

# NoHMSIC 2021

NOMMENSEN HEALTH AND SCIENCES  
INTERNATIONAL CONFERENCE

Virtual

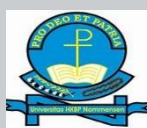
*Infection, Inflammation,  
& Nutrition in 1<sup>st</sup> 1000 Days of Life*

08-09 July 2021

## ABSTRACT BOOK

Organized by:

Participating Partners



FAKULTAS KEDOKTERAN  
UNIVERSITAS HKBP NOMMENSEN



<https://nohmsic.uhn.ac.id/>



## CONTENTS

<b>WELCOME SPEECH</b>	<b>6</b>
<b>PROGRAMME SCHEDULE</b>	<b>7</b>
<b>ORGANISING COMMITTEE</b>	<b>12</b>
<b>ABSTRACT REVIEWERS</b>	<b>13</b>

### THURSDAY, 08 JULY 2021

<b>Keynote Speech 1: <i>COVID-19 in Children: US Experience</i></b> Rusly Harsono, USA	<b>14</b>
<b>Keynote Speech 2: <i>COVID-19 Management Strategy in Indonesia</i></b> Alexander K Ginting, Indonesia	<b>15</b>
<b>Keynote Speech 3: <i>Diagnostic and Management of Brain Abscess</i></b> Indra Tjahja, The Netherlands	<b>17</b>
<b>Keynote Speech 4: <i>Prospects of Music as a Form of Healing in Times of Pandemic</i></b> Pravina Manoharan, Malaysia	<b>19</b>
<b>Keynote Speech 5: <i>Communication Challenges during COVID-19 Pandemic</i></b> Fatima Mohamed Al-Majdhoub, Malaysia	<b>20</b>
<b>Symposium 1: <i>Long COVID-19: Early Detection, Management, and Prognosis</i></b> Chrispian Oktafbipian Mamudi, Indonesia	<b>21</b>
<b>Symposium 2: <i>COVID-19: The Role of Herbal Medicine</i></b> Christine Verawaty Sibuea, Indonesia	<b>22</b>
<b>Symposium 3: <i>New Variant of SARS-CoV-2: Implication on Management</i></b> Djap Hadi Susanto, Indonesia	<b>23</b>

### FRIDAY, 09 JULY 2021

<b>Keynote Speech 1: <i>Fetal Programming and Nutrition during Pregnancy</i></b> Johanes C Mose	<b>24</b>
<b>Keynote Speech 2: <i>Hidden Hunger: Indonesian Experience</i></b> Soekirman, Indonesia	<b>26</b>
<b>Keynote Speech 3: <i>First 1000 Days of Life: Building a Healthy and Intelligent Next Generation</i></b> Hartono Gunardi, Indonesia	<b>27</b>
<b>Symposium 1: <i>The First 1000 Days of Life Count: How Micronutrients Impact a Child</i></b> Bambang Wirjatmadi, Indonesia	<b>29</b>
<b>Symposium 2: <i>Preeclampsia: The Role of Nutrition</i></b> Leo J Simanjuntak, Indonesia	<b>31</b>
<b>Symposium 3: <i>The Brain's Window of Opportunity</i></b> Sisca Silvana, Indonesia	<b>33</b>

### PARALEL SESSIONS DAY 1

**OP1-1: *Potential Antifungal Activity of Brotowali (*Tinospora crispa* L.) Stem Ethanolic Extract Against *Candida krusei****

Virgina Glory Brillianti, MM Suryani Hutomo, Christiane Marlene Sooai, Maria Sylvia Merry	34
<b>OP1-2: <i>The Effect of Ascorbic Acid on IL-β1 Cytokine in Rattus Novergicus with Endometritis</i></b>	
M. Oky Prabudi, MFG Siregar, IPA Nasution, S Ilyas	35
<b>OP1-3: <i>Correlation between Mothers' Education Level and Knowledge of DPT and HiB Primary Vaccine with Vaccine Receipt in Fourth Neighbourhood, Ninth Hamlet, Cileungsi Kidul</i></b>	
Lathifah Dzakiyyah Zulfa, Dessyani Salim	36
<b>OP1-4: <i>Contact Dermatitis and Alcohol-Based Hand Sanitizer among Healthcare Workers</i></b>	
Claudia Agape VD Nugroho, Kristo Nababan, Joice Sonya Panjaitan	37
<b>OP1-5: <i>Comparison of Serum Vitamin D Level Between Abortion and Normal Pregnancy</i></b>	
Leo Simanjuntak, Benhard Christopher Simanjuntak	38
<b>OP1-6: <i>Co-infection case effect to clinical manifestation and mortality of COVID-19 patients in Bengkulu</i></b>	
Debie Rizqoh, Enny Nugrahaeni, Jusup Endang, Mulya Sundari, Dessy Triana, Mardhatillah Sariyanti, Nikki Aldi Massardi	39
<b>PARALEL SESSIONS DAY 1</b>	
<b>OP2-1: <i>Case Report: An Eleven-Year-Old Girl with Chronic Polyarthritis and Tuberculosis Infection</i></b>	
M. Jiofansyah, Fikta Zakia N, Roro Rukmi Windi P	40
<b>OP2-2: <i>ARDS in Covid 19: A Case Report</i></b>	
Susi Sembiring	41
<b>OP2-3: <i>Cutaneous Manifestation of COVID-19 Infection: A Case Report</i></b>	
Rini Amanda Carolina Saragih, Budianto Sigalingging	42
<b>OP2-4: <i>Antifungal Activity of Brotowali (Tinospora crispa L.) Stem Ethanolic Extract on Candida Tropicalis</i></b>	
Ceny Gloria Larope, MM Suryani Hutomo, Christiane Marlene Sooai, Maria Sylvia Merry	43
<b>OP2-5: <i>Anxiety Level and Sleep Quality of The HKBP Padang Pasir Congregation during Global Pandemic of SARS-Cov-2 (Severe Acute Respiratory Syndrome Corona Virus 2) COVID-19</i></b>	
Yudi Andre Marpaung	44
<b>OP2-6: <i>Schistosomiasis and Pulmonary Hypertension: A Literature Review</i></b>	
Ester Grace D Silaen, Agnes Monika Simanullang, Claudia Pasaribu, Imanuel Sitorus Nadia Christine Hutagalung	45
<b>OP2-7: <i>Challenges Management and Diagnostic Approach on Pulmonary</i></b>	

***Adenocarcinoma and Head Metastases with Covid 19 Infection:***

***What can be done and hope for?***

Kristin Purnama Dewi, Risa Natalia Siburian, Ivana Purnama Dewi, Resti Yudhawati,  
Laksmi Wulandari, Iswanto

46

## Welcome Speech

Dear Colleagues,

Hope you are fine and safe in this pandemic.

On behalf of the organizing committee, it is with great pleasure I welcome you fellow doctors, students, and anyone interested to participate in Nommensen Health & Medical Sciences International Conference 2021 (NoHMSIC 2021) held on July 8th -9th 2021, virtually.

This conference will focus on the theme “Infection and inflammation, and nutrition during the first 1000 days of life”. Coronavirus disease 2019 (COVID-19) is an emerging disease that has reached pandemic status by rapidly spreading worldwide. The pandemic has caused a public health crisis with profound long-term socioeconomic fallout. Although most patients experience mild to moderate symptoms, the disease remains fatal in a significant proportion of those infected. Much of the critical illness is believed to be the result of a hyperinflammatory process referred to as hypercytokinemia or a “cytokine storm”. The course of the COVID-19 pandemic is still uncertain. Epidemiology, pathogenesis, the role of immunologic factors, diagnostic, treatment, and vaccine findings are still remarkably interesting and relevant to be discussed. The 1000 days of life, the period between conception and the first 2 years of life, is extremely critical and has an enormous impact on the health and wellbeing of fetal, neonates, and long-term health. Well-balanced, essential nutrients in optimal amounts during the first 1000 of life strongly correlates especially with brain development, metabolism, and immune system.

We look forward to welcoming you.

Leo Simanjuntak  
Chairman, Organizing Committee  
Dean, Faculty of Medicine  
Universitas HKBP Nommensen

## Programme Schedule

The entire NoHMSIC 2021 program takes place virtually using the **Zoom Meeting platform**.

