 to December 2019.

Methods This study was a cross-sectional research design that was a descriptive survey involved 53 research patients who were patients with a diagnosis of foreign ear, nose, and pharynx in the ENT clinic of Pirngadi Hospital Medan from Ja, January substances embed 2019.

Result and Conclusion: Most of them are aged 6-11 years, which is 10 people (18.87%). Most of the sexes in cases of foreign body ear, nose and pharynx were as many as 36 patients (67.92%). The location of the most foreign object is in the ear as many as 41 patients (77.36%). The most common foreign objects found were inorganic foreign bodies as many as 42 patients (79.25%)

Keywords: Foreign bodies, ENT

RA.3 Correlation between Compliance Level of Mask Use with the Incidence of COVID-19 In Medan City

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Background: COVID-19 is an infectious disease caused by the SARS-CoV-2 virus. It can spread through direct contact (droplet and airborne), indirectly (form). Indonesia has designated COVID-19 as a disease outbreak, so prevention and control is necessary. The Ministry of Health released 3M in preventing the spread of COVID-19 in the community in everyday life, including wearing masks. So that the community is expected to comply with the health protocol in an effort to prevent the transmission of COVID-19 cases from spreading.

Methods: This study is an analytical study with a cross-sectional design. The population of this research is people who live in Medan, North Sumatra. The sample selection used a non-probability sampling method (snow-ball sampling) and obtained 222 samples using a questionnaire.

Result: 76% of study respondents did not comply with using masks. 11.7% of respondents had an incidence of COVID-19. Data analysis using Fisher's chi test exact test got the value of $p = 1,000$ ($p > 0.05$).

Conclusion: There is no relationship between the level of mask use and the incidence of COVID-19 in Medan City.

Key Words: COVID-19, level of knowledge, mask

RA.4 Analysis of Factors Affecting Drug Adherence to Patients with Pulmonary TB in the Polonia Health Center Medan

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Background: Pulmonary Tuberculosis is a chronic infectious disease caused by the bacterium *Mycobacterium tuberculosis*. Data from the Indonesian Ministry of Health shows that Indonesia ranks second with the most TB cases in the world. The long duration of treatment

with many drugs that must be consumed causes sufferers to be non-compliant with treatment. The aim of this study was to determine the factors that influence treatment compliance for pulmonary tuberculosis patients in the Polonia Medan Public Health Service area.

Method: This research is analytical with a cross sectional design. The number of respondents was 52 people and were selected using the consecutive sampling method by visiting and making pulmonary tuberculosis patients at the community health center as research respondents.

Results: The results showed that the majority of respondents had low education (53.8%), worked (88.5%), low income (82.7%), poor PMO support (63.5%), good health worker support (53.8%), poor medication adherence (51.9%). In the multivariate analysis, variables that had a significant effect on treatment compliance in pulmonary tuberculosis patients were income (p-value 0.000), PMO support (p-value 0.001), support from health workers (p-value 0.000).

Discussion: In data from high-income respondents, the majority of good PMO support and good health staff support will make respondents obedient in undergoing treatment to completion. It is hoped that the Community Health Center can improve the function of the PMO, coordination of health workers, education and health promotion related to pulmonary tuberculosis.

Keywords: Pulmonary tuberculosis, medication adherence, medication observers, support from health workers.

RA.5 Overview the Factors Influencing Exclusive Breastfeeding in Breastfeed Mother in the Working Area of Kabanjahe Primary Health Care

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Introduction: Exclusive breastfeeding has impact on the quality of human resources. In several areas in North Sumatera, the exclusive breastfeeding rates are still low.

Aims: This research aims to describe the factors influencing exclusive breastfeeding in breastfeed mother in the working area of Kabanjahe Primary Health Care.

Method: This research is a descriptive study with a cross-sectional design. The subjects in this study are breastfeed mothers who have 6-12 months old baby and live in the working area of Kabanjahe Primary Health Care were selected in this study using purposive sampling technique. The data was collected by using a questionnaire. From 138 respondents, most of them do not breastfeed exclusively. There are 34,8% mothers who give exclusive breastfeeding, while 65,2% mothers do not practice exclusive breastfeeding. The majority of respondents who do not exclusively breastfeed their babies have low education level, have a job, have low income, have poor knowledge and bad attitude toward exclusive breastfeeding, do not practice early initiation of breastfeeding and do not receive support from their husbands. Half of the subjects who do not breastfeed exclusively, are not influenced by culture. On the other hands, the majority of respondents who provide exclusive breastfeeding to their babies have high education level, have high income, have good knowledge and good attitude toward exclusive breastfeeding, are not influenced by culture, practice early initiation of breastfeeding, receive support from their husbands. Meanwhile, half of the mothers who give exclusive breastfeeding have a job.