Thursday, July 8 <sup>th</sup> , 2021 (WIB/ GMT+7)	
7:00 – 8:00	<b>Registration</b>
8:00 – 8:15	<b>Opening Ceremony: The National Anthem of Indonesia</b> MC: dr. Rini A. C. Saragih, M. Ked (KK), SpKK (Faculty of Medicine UHN, Medan)
8:15 – 8:45	<b>Opening Remarks:</b> Dr. dr. Leo J. Simanjuntak, SpOG – Dean of Faculty of Medicine UHN, Medan Prof. Dr.dr. Mardi Santoso, DTM&H, Sp.PD-KEMD, FINASIM, FACE – Chairman of FKIK Badan Kerjasama Perguruan Tinggi Kristen di Indonesia (BK PTKI) Drs. Samse Pandiangan, MSc., PhD – Vice Rector of Universitas HKBP Nommensen, Medan Dr. Ir. Budi Situmorang, MURP – Chairman of Yayasan Universitas HKBP Nommensen
8:40 – 12:40	<b>Plenary Lecture</b>
8:40 – 9:20	Keynote Speech by <b>Rusly Harsono, MD, MBA, MSc, FAAP</b> <i>(Pediatric Intensivist, Stanford University School of Medicine, USA)</i> <i>COVID-19 in Children: US Experience</i>  Moderator: dr. Sisca Silvana, M. Ked (Ped), SpA (K) (Faculty of Medicine UHN, Medan)
9:20 – 9:30	Question and Answer
9:30 – 10:10	Keynote Speech by <b>Brigjend. TNI (P) dr. Alexander K. Ginting, SpP (K), FCCP</b> <i>(Head of Health Management of Indonesian COVID-19 Task Force)</i> <i>COVID-19 Management Strategy in Indonesia</i>  Moderator: DR.dr.Mutiara, MHA, MKT (Murni Teguh Memorial Hospital, Medan)
10:10 – 10:20	Question and Answer
10:20 – 11:00	Keynote Speech by <b>Dr. Indra Tjahja</b> <i>(Dutch Academic Neurosurgery Foundation, Bloemendaal, The Netherlands)</i> <i>Diagnostic and Management of Brain Abscess</i>  Moderator: dr. Johan C. Silaen, M.Ked(Ped),SpA (Faculty of Medicine UHN, Medan)
11:00 – 11:10	Question and Answer

11:10 – 11:30	Keynote Speech by <b>Dr. Pravina Manoharan</b> (Universiti Sains Malaysia, Penang) <i>Prospects of Music as a Form of Healing in Times of a Global Pandemic</i>
11:30 – 11:50	Keynote Speech by <b>Dr. Fatima Mohamed Al-Majdhoub</b> (International Lecturer from Yamen and Senior Lecturer at The Communication and Media Departement, Faculty of Languages and Communication, UPSI) <i>Communication challenges during COVID-19 Pandemic</i>  Moderator: Junita Batubara, S.Sn., M.Sn., Ph.D (Faculty of Languages and Arts UHN, Medan)
11:50 – 12:30	Question and Answer
12:30 – 12:35	Taking Photo and Break Time
12:35 – 14:35	<b>Symposium</b> Moderator: dr. Joseph P. Sibarani, M.Ked(PD), SpPD (Faculty of Medicine UHN, Medan)
12:35 – 13:05	dr. Chrispian Oktafbipian Mamudi, SpPD-KP (Faculty of Medicine UKRIDA, Jakarta) Long COVID-19: Early Detection, Management, and Prognosis
13:05 – 13:35	Dr. dr. Christine Verawaty Sibuea, M. Biomed (Faculty of Medicine UHN, Medan) Covid 19; The Role of Herbal Medicines
13:35 – 14:05	Dr. dr. Djap Hadi Susanto, M. Kes (Faculty of Medicine UKRIDA, Jakarta) New Variant of SARS-CoV-2: Implication on Management
14:05 – 14:35	<b>Discussion and Sharing Session</b>
14:35 – 15:00	Taking Photo and Break Time
15:00	<b>Paralel Session: Paper presentation</b> Moderator: dr. Ervina Julien, M. Biomed (Faculty of Medicine UHN, Medan) Judge: Dr. dr.Christine Verawaty Sibuea, M. Biomed (Faculty of Medicine UHN, Medan)

<b>Friday, July 9<sup>th</sup>, 2021 (WIB/ GMT+7)</b>	
7:00 – 8:00	<b>Registration</b>
8:00 – 8:20	<b>Welcome</b> MC: Dr. dr. Christine Verawaty Sibuea, M. Biomed (Faculty of Medicine UHN, Medan)
8:20 – 11:00	<b>Plenary Lecture</b>
8:20 – 9:00	Keynote Speech by <b>Prof. Dr. dr. Johan C. Mose, SpOG (K)</b> (Universitas Padjajaran, Bandung) <i>Fetal Programming and Nutrition during Pregnancy</i>  Moderator: dr. Johan C. Silaen, M.Ked(Ped),SpA (Faculty of Medicine UHN, Medan)
9:00 – 9:10	Question and Answer



9:10 – 9:50	<p>Keynote Speech by <b>Prof. Dr. dr. Hartono Gunardi, SpA (K)</b> (Universitas Indonesia/ RSCM, Jakarta) <i>The First 1000 Days of Life: Building a Healthy and Intelligent Next Generation</i></p> <p>Moderator: dr. Trina Devina, M.Ked(Ped),SpA (Murni Teguh Memorial Hospital, Medan)</p>
9:50 – 10:00	Question and Answer
10:00 – 10:40	<p>Keynote Speech by <b>Prof. Soekirman, SKM, MPS-ID, Ph. D</b> (Universitas Kristen Indonesia, Jakarta) <i>Hidden Hunger: Indonesian Experience</i></p> <p>Moderator: dr. Ade Pryta Simaremare, M.Biomed (Faculty of Medicine UHN, Medan)</p>
10:40 – 10:50	Question and Answer
10:50 – 11:00	Taking Photo and Break Time
11:00 – 13:00	<p><b>Symposium</b> Moderator: Dr. dr. Jenny Ria Sihombing, SpPK (Faculty of Medicine – UHN, Medan)</p>
11:00 – 11:30	<p>Prof. dr. Bambang Wirjatmadi, MS, MCM, Ph. D, SpGK (Faculty of Medicine – Ciputra, Surabaya) The First 1000 Days of Life Count: How Micronutrients Impact a Child</p>
11:30 – 12:00	<p>Dr. dr. Leo Simanjuntak, SpOG (Faculty of Medicine – UHN, Medan) Preeclampsia: The Role of Nutrition</p>
12:00 – 12:30	<p>dr. Sisca Silvana, M. Ked (Ped), SpA (K) (Faculty of Medicine – UHN, Medan) The Brain's Window of Opportunity</p>
12:30 – 13:00	<b>Discussion and Sharing Session</b>
13:00 – 14:00	Taking Photo and Break Time
14:00	<p><b>Paralel Session: Paper presentation</b> Moderator: dr. Ervina Julien, M.Biomed (Faculty of Medicine UHN, Medan) Judge: Dr. dr. Christine Verawaty Sibuea, M. Biomed (Faculty of Medicine UHN, Medan)</p>
16:45 – 17:00	<p><b>Closing</b> Dr. Richard Napitupulu, ST, MT – Vice Rector of Universitas HKBP Nommensen, Medan</p>

## Parallel Sessions

Day 1: Juli, 08 <sup>th</sup> 2021 Start from 03.00 pm			
Presentation ID	Authors	Institution	Abstract Title
OP1-1	<b>Virgina Glory Brillianti</b> MM Suryani Hutomo Christiane Marlene Sooi Maria Sylvia Merry	Faculty of Medicine, Universitas Kristen Duta Wacana	Potential Antifungal Activity of Brotowali ( <i>Tinospora crispa L.</i> ) Stem Ethanolic Extract Against <i>Candida krusei</i>
OP1-2	<b>M Oky Prabudi</b> MFG Siregar IPA Nasution	Faculty of Medicine, Universitas	The Effect of Ascorbic Acid on <i>IL-β1</i> Cytokine in <i>Rattus Novergicus</i> with Endometritis

	S Ilyas	Sumatera Utara	
OP1-3	<b>Lathifah Dzakiyyah Zulfa</b> Dessyani Salim	Faculty of Medicine, Universitas Kristen Indonesia	Correlation between Mothers' Education Level and Knowledge of DPT and HiB Primary Vaccine with Vaccine Receipt in Fourth Neighbourhood, Ninth Hamlet, Cileungsi Kidul
OP1-4	<b>Claudia Agape VD Nugroho</b> Kristo Nababan Joice Sonya Panjaitan	Faculty of Medicine, Universitas HKBP Nommensen	Contact Dermatitis and Alcohol-Based Hand Sanitizer among Healthcare Workers
OP1-5	Leo Simanjuntak <b>Benhard Christopher Simanjuntak</b>	Faculty of Medicine, Universitas HKBP Nommensen	Comparison Of Serum Vitamin D Level Between Abortion and Normal Pregnancy
OP1-6	<b>Debie Rizqoh</b> Enny Nugrahaeni Jusup Endang Mulya Sundari Dessy Triana Mardhatillah Sariyanti Nikki Aldi Massardi	Faculty of Medicine, Universitas Bengkulu	Co-infection case effect to clinical manifestation and mortality of COVID-19 patients in Bengkulu
Day 2: July, 09 <sup>th</sup> 2021 Start from 02.00 pm			
OP2-1	<b>Muhammad Jiofansyah</b> Fikta Zakia N Roro Rukmi Windi P	Faculty of Medicine, Universitas Lampung	Case Report: An Eleven-Year-Old Girl with Chronic Polyarthritis and Tuberculosis Infection
OP2-2	<b>Susi Sembiring</b>	Faculty of Medicine, Universitas HKBP Nommensen	ARDS in Covid 19: A Case Report
OP2-3	<b>Rini Amanda Carolina Saragih</b> Budianto Sigalingging	Faculty of Medicine, Universitas HKBP Nommensen	Cutaneous Manifestation of COVID-19 Infection: A Case Report
OP2-4	<b>Ceny Gloria Larope</b> Suryani Hutomo Christiane Marlene Sooi Maria Sylvia Merry	Faculty of Medicine Universitas Kristen Duta Wacana	Antifungal Activity of Brotowali ( <i>Tinospora crispa L.</i> ) Stem Ethanolic Extract on <i>Candida Tropicalis</i>
OP2-5	<b>Yudi Andre Marpaung</b>	Faculty of Medicine, Universitas	Anxiety Level and Sleep Quality of The HKBP Padang Pasir Congregation during Global Pandemic of Sars-Cov-2 (Severe

		HKBP Nommensen	Acute Respiratory Syndrome Corona Virus 2) COVID-19
OP2-6	<b>Ester Grace D Silaen</b> Agnes Monika Simanullang Claudia Pasaribu Imanuel Sitorus Nadia Christine Hutagalung	Faculty of Medicine, Universitas HKBP Nommensen	Schistosomiasis and Pulmonary Hypertension: A Literature Review
OP2-7	<b>Kristin Purnama Dewi</b> Risa Natalia Siburian Ivana Purnama Dewi Resti Yudhawati Laksmi Wulandari Iswanto	Faculty of Medicine, Universitas Airlangga	Challenges Management and Diagnostic Approach on Pulmonary Adenocarcinoma and Head Metastases with Covid 19 Infection: What can be done and hope for

## Organizing Committee

- Chairman: Leo Simanjuntak (Universitas HKBP Nommensen, Indonesia)
- Co-Chairman: Okto Marpaung (Universitas HKBP Nommensen, Indonesia)
- Secretary: Sisca Silvana (Universitas HKBP Nommensen, Indonesia)
- Treasurer: Joice S Panjaitan (Universitas HKBP Nommensen, Indonesia)
- Scientific: Novita Simanjuntak (Universitas HKBP Nommensen, Indonesia)
- Multimedia: David M T Simangunsong (Universitas HKBP Nommensen, Indonesia)

## Abstract Reviewers

1. Dr.dr. Mardi Santoso, DTM&H, SpPD-KEMD (Faculty of Medicine-Universitas Kristen Krida Wacana)
2. Dr.dr. Theresia Monica Rahardjo, SpAn, KIC, M. Si (Faculty of Medicine-Universitas Kristen Maranatha)
3. Dr. dr. Leo Simanjuntak, SpOG (Faculty of Medicine-Universitas HKBP Nommensen)
4. Dr. dr. Christine V Sibuea, M. Biomed (Faculty of Medicine-Universitas HKBP Nommensen)
5. dr. Ristarín P Zaluchu, M. Med. Ed (Faculty of Medicine-Universitas HKBP Nommensen)

#### COVID-19 in Children: US Experience

**Rusly Hartono**

School of Medicine, Stanford University

USA

Children and families in all areas of the world were affected by COVID-19. Children are making up a growing share of new COVID-19 cases. In the early months of the pandemic, known cases among children were concentrated in urban areas of the Northeast of the US. But over the months that followed, weekly case count data captured in Children and COVID-19: State-Level Data Report from the American Academy Pediatrics (AAP) and the Children's Hospital Association documented how the virus spread and varied by time and place. This COVID-19 pandemic spiked in waves and eventually hit urban, suburban, and rural pediatric practices across the country. As of July 2, 2021, according to Johns Hopkins University COVID-19 tracker, more than 33.6 million COVID-19 cases and more than 605,000 deaths have been reported. AAP data reported that nearly just over 4.03 million COVID-19 cases in children and at least 336 deaths have been reported as of June 24, 2021.

Multisystem inflammatory syndrome in children (MIS-C), myalgic encephalitis/chronic fatigue syndrome (MECFS), rheumatologic challenges, and neuropsychiatric problems are among COVID-19-related clinical issues observed by clinician experts taking care of children with COVID-19. The National Institutes of Health (NIH) has launched research efforts to understand why some children are at greater risk for SARS-CoV-2 infection than others, why symptoms vary among infected children, and how to identify children at risk for severe illness from SARS-CoV-2 infection, including MIS-C.

This keynote presentation is to share our clinical experience in caring for children with COVID-19 in the U.S. As this pandemic continues, many management strategies, successful or not, constantly evolve at a rate that none of us have ever predicted. Furthermore, many different vaccines are made available worldwide, yet cases with new viral variants continue to emerge. The COVID-19 'war' is ongoing, without a clinical roadmap, clinicians including pediatricians have been charting new territory to navigate these and other COVID-19-related illnesses as well as post-infection symptoms including vaccination-related concerns.

### COVID-19 Management Strategy in Indonesia

**Alexander K Ginting**

Head of Health Management, COVID-19 Task Force

Indonesia

The government has established the Enactment of Restrictions on Emergency Community Activities (PPKM) from July 3 to July 20, 2021, in Java and Bali. The policy was issued based on the latest epidemiological data. As of June 21, 2021, Indonesia is experiencing a spike in cases as high as 381%. The policy was also issued based on the existence of Delta COVID-19 variants and socio-political considerations. The Emergency PPKM, restricts community activities in Java and Bali, stricter and tighter.

Other than restricting human movement, Emergency PPKM together with PPKM Kabupaten Kota and microscale PPKM in the upstream sectors, also carrying out maximum contact tracking, improving testing, and establishing isolation. Testing was done on the symptomatic person, on those that have close contacts history, and on the confirmed cases. There are also establish self-contained Isolation and Quarantine and centralized shelters provided by the government. Simultaneously, vaccination is carried out with a target of at least 1 million per day and a decrease in positivity rate below 5%.

Activities in the downstream sector to increase hospital bed capacity in both ICU and isolation rooms as well as increase the capacity of emergency hospitals along with the addition of human resources and logistics of pharmaceutical, oxygen, and medical devices. Provision of separate accommodation for Health Workers in Referral Hospitals. Enforcement of rules for overseas travel with vaccine certificate, PCR results in 3 x 24 hours and quarantine 8 x 24 hours and the enforcement of domestic travel with RT PCR 2 x 24 hours and fill eHAC. Especially for children must present the first vaccine card and RT PCR 2 x 24 hours

Microscale PPKM is applied based on the *Instruction of the Minister of Trade No. 10 of 2021* for 34 provinces, which contains micro-based PPKM and COVID-19 Handling Post at the Village and Village level. If PPKM Mikro regulates the workplace or office imposes 50 percent work from home (WFH) and another 50 percent work from an office (WFO). Teaching and learning activities are conducted online and some are allowed to do face-to-face learning (offline).

Public facilities are allowed to open but are still limited to a maximum of 50 percent. Meanwhile, the artistic, social, and cultural gatherings that potentially causing crowds are only allowed to open by 25 percent. Similarly, in the transportation sector, public transportation adjusting its capacity and operating hours to the applicable regulations. While construction activities and the essential sector are 100 percent operational, they still implement strict health protocols.

Instrument of Micro Scale PPKM is a form of accommodating Health Recovery without neglecting Economic Recovery and Economic Recovery while paying attention to Health Recovery. The implementation of Emergency PPKM in Java and Bali and MicroScale PPKM at 34 Other provinces are expected to restrict population mobility, improve health protocol compliance, limit social activities, increase testing capacity, tracing, and treatment, and accelerate vaccination to achieve herd immunity.