Conclusion: Most of the breastfeed mothers in the working area of Kabanjahe Primary Health Care do not provide exclusive breastfeeding. There are of the factors that might influence this. Further research is needed to analyse the correlation of these factors to exclusive breastfeeding.

Keywords: Breastfeeding, breastfeed mothers, exclusive breastfeeding

RA.6 Correlation between Physical Distancing Compliance Level and the Incidence of COVID-19 in Medan City

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Background: Coronavirus Disease 2019 (COVID-19) is an infectious disease of the respiratory tract that caused by Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2). It can be spread through coughing, sneezing, respiratory droplets, aerosols and interacting closely with people who are infected with COVID-19. One of the steps to prevent its spread is to carry out physical distancing by maintaining a minimum distance of 2 meters and limiting physical interactions to minimize the spread of this virus.

Method: This study was an analytical study with a cross-sectional design. The sample selection used the snowball sampling method and 222 samples were obtained which were assessed using an online questionnaire via google form.

Results: The 83,3% of respondents did not obey physical distancing and 11,7% of respondents were classified as COVID-19 incidents. Data analysis with fisher's exact test obtained p value = 0,089 ($p > 0,05$).

Conclusion: There is no relationship between the level of compliance with physical distancing and the incidence of COVID-19 in Medan.

Keywords: COVID-19, level of compliance, incidence of COVID-19

RA.7 Description of the Level of Knowledge and Attitudes of Student at the Faculty of Medicine, HKBP Nommensen University Medan Towards Smoking

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Background: Smoking is the cause of more than eight million people's death every year. Cigarette contains more than 7000 chemical substances, and 69 of them tend to be carcinogenic. Long-term exposure to cigarette smoke may increase risk of lung cancer and heart disease. There is two possibility a person to be a smoker. It could be that person affected

from other people, or the people influenced by that person, so in the end they all become smokers.

Objective: The purpose of this study is to know the level of knowledge and attitude of medical student at HKBP Nommensen Medan University about smoking.

Method: This study uses descriptive research methods with cross-sectional design, and the sample withdrawal is done by using total sampling technique.

Result: From 303 respondents, 38 students (12,5%) had smoked, and 265 students (87,5%) never smoked. Among 38 students who had smoked, 16 students (42.1%) still smoking and 22 students (57.9%) did not smoke anymore. The level of knowledge is relatively high, and the student attitudes dominated by negative attitudes towards smoking.

Conclusion: We can conclude that the knowledge level of medical student at HKBP Nommensen Medan University is relatively high, and the student attitudes dominated by negative attitudes towards smoking. It might be caused by respondents are medical students.

Keywords: Knowledge and Attitude, University student, Smoking.

RA.8 The Relationship between the Level of Knowledge of HKBP Nommensen University Medan Employees and Attitudes and Preventive Actions for COVID-19

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Background: The spread of COVID-19 has been increasingly widespread since the easing of “*Pembatasan Sosial berskala Besar (PSBB)*”. This increases community activities outside the home, especially office employees who have started working, so that the office becomes the largest source of transmission clusters. Breaking the chain of spread of COVID-19 requires a good balance between knowledge, attitudes, and preventive measures for COVID-19. Individual knowledge about COVID-19 based on appropriate information is the most important

domain in shaping individual behaviour. It is hoped that this good knowledge can influence every individual in showing a positive attitude and good action in preventing and controlling COVID-19.

Objective: This study aimed to determine the relationship between the level of knowledge of the campus staff of the Universitas HKBP Nommensen Medan on the attitudes and actions to prevent Coronavirus Disease 2019 (COVID-19).

Methods: This study was an analytic study using a cross sectional design. The number of samples is 86 people who were selected using purposive sampling method. The data obtained are primary data from questionnaires that have been filled out by the research sample.

Results: The results of this study showed 86 respondents, good knowledge level (97.7%), positive attitude (90.7%) and good action (84.9%). In the bivariate analysis, it was stated that there was a statistically significant relationship between knowledge and preventive measures for COVID-19 ($p=0.021$).