### Diagnosis and Management of Brain Abscess

**Indra Tjahja**

Dutch Academic Neurosurgery Foundation

The Netherlands

The successful treatment of brain abscess depends on early clinical diagnosis. There remains significant mortality and considerable morbidity in the contemporary management of brain abscess. Awareness must always be high as the patients may not be particularly ill initially but can rapidly deteriorate. The incidence of brain abscess is higher in developing countries. Currently, in high-income countries, the forms of the intracranial suppurative disease (i.e., brain abscess) are so uncommon that most young doctors are unfamiliar with this form of pathology and do not recognize the urgency for both prudent, yet complex aggressive, surgical management and medical treatment. The frequency of brain abscess is increasing with the growing numbers of opportunistic infections in immunocompromised patients, such as advanced HIV or transplant recipients. The routes of infection are both direct inoculation and hematogenous spread. In a significant percentage of patients, the source remains unknown.

Various pathogens have been isolated from intracranial abscess mostly of them are streptococcus, but also staphylococcus, gram-negative bacteria, pathogenic fungal organisms, toxoplasmosis, and mycobacterium tuberculosis. Brain abscess begins as a localized area of cerebritis and develops into an encapsulated collection of pyogenic materials, presenting as a mass lesion.

Symptoms of brain abscess are generally non-specific, leading to late diagnosis. Triad clinical symptoms, such as headache, fever, and focal neurological deficit were found in less than 50% of patients. Changes in mental status, confusion, signs of increased intracranial pressure (e.g., nausea, vomiting, papilledema), and seizures were seen regularly. Meningitis can also be a presenting symptom. Diagnosis of brain abscess is based on history, physical examination, and imaging studies showing characteristics of a ring contrast-enhancement around a hypodense lesion on CT-scan. Computed Tomography (CT-scan) is a rapid examination for early detection of a brain abscess. However, Magnetic Resonance Imaging (MRI) is the examination of the first choice for accurate diagnoses. Serial imaging is needed to follow-up cases of brain abscess. The differential diagnosis of brain abscess includes primary or metastatic brain tumors, subdural empyema, neurocysticercosis, and tuberculoma.

Management of brain abscess involves mostly a combination of surgical procedures (stereotactic aspiration or image-guided evacuation/excision) and antimicrobial treatment (antibiotics, antifungals, or antiprotozoals). Non-surgical management only can be appropriate for small lesions (<3cm), multiple lesions, or patients with poor clinical conditions. Certainly, an intracranial abscess can shrink and disappear on antibiotic treatment alone. Usually, surgery provides the benefit of immediate decompression and symptom release by reducing intracranial pressure due to the (huge) abscess, bacteriological diagnosis, dedicated antibiotic prescriptions and may reduce the duration of antibiotic treatment. Advances in neurosurgery, improved neuroimaging, diagnostic technics, and the introduction of newer broad-spectrum antibiotics, have drastically improved the outcomes of this severe suppurative infection of the brain.

Brain abscess should be regarded as a serious life-threatening emergency and efforts should be focused on continually optimizing diagnosis and management, since this condition can easily be fatal. Awareness should be in the lead.

This presentation aims to review the current concepts regarding epidemiology, pathophysiology, etiology, clinical presentations, diagnosis, and management of brain abscess. A synopsis about tuberculous brain abscess will be presented.

### **Prospects of Music as a Form of Healing in Times of a Global Pandemic**

**Pravina Manoharan**

Music Department

School of The Arts, University Sains of Malaysia

Malaysia

The COVID-19 pandemic has brought about rapid changes to all forms of human interaction and mobility from travel, work conditions, learning environments, to social activities. The pandemic which presented high contagious levels and mortality rates forced policymakers around the world to immediately impose quarantine orders that obligated millions of people to stay at home and self-isolate for weeks or in some cases months. Around the world, individuals and communities had to deal with both health-related fears and stress, prompted by social distancing and isolation. While the health advantages of the quarantine order have been well documented, its emotional strain on people has had far-reaching consequences. As a coping mechanism to deal with the stress of quarantine, the internet was suddenly flooded with posts and videos of people turning to music as a form of individual and communal healing. Healing can go beyond medicine, and the importance of music as a form of healing has been well documented right back to the time of Aristotle. This paper looks at how communities around the world found solace in music as a form of solidarity that united people regardless of age, gender, nationality, creed, and political affiliation. The prospects of music in presenting people with a sense of belonging in times of solitude are explored through the various accounts around the world on the healing power of music. Findings further strengthen previous works on the effects of music on a person's emotional stability and as a means of communal solidarity.

## Communication Challenges During COVID-19: The Case of Yemen

**Fatima Al-Majdhoub**

Communication and Media Department

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Yemen has been devastated by ongoing conflict since 2015, as the country for years is known as the poorest country in MENA, it is facing the worst humanitarian crisis in the world. The outbreak of the COVID-19 pandemic has worsened the situation in the country as its economy, health sector, and social condition severely deteriorate. As a crisis, the COVID-19 has brought new challenges. In this preliminary study, the researcher was interested to understand more about the communication challenges during the COVID-19 pandemic in Yemen. In the light of the communication model, in-depth interviews were conducted using Google-meet with 6 Yemeni journalists whom some of whom are also working with UNICEF Yemen. The interview transcripts were analyzed, and the data revealed common themes across the interviews. Findings showed that many communication challenges are facing Yemen during the COVID-19 crisis and of the great concern are, 1) the denial of COVID-19 by the Houthis who control the north parts, 2) the mindset and behavior of the Yemeni society about COVID-19, and 3) the transparency of information and the misinformation about the COVID-19 and vaccines. Communication for development strategy by civil society organizations is very much needed and recommended to engage the Yemeni community for behavioral and social changes which depend on accurate information and the mutual trust between the source and the receivers.

## Long COVID-19: Early Detection, Management & Prognosis

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COVID-19 is not just an acute disease. Some people suffer from persistent and fluctuating symptoms or complications. These can continue for many weeks, or even months, after presumed or confirmed initial COVID-19 infection. This is called Long Covid, post-acute or chronic Covid. Long covid includes persistence of symptoms beyond viral clearance and fresh development of symptoms or exaggeration of chronic diseases within a month after initial clinical and virological cure of the disease with a viral etiology. Long Covid seems to be a multisystem disease, sometimes occurring after a relatively mild acute illness. Most people get better slowly, but some suffer serious complications. Sufferers report finding it difficult to access help and many are struggling to return to normal life. Services and pathways are being set up, but there are concerns about the identification of Long Covid, and about coverage and adequacy of services. Clinical management requires a whole-patient perspective. This article, intended for primary care clinicians, relates to the patient who has a delayed recovery from an episode of COVID-19 that was managed in the community or a standard hospital ward. Broadly, such patients can be divided into those who may have serious sequelae (such as thromboembolic complications) and those with a non-specific clinical picture, often dominated by fatigue and breathlessness. The specialist rehabilitation needs of a third group, COVID-19 patients whose acute illness required intensive care, have been covered elsewhere.

## The Role of Herbal Medicine in COVID-19

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COVID-19 impacts the whole world continuously and there is no specific treatment yet. Every effort should be made to find a treatment combating COVID-19. Herbal medicine is used as the major source of healthcare by around 80% of the world's population, many of whom reside in underdeveloped nations for a variety of reasons. Some countries use herbal medicine in their guideline combating COVID-19 combine with another drug, and many countries use herbal medicine to maintain immunity. However, World Health Organization (WHO) has advised against using products that have not been subjected to scientific trials to determine their safety and effectiveness against COVID-19. The herbal medicine can interfere with entry or viral replication, viral enzymatic system, and immunity system. The compounds in herbal medicine can be used in that interferences. Differ herbal and traditional medicine used in a different countries. TCM is included in Chinese's COVID-19 Guideline and Ayurveda used in India. Generally, there are 3 traditional medicines in Indonesia which are jamu, standardized herbal medicine, and phytopharmaceuticals. Indonesia has many herbal medicines used empirically. However, herbal medicine can only be used to maintain immunity and must have a clinical trial to prove drug efficacy and safety. There is no herbal medicine claimed by BPOM as medicine to prevent or treat COVID-19 until now.