Conclusion: Good knowledge was expected to have a good impact on prevention and transmission of COVID-19.

Keywords : COVID-19, knowledge, attitude, precautions.

RA.9 The Relationship between Breakfast Intensity and Intensity and The Degree of Dysmenorrhoe in College Students of Universitas HKBP Nommensen

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Introduction: Dysmenorrhoea occurs as one of the symptoms of menstruation. Dysmenorrhoea is a health problem that is frequently found in the reproductive age of women. This thing can reduce life quality and inhibit the activities of young women, especially when it is followed by

symptoms such as headache, fatigue, nausea and vomiting, diarrhea, and muscle cramps. Breakfast is one of the most important foods today. Breakfast is used as body fuel after fasting all night, can increase concentration in carrying out daily activities, and also seen as the basis of a healthy diet. Breakfast skipping incidence is more typical among young adults than older adult. Many college students have the habits of skipping meals, especially breakfast, in spite the significance of this meal. This research aims to see the relationship between breakfast intensity and the degree of dysmenorrhea of students in Nommensen HKBP University Medan.

Method: This study was analytical research with a cross-sectional design. There were 390 students from Nommensen HKBP University chosen as the research sample. Data collection was done by using Google Form. The data were analysed by applying the Spearman Rank correlation test.

Result: In this study, there were 103 respondents (26.4%) who always had breakfast, 95 respondents (24.4%) who often had breakfast, namely 5-6 times/week, 126 respondents (32.3%) who only had breakfast 3-4 times/week, 49 respondents (12.6%) who rarely had breakfast, namely 1-2 times/week, and only 17 respondents (4.4%) who never had breakfast in a week. There were 101 respondents (25.9%) who did not experience dysmenorrhea, 189 respondents (48.5%) who had mild dysmenorrhea, 71 respondents (18.2%) who had moderate dysmenorrhea, and only 29 respondents (7.4%) who had severe dysmenorrhea. This study showed that there was a relationship between breakfast intensity and the degree of dysmenorrhea ($p = 0.000$) with a strong correlation coefficient between the two variables ($r = 0.482$).

Conclusion: There was a relationship between breakfast intensity and the degree of dysmenorrhea of students in Nommensen HKBP University Medan.

Keywords: dysmenorrhea, breakfast intensity

RA.10 Description of Self Regulated Learning for Students at the Faculty of Medicine, HKBP Nommensen University during the Online Learning Period

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Background: In a learning process, there was individual student differences in the learning process. One of these differences was the ability to self-regulate in student learning or self-regulated learning, which differs from one student to another. During the pandemic, all learning in Indonesia was carried out online, including at the medical faculty at HKBP Nommensen University. The learning environment changes, and this results in changes in the learning process. Environment was one of the factors that influence SRL. The image of SRL in students during online learning can explain the environment affecting SRL.

Method: This research was a descriptive quantitative study using a cross sectional design. The number of samples is 212 respondents who were selected using the total sampling method. The data obtained was primary data through questionnaires.

Results: The figure of SRL based on gender is in the low category, in men (14.7%), women (15.9%). Medium category for men (65.5%), women (73.5%). High category in men (19.6%), women (10.6%). The description of SRL is based on the year of class with low category, in Class 2018 (20.3%), Class 2019 (14.8%), Class 2020 (11.9%). Medium category is Class 2018 (75.0%), Class 2019 (74.1%), Class 2020 (64.2%). High category in Class 2018 (4.6%), Class 2019 (11.1%), Class 2020 (23.9%).

Conclusion: The figure of SRL based on gender with the highest category was male, namely 19.6%. The figure of SRL based on the year of class with the highest category was the largest percentage in Class 2020, namely 23.9%.

Keywords: SRL, Faculty of Medicine, Online Learning

RA.11 The Relationship between Low Birth Weight (LBW) Babies and the Incident of Neonatary Sepsis in Infants at Dr. Pirngadi Medan in 2018-2019

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Background: According to the World Health Organization (WHO), the definition of a low birth weight (LBW) baby is a baby with a birth weight of less than 2,500 grams. Based on the Ministry of Health of the Republic of Indonesia, Secretariat General, Indonesian Health Profile. In 2019, the number of low-birth-weight babies in Indonesia was found to be 111,827 out of 4,778,621 total. neonate birth. With the highest incidence rate being in East Java 39,739 neonates, West Java 18,656 neonates, North Sumatra 6,511 neonates and South Sulawesi 6,478 neonates. Neonatal sepsis is a collection of clinical syndromes of systemic diseases that attack newborns, in the first month of life and in some circumstances can causes tissue damage and organ damage.