**New Variant of SARS-CoV-2: Implication and Management (Public Health Perspective)**

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The COVID-19 outbreak has lasted over 1.5 years and there is no sign of it coming to an end, in the world and especially in Indonesia. On July 5, 2021, even positive cases per day have reached almost 30,000 new cases. Health facilities are getting overwhelmed with it. This paper discusses the anticipation of SARS-CoV-2 mutations that have an impact on the speed of transmission, the severity of disease, and disease management from a public health perspective.

**Conclusion:** The case of Covid-19 will still be an endemic disease. Variant SARS-CoV-2 will continue to arise due to various causes, due to the length of the outbreak. Suspected new variants, associated with more infectious (easier entry and proliferation in the body of the vulnerable host). The absence of concrete evidence relates to the severity of the disease, more to the co-morbidity of the sufferer, the diagnosis is more difficult, the existing vaccine is relatively still able to prevent new variants of COVID-19.

Prevention strategy remains unchanged, as long as the transmission pattern does not change, it is only necessary to achieve herd immunity. Mutation = a normal thing in the evolution of viruses. Most important is the monitoring of transmission, severity, changes in clinical symptoms to promote to the community. Community empowerment and increased prevention awareness. COVID-19 will become an endemic disease, so there needs to be a change in clean and healthy living behavior (PHBS) at the level of individuals, families, workplaces, communities. Covid-19 vaccine booster is needed in the future and prepare for life together with COVID-19.

## FETAL PROGRAMMING AND NUTRITION DURING PREGNANCY

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Fetal programming is the theory concerning fetal development in utero involving the growth and development of fetal cells, tissues, and vital organs. Three important factors interacted within this programming including fetal nutrition, fetal endocrine milieu, and placental vascular impedance. Inadequate nutrition occurred during this period makes the process adapts to that particular environment and deviates the health trajectories towards maladaptation of cell number, type, organ structure, and metabolic activity emerging to chronic disorders in adult life such as brain and cardio-vascular disorders, stroke, hypertension, DM, hypercholesterolemia, obesity, etc as has been known as Barker hypothesis.

The nutritional status of a pregnant woman is determined by nutritional intake before and during pregnancy including the normal amount of macronutrients(carbohydrate, protein, and fat) and micronutrients such as folate, Fe, yodium, Ca, Mg, Zn, Se, Cu, Vitamin A, B1, B2, B3, B6, B12, C, E, dan D. These macro and micronutrients and their interaction are very important determinants needed in utero for the normal and optimal fetal growth and development towards the creation of new normal and best quality human individual.

On the contrary, the distraction of this normal programming will end with unsuccessful reproduction manifested clinically as stillbirth, abortion, fetal malformation, obstetric complications (such as preeclampsia, preterm birth), fetal growth restriction, low birth weight baby, stunting in adolescents, or metabolic syndrome in adult life.

At the national and country levels, these chronic malnutrition series globally will create a society with poverty, malnutrition, weak and vulnerable, high morbidity and mortality rate, low education, low income, low competitiveness, low mastery in sains and technology, low



productivity, and achievement, and with low economic, security and country self-defense competence.

By finishing the problem of malnutrition during pregnancy especially during the first 1000 days of life we will not just overcome the chronic malnutrition problems like stunting but at the same time transforming and increasing the quality of our new generation's human resources, productivity, economic, security and country defense competitiveness.

### Hidden Hunger - Invisible Problem for The Future Generation

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Hidden hunger does not come from being hungry. People who experience hidden hunger may have enough food to eat to fill their stomachs, but the body is not getting the essential nutrients from the food to support optimal health. Purely hungry people crave food to fill their stomachs. Buchi Emecheta once said, "a hungry man is an angry one." Hungry people do not care what they eat, if they feel satiated and do not feel hungry, anymore. They can continue to play, work and conduct activities that require high energy. Many of the poor experience this kind of hunger. Meanwhile, hidden hunger is less obvious. People with hidden hunger do not complain about lacking food. Hidden hunger is malnutrition that is caused by inadequate micronutrients (vitamins and minerals). Various publications show that more than 2 billion people around the world are affected by hidden hunger. In Indonesia, about 30% of children are suffering from hidden hunger. Hidden hunger is different from Protein Calorie Malnutrition (PCM), which was taught in the nutrition textbooks in the 1960s, whereby most nutrition problems centered on the lack of protein and amino acids. AH Kimura in her book *Hidden Hunger* called protein a "charismatic " nutrient until the 1980s. In 1974 the *Lancet* published provoking studies called "The Great Protein Fiasco" by McLaren, which suggested that protein was not a major malnutrition problem globally. This news shocked the nutrition world. Although the validity of the article was debated, it was endorsed by the United Nations Protein Advisory Group (PAG). They admitted that nutrition studies worldwide demonstrate that lack of protein is not the main cause of global malnutrition. Rather, most of the global malnutrition is mainly due to also lack of calories and, since the 1970s, due to lack of vitamins and mineral or micronutrients. This constitutes the hidden hunger that, among others, manifests in the form of stunting. This paper will explore the invisible malnourished people who are suffering from hidden hunger. More specifically, it will discuss the history of hidden hunger and what, why, who, and how these relate to stunting, especially among children of the poor, and how to prevent it.

## The First 1000 Days of Life: Building a Healthy and Intelligent Next Generation

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The first 1000 days of life, the periods between conception and second birthday are a unique period of opportunity when the foundations of optimum health, growth, and neurodevelopment across the lifespan are established. During this critical period, children's basic health needs, especially nutrition, affection, stimulation need to be met and they need to be protected from infectious diseases by giving complete immunizations. If during this time, the children suffer from malnutrition, they will be wasting, stunting which can impact on cognitive development, low school achievement, shorter school years, and as adults have low productivity, low quality of life, and an increased risk of developing metabolic syndrome such as diabetes mellitus, hypertension, coronary heart disease, stroke.

The first 1,000 days are characterized by rapid rates of neuronal proliferation, growth and differentiation, myelination, and synaptogenesis. This period embraces the greatest opportunity to provide optimal nutrition to ensure normal development and the time of greatest brain vulnerability to any nutrient deficit. Therefore, children's basic health needs should be met, especially in nutrition. While the brain requires all nutrients for growth, certain nutrients, including protein, polyunsaturated fatty acids, iron, zinc, iodine, folate, and vitamins are particularly critical. Breast milk is the ideal nutrition for infants and should be given exclusively for 6 months. Afterward, complementary feeding should be provided in a timely, adequate, safe, and properly fed. Failure meets those requirements will result in malnutrition and stunting. Other than nutrition, children also need love and affection which build basic trust. Affection in early childhood will reduce stress and anxiety and lead to happier, more resilient adults.

Stimulation is important for optimal synaptogenesis. Breastfeeding in addition to providing complete nutrition can also stimulate all five senses of the baby. Stimulation shall be given interactively by parents or caregivers to all senses of the baby. Electronic media is not suitable for children under 2 years old and may increase the likelihood of developmental delays such as

speech and language delays. Furthermore, excessive screen time in early childhood is associated with the likelihood of developmental problems such as autistic-like behaviors, Attention-Deficit/Hyperactivity Disorder (ADHD), and cognitive abilities as well as mental health in later life.

Growth and development in the first 1,000 days should be regularly monitored simply by using Mother and Child Book (Buku Kesehatan Ibu dan Anak). Any deviation in growth or delay in development should be detected and intervened early. Furthermore, immunization should be completely provided during this critical period to protect children from vaccine-preventable diseases and its complication. Normal growth, normal development, and complete immunization in the first 1000 days is the critical base of building a healthy and intelligent next generation of Indonesia for 2045.

## The Role of Omega 3, Vitamin A, Zinc, and Protein on Stunted Toddler Recovery

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Stunting in toddlers is still a major nutritional problem in Indonesia. Statistical data shows that the prevalence of stunting in Indonesia in 2013 was 37.2% and in 2019 decreased to 27.5%. It is even higher in East Nusa Tenggara (NTT), which prevalence reaches 40.3%. Although stunting prevalence figures show a decrease, various prevention efforts, as well as interventions that have been carried out, have not had a significant impact. Especially in NTT, where the daily level of protein intake, which mainly comes from animal protein, is sufficient, but the prevalence is still quite high.

A study conducted in NTT (2019) in toddlers aged 12 –36 months with Randomized, Double-Blind, Pre-Post Control Group Design, shows that the daily average protein consumption rate is 98.59 – 119.55% of Nutrition Adequacy Ratio (AKG). However, toddlers are frequently suffered from illnesses, although mild spectrum complaints, such as coughs, colds, heat, abdominal pain, diarrhea, chickenpox, etc. will have an impact on height growth. From the study, it appears that for toddlers who do not get treatment, as much as 83.33% are getting sick and that 16.67% treated were not. Treatment is given in the form of administration of omega 3 for 2 months. The path analysis shows that omega 3 plays a role in activating IL 2 and gamma globulin. These 2 substances play a role in reducing the frequency of pain and will eventually improve height growth. How did this happen?