Objective : This study aimed to determine the relationship between low birth weight (LBW) babies and the incidence of neonatal sepsis in babies at RSUD Dr. Pirngadi Medan in 2018 – 2019.

Method : This research used observational analytics, namely a case control study design, with the basis of sampling starting from identifying the neonatal sepsis group (cases) and the group that did not experience neonatal sepsis (controls) then looking at the relationship with birth weight in neonates using medical record data.

Results: The results of this study showed 1. The incidence of neonatal sepsis was 78 babies. Male gender is 53.8% and female gender is 46.2%. The percentage of early-onset sepsis (late-onset sepsis) was 83.3% and late-onset (early-onset sepsis) 16.7%. With a description of the outcome or condition of the septic baby going home, the recovery rate reached 74.4%, the mortality rate was 10.3%. The birth weight description of sepsis babies was found in 15.4% of normal birth weight babies, 59% of low birth weight (LBW) babies, 20.5% of very low birth weight (BBLSR) babies and 5.1% of very low birth weight babies (BBLASR).

Conclusion: There is a significant relationship P value of 0.000 or significance <0.05 , which means H_0 is rejected and H_a is accepted or there is a relationship between LBW babies and neonatal sepsis. The prevalence ratio was obtained at 19.735, which means that LBW babies are at risk of developing sepsis 19.735 times compared to babies who are not LBW. The prevalence of sepsis in babies is more male, 53.8%, than female babies, 46.2%.

Keywords: Sepsis, low birth weight

RA.12 The Relationship of Stress with The Incident of Dyspepsia Syndrome in Students of The Faculty of Medicine Universitas HKBP Nommensen

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Background: Dyspepsia is a symptom that is often found in some patients who come for treatment to a doctor's practice or hospital. These symptoms cause pain and discomfort in the solar plexus, can be permanent or intermittent. Complaints can be accompanied by a burning feeling in the chest and stomach, feeling full quickly, anorexia, bloating, regurgitation, and releasing a lot of acid gas from the mouth (belching).

Objective: The objective of this study is to know how the relationship between stress and the incidence of dyspepsia syndrome.

Method: This study was analytical research with cross-sectional design. There were 82 respondents chose by purposive sampling technique. Respondents were given a Depression, Anxiety, and Stress Scale (DASS) questionnaire to determine respondents stress and functional dyspepsia questionnaire to determine the incidence of dyspepsia. The datas were analyzed with Chi Square test.

Result: There was no relationship between stress and the incidence of dyspepsia syndrome with p value 0.102.

Conclusion: There was no relationship between stress and the incidence of dyspepsia syndrome.

Keywords: Stress, dyspepsia, students.

RA.13 Factors that Influence the Growth and Development of Toddlers at The UPT Puskesmas Sigalingging

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Background: Toddler age, especially the age of one to three years is the most important age in children because this stage is a golden period of growth physical, intellectual, mental and emotional children. Growth is the increase in the number, organs, of an individual. Development is the ability to structure and function of the body more complex, with an orderly pattern and can be considered.

Objective: This study aimed to determine the factors that affect the growth and development of children under five at UPT Puskesmas Sigalingging.

Methods: This study is an observational analytic study with a cross sectional design. The study sample there were 302 toddlers at UPT Puskesmas Sigalingging. Sampling was done by purposive sampling. Sampling was done by using purposive sampling method. Data analysis was performed using Fisher's exact test and multiple logistic regression.

Result: Factors significantly associated with growth status according to weight/age is birth weight ($p=0,056$ OR=0,13), breastfeeding ($p=0,004$ OR=2,87), parent's education ($p=0,030$ OR=0,10). Factors significantly associated with growth status according to height/age is breastfeeding ($p=0,000$ OR=3,61), parent's income ($p=0,000$ OR=0,16). Factors significantly associated with growth status according to weight/height is parent's income ($p=0,009$ OR=0,19). Factors significantly associated with development status is breastfeeding ($p=0,000$ OR=0,12), parent's income ($p=0,002$ OR=5,84).

Conclusion: The factors that most influences the growth status of children according to weight/age, height/age is the breastfeeding and the factor that most influences the growth status of children according weight/height and development status of children is the income of parents.

Keywords: Growth, development, toddler

RA.14 Viability of Hepatocyte in 3D Monoculture Hanging Drop Method and 2D Monoculture

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Background: Liver is a vital organ that has much a lot functions including the center of metabolism and detoxification. The treatment of liver disease of highest prevalence of liver disease is the reason that liver model are needed to study liver disease mechanisms and test drug toxicity. Study of hepatocyte culture continue to develop. Many hepatocyte culture methods are being developed to construct an optimal liver model. The best culture method maintains high hepatocyte viability.

Objective: This study aims to determine the viability of hepatocytes in 3D hanging drop method culture and in 2D culture.

Methods: Hepatocytes were isolated from the liver of Sprague-Dawley rats (n=2) and digested with Trypsin. Primary hepatocytes were cultured using the hanging drop method and conventional (2D) method. Hepatocyte viability was analyzed using the Trypan Blue Exclusion Test.

Results: Hanging drop method had higher viability (81.18%) than the 2D culture method (69.22%) with $p > 0,05$.

Conclusion: The hanging drop method has better viability than the 2D culture method.

Keywords: hepatocyte, viability, 3D culture, 2D culture, hanging drop

RA.15 The Relationship of Stress to Dysmenorrhea in University Faculty of Medicine student HKBP Nommensen Medan

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Background: Menstruation is one of the female reproductive organ maturity signs. During menstruation a woman experiences some annoying things, such as emotional discomfort and feeling pain in the pelvis and abdomen which is often referred to as dysmenorrhea. Dysmenorrhea is caused by increased production of prostaglandins which cause ischemic and stimulate myometrium contractions. Some factors trigger the occurrence of dysmenorrhea such as early menarche, elongated menstruation, smoking, alcohol consumption, obesity and stress. Stress is the human body's response to the stressors it experiences. Stressful conditions alone can cause disruption to the working system in the human body including the endocrine system.

Objective: This study was aimed to find out the correlation between stress and dysmenorrhea in students of the Faculty of Medicine Universitas HKBP Nommensen Medan.

Method: This study was an analytical study. The sample were 44 active students of the Faculty of Medicine of Universitas HKBP Nommensen Medan who filled the criteria of inclusion and exclusion by purposive sampling. The data was analyzed in a univariate way to describe the average stress and dysmenorrhea scores and bivariate analysis using Pearson test to determine the correlation between stress and dysmenorrhea.

Result: We found moderate correlation between stress to dysmenorrhea and correlation coefficient value $r=0.495$ ($p= 0.000$).

Conclusion: The higher the stress score, the higher the dysmenorrhea score in students of the Faculty of Medicine Universitas HKBP Nommensen Medan.

Keywords: Stress, dysmenorrhea

RA.16 Description of Doctors Present as Experts in Trials at the Medan District Court and Lubuk Pakam District Court for the 2018-2019 Period

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Background: Apart from providing health services to patients, doctors are also needed in the law enforcement process by carrying out medical examinations on dead and alive victims, and providing statements in front of judges. Proof of an event is increasingly developing with the presence of silent witnesses. This type of witness requires an expert to be able to explain the event that occurred, one of which is a doctor. A doctor who is presented as an expert in a trial must meet the characteristic criteria necessary for the doctor to be able to shed light on a case. In carrying out their obligations as experts at trial, doctors also have the right to receive reimbursement.

Objective: This study aimed to describe characteristics of doctors who are called as experts in the Medan District Court (DC) and Lubuk Pakam DC.

Methods: This research was a descriptive qualitative study using a cross-sectional. The number of samples is 145 doctors who were selected using the total sampling method. Primary data from interviews with related doctor, and secondary data in the form of case data presenting them as experts.

Result : The results of this study showed 145 doctors, (58,1%) abuse cases in Medan DC, (38,1%) sexual abuse cases in Lubuk Pakam DC, (37,7%) male doctors in Medan DC and (33,3%) Lubuk Pakam DC, (37,7%) the age group 25-34 years in Medan DC and (33,3%) 35-44 year in Lubuk Pakam DC, (25,0%) the duration of doctors was 6-10 year in Medan DC and (23,8%) 31-35 year in Lubuk Pakam DC, Bhayangkara TK II Hospital in Medan DC and Lubuk Pakam DC, general practitioner (57,3%) in Medan DC and doctors forensic (38,1%) in Lubuk Pakam DC, 1 doctors who compensated (0,7%).