In another study conducted in Surabaya (2009) in toddlers aged 24 – 60 months with Randomized, Double-Blind Pre-Post Control Group Design, shows that the mean daily level of protein is approximately the same as the one in NTT which is 102.36 - 114.15% of AKG, but stunting is still happening. This prospective study was conducted on toddlers for 6 months who have been getting high doses of vitamin A supplementation and Zinc. The results of the path analysis showed that the role of vitamin A and zinc, in addition to activating gamma globulin (to

prevent infection/inflammation), also plays a role in increasing IGF-1 secretion and stimulating growth bone epiphysis (bone age).

From the phenomenon, it can be concluded that the role of omega 3, vitamin A, zinc, and protein is especially important in improving stunting. The role of these vitamins and minerals is in cellular and humoral immunity (innate and adaptive immunity), as well as bone age. So, with the increase of immunity of the body (both cellular and humoral), then the frequency of getting sickness/inflammation can be suppressed and bone age can occur.

### The Role of Nutrition to Prevent Preeclampsia

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Preeclampsia (PE) is a pregnancy-specific disease with a worldwide prevalence of around 2–8%. It is one of the triads of maternal morbidity and mortality globally besides hemorrhage and sepsis. PE accounts for 50 000–60 000 deaths annually, particularly in developing countries such as Indonesia. Preeclampsia also accounts for 15% of indicated preterm delivery and 12% of cases of intrauterine growth restriction. Preeclampsia is a multiorgan disease, affecting the liver, kidneys, brain, and blood clotting system. Severe preeclampsia often results in life-threatening complications such as eclampsia, and HELLP syndrome. PE can be classified into early-onset and late-onset. Early-onset PE is commonly associated with severe complications such as intrauterine fetal growth restriction (IUGR), abnormal uterine artery waveforms, abruptio placentae, postpartum hemorrhage, and long-term adverse effects to maternal and neonatal. Meanwhile, late-onset is mostly with milder maternal and fetal complications, and mostly with favorable perinatal outcomes.

Despite much improvement in management and extensive study had been accomplished, the etiopathogenesis of preeclampsia remains enigmatic and poorly understood. Until recently no effective treatment is available but to terminate the pregnancy. The leading theories proposed responsible for the pathophysiology of preeclampsia including inadequate cytotrophoblast invasion into spiral arteries leading to reduced placental blood flow and placental ischemic, endothelial dysfunction, oxidative stress, and excessive inflammation. The mechanisms whereby the biochemical upset leads to the maternal manifestations may be via oxidative stress, which in turn is caused by the generation of free radicals by the placental hypoperfusion. Various hypotheses have been proposed to support interventions that might delay or reverse the pathogenesis of preeclampsia. More recently, the observation that women with preeclampsia encountered a low level of plasma and placental antioxidant concentration.

Antioxidants are commonly defined as the substance in which with low concentrations compared to an oxidizable substrate, delays or inhibits oxidation of that substrate. Antioxidants protect proteins and enzymes from oxidation and destruction by free radicals and help to maintain cellular membrane integrity. Antioxidants are commonly divided into either free radical scavengers that trap or decompose existing free radicals or cellular and extracellular enzymes that inhibit peroxidase reactions involved in the production of free radicals. Free radical scavengers include vitamin C (ascorbate), vitamin E (tocopherols), carotenoids, and glutathione. Antioxidant enzymes include glutathione peroxidase, superoxide dismutase, and catalase, which are dependent on co-factors such as selenium, zinc, and iron. Antioxidant enzymes are very pivotal for an intracellular defense mechanism, meanwhile, non-enzymatic antioxidants are the main defense mechanism in the extracellular environment.

It is evident that in preeclamptic women, the marker of oxidative stress is rising higher than a normal pregnant woman. It indicates that antioxidants have the potential to prohibit oxidative stress and subsequently prevent preeclampsia. Vitamin C scavenges free radicals in the aqueous phase, and the lipid-soluble vitamin E acts to inhibit the creation of lipid peroxides, therefore protecting the cell membranes.

Supplementation of antioxidants during pregnancy may increase their resistance to oxidative stress, and limit the endothelial damage as mainly encountered in preeclampsia. Accordingly, antioxidants have been proposed as potential prophylaxes against preeclampsia. Marine oil showed a hypotensive effect in normotensive and hypertensive nonpregnant women. It exerts an effect through influences fatty acids precursors of prostaglandin which modulate inflammation and effect on vascular. Gestational hypertension and PE Preeclampsia are marked by vasoconstriction and endothelial damage. The marine oil fatty acids could the vasoconstriction and endothelial damage through direct competition with arachidonic acid as the precursor of thromboxane A<sub>2</sub>.

Pregnant women who lived in regions with high calcium intakes, such as Guatemala Indians and Ethiopians found to have a low incidence of PE and eclampsia. This fact supports the hypothesis that higher calcium intake in a population with low calcium intake during pregnancy might reduce the incidence of high blood pressure and PE. Zinc is an essential trace mineral that important for many biological processes including carbohydrate and protein metabolism, DNA and RNA synthesis, cellular replication and differentiation, and hormone regulation. Zinc is a key component of enzymatic antioxidants such as superoxide dismutase, zinc deficiency putatively may contribute to preeclampsia pathogenesis.



## Children' Brain Development: Window of Opportunity

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The brain is an organ that is constantly growing and developing as long as you use it. There are many specialized areas in our brain to control our behaviors and thoughts. Development and maturation of the brain take place during different stages of human life. In children, those processes are called the window of opportunity since those are the optimum periods for specific areas in the brain to develop at an incredible speed. The brain is choosing to sustain certain kinds of connections, and at the same time deciding not to open connections of other areas. When the baby is born, those windows are open for sensory connections (sight, hearing, touching), for basic motor skills, for developing attachments, and for learning the language. These windows close at different times. The window for sight, for example, closes early. The brain has many functions from the smell, speech, hearing, coordination, vision, body awareness, concentration, planning, problem-solving, and many more. Each area covers several functions as the frontal lobe covers smell, speech, concentration, and motor control, while the occipital covers the function of vision. The period from term birth to 2 years of age is characterized by rapid and dynamic brain development. Brain development begins from occipital to frontal. That is why earlier we can see first then we can solve the problem (high cognitive functions). Several factors influence brain development such as genetics (nature), nutrition, and stimulation (nurture). Neuron, microglia, astrocytes, and myelin need adequate nutrition while synapses need nutrition and stimulation. Myelin function and maintenance require the cooperation of nutritional components including fats, fatty acids, proteins, minerals, and other micronutrients. Myelin sheath formation is essential for brain development. Nutrient deficiency (infant) will interfere with the composition, form, and function of myelin and will also interfere with normal brain function and cognitive function output.

OP1-1

**Potential Antifungal Activity of Brotowali (*Tinospora crispa* L.) Stem Ethanolic Extract Against *Candida krusei***

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**Background:** *Candida krusei*, a variety of *Candida*, has lower pathogenicity than *C. Albicans*. This species can cause a decrease in immune receptor function due to its higher polysaccharide structure. Improper antifungals resulted in *C. krusei* resistance. Brotowali stem extract contains substances that can inhibit the growth of fungi. This study aimed to determine the ability of brotowali stem extract in inhibiting the growth of *C. krusei*.

**Method:** The ethanol extract of the brotowali stem was made using the maceration method. The antifungal activity test was carried out using the disc diffusion technique (*Kirby-Bauer test*).

**Result:** The ethanolic extract of brotowali stem inhibited the growth of *C. krusei* at the concentrations of 2.500 µg/ml and 5.000 µg/ml with inhibition zones of 17,75 mm and 22,25 mm. At a concentration of 1.250 µg/ml, the inhibition zones formed was 6,75 mm and was included in the category of weak growth inhibition response. Statistical analysis using One Way Anova showed a significant difference with  $p < 0,05$ .

**Conclusion:** Ethanolic brotowali stem extract was able to inhibit the growth of *C. krusei* with a minimum inhibitory concentration of 2.500 µg/ml.

**Keyword:** *Candida krusei*; *Tinospora crispa* L.; brotowali stem ethanolic extract; antifungal

OP1-2

## The Effect of Ascorbic Acid on IL- $\beta$ 1 Cytokine in *Rattus Novergicus* with Endometritis

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**Background:** Endometritis is a gynecological disease characterized by inflammation of the endometrial glands and stroma. Inflammatory stimuli or tissue injury induce inflammatory pain through the release of cytokines. Ascorbic acid or commonly referred to as vitamin C is a water-soluble vitamin that plays a role in inhibiting the production of proinflammatory cytokines, namely IL-1 $\beta$ , IL-6, IL-12, TNF- $\alpha$ . The purpose of this study was to find out the association between administration of ascorbic acid and proinflammatory cytokines, especially IL-1 $\beta$  which was carried out in experimental animals *Rattus Novergicus* with endometritis.

**Methods:** The research was conducted using virgin female *Rattus Norvegicus* laboratory mice weighing 250-300 g and aged 11-12 weeks with an estrus cycle of 5-6 days. Mice with regular estrus cycles were randomly divided into 3 groups: group 1 was given 200 L of water orally without *E. coli* inoculation and represented a negative control. Groups 2 and 3 were inoculated (50 L/rat) *E. coli* intravaginally, 10<sup>6</sup> CFU/mL, Group 2 was not given ascorbic acid and the other side group 3 was given ascorbic acid. The IL-1 $\beta$  cytokine examination was carried out by histopathological examination utilizing a biopsy of the endometrial tissue. Hypothesis testing on the data was analyzed by the Kruskal Wallis test using SPSS.

**Results:** In this study, the highest mean value of the proinflammatory cytokine IL-1 $\beta$  was found in the negative control group (2.6) and the lowest was found in the positive control group (1.2). In the statistical analysis using the Kruskal Wallis test, ascorbic acid had a significant correlation with the level of proinflammatory cytokine IL-1 $\beta$  which was assessed in the three groups with different treatments (p-value = 0.036).

**Conclusions:** We found a decrease in the expression of the proinflammatory cytokine IL-1 $\beta$  with ascorbic acid administration

**Keywords:** *ascorbic acid; cytokine; IL-1 $\beta$ ; mice*

### OP1-3

## Correlation between Mothers' Education Level and Knowledge of DPT and HiB Primary Vaccine with Vaccine Receipt in Fourth Neighbourhood, Ninth Hamlet, Cileungsi Kidul

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**Background:** National diphtheria fatality rate alone is up to 4,62% in 2017 and never been reported again until now, so people need to be more aware of it because there is no proof that this infection is already not a problem anymore and do not forget that there are several more common child infection again. Awareness can be raised by giving education because it can increase mothers' intention to give their children immunization. Authors intend to know if the education level or knowledge of the mothers can influence their preference on their child immunization.

**Methods:** 30 native mothers from the fourth neighborhood, ninth hamlet, Cileungsi Kidul urban village join DPT and HiB vaccines' knowledge test and being asked about their education level and their youngest child's vaccine adherence. These variables then get tested with the spearman rho formula as the prior literature just checks their correlation with the chi-square formula so that how strong and the direction of the correlation can be known now.

**Results:** Significance tests show there is no correlation between mothers' education level and their youngest child's vaccine receipt while the other variable gets a different score so there is a different interpretation. The empiric score means of DPT and HiB primary vaccine is higher than the hypothetic one, which indicates the mothers in this neighborhood have a good knowledge about immunization, but there is a different score mean between the mothers who get their child vaccinated and those who do not. Knowledge variable gets 000 ( $P < 0,05$ ) on Spearman rho test that means there is a positive correlation between this variable and DPT and HiB primary vaccination. The coefficient Correlation of this variable is 0,726, showing a strong correlation between them.

**Conclusion:** The conclusion of this research is the better the mothers' knowledge, the more compliant they with their child DPT and HiB primary immunization as knowledge is coming to solve problems, one of them is breaking the chain of infections.

**Keywords:** *knowledge; education level; vaccine*

OP1-4

## Contact Dermatitis and Alcohol-Based Hand Sanitizer among Healthcare Workers

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**Background:** During the COVID-19 outbreak in China, 66.1% of health workers washed their hands  $\geq 10$  times per day, but only 22.1% used moisturizer after washing their hands. The overall frequency of washing hands before and during the pandemic shows a very significant increase from 5–10 times per day to 10–20 times per day for all health workers which predisposes them to contact dermatitis. Therefore, this study is aimed to determine the correlation between the frequency of Alcohol-Based Hand Sanitizer (ABHS) use and the incidence of contact dermatitis among health workers.

**Methods:** This study used an analytical research method with a cross-sectional design. This study aims to determine the correlation between the frequency of ABHS use and the incidence of contact dermatitis among health workers at Murni Teguh Hospital Medan in November 2020 till March 2021 on 207 respondents who were selected using the questionnaire.

**Results:** From the 207 respondents, the results showed that most of the respondents were  $< 30$  years old which were 124 people (59.9%), based on a history of allergies, there were 143 people (69.1%) who had no history of allergies. There were 140 people (67.6%) who had contact dermatitis due to ABHS, according to the frequency of the most ABHS usage which was  $\geq 10$  times, about 182 people (87.9%).

**Conclusion:** There is a significant correlation between the frequency of ABHS use and the incidence of contact dermatitis, using the chi-square test the p-value is 0.000, less than  $\alpha = 0.05$ .

**Keywords:** *contact dermatitis; alcohol-based hand sanitizers; healthcare workers*

## OP1-5

# COMPARISON OF SERUM VITAMIN D LEVEL BETWEEN ABORTION AND NORMAL PREGNANCY

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**Background:** Abortion is still a common complication in early pregnancy. There is growing evidence that a low level of vitamin D is linked to early pregnancy loss. Establishing this connection and the associated factors is crucial to ameliorate pregnancy outcomes. Thus, this study aimed to compare the level of serum vitamin D in abortion patients and normal pregnant women.

**Methods:** This is a cross-sectional study using primary data from a private maternity clinic in October 2020-February 2021. The subjects recruited in this study were 49 women at first-trimester pregnancy with either normal pregnancy (23 subjects) or abortion (26 subjects). Demographic data (maternal age, gestational age, BMI, parity level, history of miscarriage, and occupation) and their relation to abortion were determined. The serum 25-hydroxyvitamin D (25(OH)D) level was measured and then compared using statistical analysis.

**Results:** Mean age of the subjects was  $30.45 \pm 4.56$  years and the mean gestational age of the recruitment was  $58.31 \pm 17.89$  days. Abortion group has lower serum 25-hydroxyvitamin D (25(OH)D) level ( $16.95 \pm 5,51 \mu\text{g/L}$ ) than normal pregnant group ( $17.89 \pm 4,74 \mu\text{g/L}$ ), although it was not statistically significant ( $P = 0.527$ ). The results also showed there were no statistically significant correlations between the classification of vitamin D deficiency, BMI, parity level, history of miscarriage, occupation, and abortion ( $P > 0.05$ ).

**Conclusion:** In our study, we found that abortion patients had lower vitamin D levels than normal pregnant women, but it was not statistically significant. Abortion also was not correlated with BMI, parity level, history of miscarriage, and occupation.

**Keywords:** *abortion; vitamin D; 25-hydroxyvitamin D; normal pregnancy*

## OP1-6

### Co-infection case effect to clinical manifestation and mortality of COVID-19 patients in Bengkulu

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**Background:** The COVID-19 pandemic is still ongoing, and no one could predict when it would end. In some cases of COVID-19, patients experienced infection by SARS-Cov-2 and other microorganisms, including viruses, bacteria, and fungi. This study aims to determine Co-infection on clinical symptoms and mortality of COVID-19 patients in Bengkulu City, Indonesia.

**Methods:** We reviewed and analyzed data on patients with confirmed COVID-19 who were co-infected, including basic information, clinical manifestations, radiological and laboratory examinations, to the final status.

**Results:** A total of 105 patients with confirmed COVID-19 participated in this study. Of the 105 patients, seven patients were co-infected with human immunodeficiency virus (HIV), Mycobacterium tuberculosis, Salmonella thypii, bacterial pneumonia, and viral pneumonia. As many as three of the seven patients experienced inferior clinical manifestations and died.

**Conclusion:** The co-infection of other microorganisms in COVID-19 can affect the severity and mortality in COVID-19 patients.

**Keywords:** COVID-19; co-infection; clinical manifestation; mortality

OP2-1

**An Eleven Years Old Girl with Chronic Polyarthritis and Tuberculosis Infection**

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**Background:** The most common idiopathic case of chronic arthritis in children is Juvenile Idiopathic Arthritis (JIA). JIA has the characteristic of chronically inflamed joints in children who's younger than 16 years of age that occurs at least 6 weeks long or more.