Conclusion: There were still many doctors who haven't received reimbursement when presented as experts at the trial.

Keywords: Doctor, expert, reimbursement.

RA.17 The Relationship between Stress and Sleep Quality in Students of the Faculty of Medicine, HKBP Nommensen University

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Introduction: Medical faculty students have a heavy educational burden because they are required to have the ability in studies and skills to be able to become quality doctors. The competency- based curriculum (CBC) used at the Faculty of Medicine increases the educational load of medical students because there is a compaction of assignments and lecture schedules. This makes them even more stressed and spends their time studying late at night which has a negative impact on health and sleep quality. This study aims to determine the relationship between stress and sleep quality in students of the Faculty of Medicine, University of HKBP Nommensen.

Methods: The research sample was 97 FK UHKBP Nommensen students in the undergraduate medical stage who met the criteria. Data were collected by giving the Depression Anxiety Stress Scale (DASS 42) questionnaire to assess stress and the Pittsburgh Sleep Quality Index (PSQI) questionnaire to assess sleep quality. The relationship between stress and sleep quality was analysed using Fisher exact test.

Results: The results of this study showed that out of 97 respondents, most of them did not experience stress (80.4%) and most had poor sleep quality (84.5%). The results of univariate analysis showed that in 2019's and 2020's class, had the highest stress and the worst quality of sleep. The results of the Fisher exact test showed a significant relationship between stress and sleep quality ($p = 0.037$).

Conclusion: There is a significant relationship between stress and sleep quality in students of the Faculty of Medicine, University of HKBP Nommensen.

Keywords: Stress, Medical Students, Sleep Quality

RA.18 Correlation of Body Mass Index with Fasting Blood Sugar Levels in Students at the Faculty of Medical HKBP Nommensen University Medan.

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Introduction: Diabetes Mellitus (DM) is a collection of symptoms that arise in a person as a result of the body having problems controlling blood sugar levels. The proportion of DM in the North Sumatra region itself has increased from 1.8% in 2013 to 2% in 2018. One of the risk factors for DM is obesity. In this state obesity becomes global public health, especially in young adults who experience a marked increase in overweight and obesity.

Objective: This study aims to determine the correlation between BMI and fasting blood sugar levels in students of the Faculty of Medicine, University of HKBP Nommensen Medan.

Methods: This study is an analytical study with a cross-sectional approach to 53 respondents who were selected by purposive sampling. BMI measurement uses a digital scale with an accuracy of 0.1 kg and a capacity of 200 kg to measure body weight, using a microtoise measuring instrument with a length of 200 cm with an accuracy of 0.1 cm to measure height, then the weight results in kg divided by the height in meters squared being the result of BMI, fasting blood sugar levels were measured by a Cobas 6000 analyser after fasting 8-12 hours. Normally distributed data were analysed using the Pearson correlation test and data that were not normally distributed were analysed using the Spearman correlation test.

Results: The results of this study showed the median BMI was 22.49 kg /m², those who were obese were 35.85%, and the average fasting blood sugar levels were 56.68 mg/dL. The results of statistical tests showed that there was no correlation between BMI and fasting blood sugar levels (p = 0.642).

Conclusion: There was no correlation between BMI and fasting blood sugar levels in students of the Faculty of Medicine, Universitas HKBP Nommensen (p = 0.642).

Keywords: Body mass index, fasting blood glucose, obesity

RA.19 The Correlation Between the Intensity of Social Media Use and the Degree of Depressive Symptoms in Students of the Faculty of Medicine, University of HKBP Nommensen

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Background: Social media is an inseparable component of human life, included medical students. Social media usage has both positive and negative benefits. Several studies showed excessive use of social media can cause mental health problems, such as depression. This study aims to evaluate the correlation between the intensity of social media use and the degree of depressive symptoms in students of the Faculty of Medicine, University of HKBP Nommensen.

Methods: This study was an analytical observational study with cross-sectional design on 101 students of the Faculty of Medicine, University of HKBP Nommensen using questionnaires such as Social Networking Time Use Scale (SONTUS) to measure the intensity of social media use, and Beck Depression Inventory-II (BDI-II) to assess the degree of depressive symptoms. Data analysis was done by Spearman's rank correlation coefficient test.

Results: This study showed that 38.6% respondents had low intensity, 41.6% medium intensity, and 19.8% respondents had high intensity of social media usage. There were 81.2% of respondent had no depression, 10.9% had mild depression, 5.9% moderate depression, and 2.0% severe depression. The Spearman test results showed that there is no correlation between the intensity of social media usage and the degree of depressive symptoms ($p= 0.882$) with a very weak correlation value ($r = 0.015$).

Conclusion: There is no correlation between the intensity of social media use and the degree of depressive symptoms in the Faculty of Medicine, University of HKBP Nommensen students.

Keywords: Social media, depression, medical students.

RA.20 Description of The Anxiety Level of Congregation during Covid-19 Pandemic at HKBP Padang Pasir

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Introduction: Covid-19 can affect mental health. One of the psychosocial impacts that occurred during the Covid-19 pandemic was anxiety. Lack of knowledge about Covid-19, fear of contracting Covid-19, closing schools, businesses and scarcity of medical equipment are factors that increase anxiety during the Covid-19 pandemic.

Objective: The aim of this study is to determine the description of the level of anxiety of the congregation during the COVID-19 pandemic at HKBP Padang Pasir Rantauprapat.

Methods: In this study used descriptive research methods with cross-sectional design. The data came from 224 respondents, who had filled HARS (Hamilton Anxiety Rating Scale) questionnaires.

Result: This study showed that the most respondents were in late adult age group (25.9%), female (54.8%), high school students (46.9%), workers (60.7%), married (63.8%), mild anxiety (50.4%).

Conclusion: The conclusion of this research is 224 respondents with the most anxiety level category are mild anxiety.

Keywords: Anxiety level, pandemic COVID-19

RA.21. The Effect of Mangosized skin extract (Gracinia mangostana L.) Activity on Blood Glucose Levels in Male White Wistar Rats (Rattus norvegicus) induced by Aloksan.

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Background: Diabetes mellitus (DM) is a chronic metabolic disorder that occurs due to various causes, characterized by hyperglycaemia, accompanied by disorders of carbohydrate, fat and protein metabolism. Diabetes mellitus has become a world health problem, because the incidence and prevalence of DM disease never stops, in fact it increases from year to year. Diabetes mellitus sufferers will receive long-term therapy so it takes a very long time. Diabetes management requires multidisciplinary treatment that includes non-pharmacological and pharmacological therapy. One alternative prevention of diabetes mellitus is with natural treatment using mangosteen peel extract (*Gracinia mangostana L.*).

Research Objective: To determine the effect of the activity of 100 and 150 mg/KgBW of mangosteen rind extract (*Gracinia mangostana L.*) on the blood glucose levels of male white Wistar rats (*Rattus norvegicus*) induced by alloxan.

Method: Pre-clinical experimental laboratory test research with a PreTest and PostTest Control Group Design, where the research subjects were 15 male Wistar white rats divided into 3 treatment groups. The pretest blood glucose level examination was carried out before administering the skin extract, while the post test was carried out after administering the skin extract at doses of 100 and 150 mg/kgBB. The treatment group was given mangosteen peel extract, while the control group was not given mangosteen peel extract but only fed. Data analysis used the Shapiro-Wilk test, followed by the One Way Anova test to compare blood glucose levels in the three groups.

Research Results: The control group found that in the pretest the average blood glucose level for mice was 438.2 mg/dL, post test 404 mg/dL. The treatment group with 100 mg/kgBB mangosteen peel extract, in the pretest the average blood glucose level was 418.4 mg/dL, post test 207 mg/dL. The treatment group administered 150 mg/KgBB of extract, in the pretest the average blood glucose level was 464 mg/dL while in the post test it was 184 mg/dL. The ANOVA test showed that there was a significant decrease in blood glucose levels in the control group with the treatment group given mangosteen peel extract at doses of 100 and 150 mg/KgBB ($p < 0,001$). There was no significant effect on reducing blood glucose levels in mice when given mangosteen peel extract at a dose ratio of 100 mg/KgBB and a dose of 150 mg/KgBB ($p > 0.001$).

Conclusion: There is an effect of the activity of mangosteen peel extract (*Gracinia mangostana L.*) on blood glucose levels of male Wistar white rats (*Rattus norvegicus*) induced by alloxan.

Keywords: Diabetes Mellitus, Mangosteen Peel Extract (*Gracinia mangostana L.*), Blood Glucose Levels, Male Wistar White Rat (*Rattus norvegicus*).



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