**Case Presentation:** In this case, we report an eleven years old girl with recurrent joint pain and swelling on her both side of knee and finger joints, which persist for almost 2 years. The pain often comes in morning times or with the presence of low temperature. Other symptoms like recurrent fever were reported by the patient. The patient has a history of blood transfusion at RS Pesawaran due to severe anemia about 2 months before the examination. Due to her condition, the patient gets referred to RSUD Abdul Moeloek Lampung to manage her symptoms. The physical examination of the inflicted joints showed that the joints felt warm, look reddish, and painful if they are touched or moved. The lymph node from the right region of the neck was found enlarged in this patient. We also did the Child's Tuberculosis Scoring resulting in 9 points indicating tuberculosis infection. Chest X-Ray was done on this patient before the visit because of health safety protocol, which shows the calcification in her right perihilar, correlating to the tuberculosis infection. The patient's blood test revealed leukocytosis, thrombocytosis, and elevated ESR. Electrolyte evaluation suggests some mild hyperkalemia and hypocalcemia. We also found an elevated CRP and positive ASTO on this patient. We also used the diagnostic criteria for JIA to clinically diagnose this patient with JIA too. We also used the diagnostic criteria for JIA to clinically diagnose this patient with JIA too. We used 4 tablets of 5 mg prednisone 3 times a day, and ibuprofen 150 mg 3 times a day to treat her JIA symptoms. The 2RHZ/4RH tuberculosis regimen was chosen for her tuberculosis infection. We also recommend the patient get a routine check-up at RS Abdul Moeloek polyclinic at least once a month.

**Conclusion:** Even though this patient came with a more prominent symptom of joint pain, with more thorough history taking then the diagnosis for tuberculosis can be made.

**Keywords:** *Juvenile Idiopathic Arthritis; tuberculosis; Child*



## OP2-2

### ARDS in Covid 19: Case Report

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**Introduction:** COVID-19 represents viral pneumonia from severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) infection leading to ARDS. ARDS is characterized by acute and diffuse inflammatory damage into the alveolar-capillary barrier associated with a vascular permeability increase and reduced compliance, compromising gas exchange, and causing hypoxemia.

**Case Presentation:** We reported a 59-year-old male patient admitted with shortness of breath a day ago. The patient was dyspnoeic with oxygen saturation levels 85-90% under 15-20 L/min oxygen therapy via an oxygen reservoir bag. The result of PCR COVID-19 was positive. The thoracic CT imaging showed diffuse ground-glass densities and PA-CXR showed bilateral diffuse infiltration. The patient was diagnosed with COVID-19 pneumonia and was admitted to ICU. The patient was considered severe ARDS with  $RR > 30$  and a  $PaO_2/FiO_2$  ratio of  $\leq 100$  ( $PEEP \geq 5$  cmH<sub>2</sub>O) and was intubated electively on the first day of admission. The patient received broad-spectrum antibiotics and methylprednisolone therapy started at 250 mg/day. Favipiravir, low molecular weight heparin (LMWH), and intravenous high-dose ascorbic acid were added. Tocilizumab was considered not suitable because of the high procalcitonin level. The patient was placed in the prone and supine positions alternately. Saturation level was measured every 12–16 h and showed a decreasing trend. The patient died on day 9 of hospitalization.

**Conclusion:** This case showed COVID-19 patients with ARDS may appear to have similar features to other causes of ARDS with a high progressivity rate. Despite significant advances in supportive treatment techniques such as mechanical ventilation, the incidence and mortality of ARDS remain high.

**Keyword:** *COVID-19; ARDS; shortness of breath*

## OP2-3

### Cutaneous Manifestation Of COVID-19 Infection: A Case Report

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**Background:** An increasing number of reports worldwide concern the cutaneous manifestations of COVID-19 that precede common acute respiratory symptoms. Five major clinical patterns of cutaneous manifestation of COVID-19 were described. They are acral areas of erythema-edema with some vesicles or pustules (pseudo-chilblain), other vesicular eruptions, urticarial lesions, maculopapules, and livedo or necrosis. The majority of these manifestations were non-specific and their cause-effect relationship with the virus is not fully established. This case report describes a case of a patient in whom the cutaneous manifestation was found on the second day of hospitalization.

**Case report:** A 41-year-old male with COVID-19 infection confirmed by nasopharyngeal swab PCR developed an asymptomatic erythematous maculopapular rash on his neck, one day after hospitalization. Treatment consisted of oxygen therapy, vancomycin injection, dexamethasone injection, enoxaparin injection, vitamin C injection, N acetylcysteine injection, remdesivir, irbesartan, paracetamol, curcuma, vitamin D, and codeine with an expectorant. Spontaneous improvement of skin lesions appeared on the third day of hospitalization.

**Conclusion:** COVID-19 infection can have various cutaneous manifestations. Clinicians should be aware of these clinical manifestations that may help the timely diagnosis of COVID-19.

**Keywords:** *COVID-19 infection; cutaneous manifestation; maculopapular rash*

## OP2-4

### Antifungal Activity of Brotowali (*Tinospora crispa L.*) Stem Ethanolic Extract on *Candida Tropicalis*

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**Background:** *Candida tropicalis* is one of the most common non-*Candida Albicans* candida (NCAC) species isolated from various clinical types of candidiasis and nosocomial infection. This species is the second most virulent among *Candida* species. The widespread use of antifungals as prophylaxis has led to the major cause of antifungal resistance. Brotowali (*Tinospora crispa L.*) stem, is used as herbal medicine in Asia, including Indonesia. There are more than 65 phytochemical compounds and a few of them identified as potential antifungal agents, such as the flavone group, alkaloids, berberine, saponins, and tannins. Purpose: The purpose of this study is to explore the antifungal activity of brotowali stems and to determine the minimum inhibitory concentration.

**Methods:** The susceptibility of *C. tropicalis* against the ethanolic extract of brotowali stem was examined by minimum inhibitory concentration (MIC) test using broth microdilution method with an initial concentration of 10,000 µg/ml.

**Results:** The result of the minimum inhibitory concentration test showed that the MIC value for brotowali stem ethanolic extract was at a concentration of 5000 µg/ml.

**Conclusion:** In conclusion, ethanol extract of brotowali stem has antifungal activity against *C. tropicalis* with a minimum inhibitory concentration of 5,000 µg/ml.

**Keywords:** *Candida tropicalis*; *Tinospora crispa L.*; brotowali stem ethanolic extract; antifungal; minimum inhibitory concentration

## OP2-5

### Anxiety Level and Sleep Quality of The HKBP Padang Pasir Congregation during Global Pandemic of Sars-Cov-2 (Severe Acute Respiratory Syndrome Corona Virus 2) COVID-19

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**Background:** One of the psychological factors that often occur during the COVID-19 pandemic, is anxiety. Lack of knowledge, fear of contracting COVID-19 are factors that increase anxiety. Anxiety can make people sustaining difficulty to sleep that can cause poor sleep quality.

**Methods:** This research was a descriptive study using a cross-sectional design. The number of samples is 224 respondents who were selected using the purposive sampling method. The data obtained was primary data through questionnaires.

**Results:** This study showed that the most respondents were in the late adult age group (25,9%), female (54,8%), high school students (46,9%), workers (60,7%), married (63,8%), mild anxiety (50,4%), and had poor sleep quality (46,9%).

**Conclusion:** The conclusion of this research is 224 respondents with the most anxiety level category is mild anxiety. Anxiety level is one of the risk factors that can decrease the quality of sleep during the COVID-19 pandemic.

**Keywords:** *anxiety level; sleep quality; COVID-19 pandemic*

## OP2-6

### **Schistosomiasis And Pulmonary Arterial Hypertension : A Literature Review**

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**Background:** Schistosomiasis is a disease whose infection can be acquired when people come into contact with freshwater infested with worms in the form of larvae (cercariae) of this species. PAH was one of the chronic complications of schistosomiasis. This study aimed to determine the molecular pathogenesis of Pulmonary Arterial Hypertension caused by schistosomiasis.

**Methods:** This study was a literature review. We searched journal articles from the last ten years in Pubmed by using the MeSH terms “schistosomiasis” and “pulmonary hypertension”. Journals articles in English and using human subjects were included in this study. Review articles were excluded.

**Results:** We found 30 articles that met the inclusion criteria. There were 13 review articles excluded and 15 articles that did not match our research objectives. Two final articles were reviewed. We found Pulmonary Arterial Hypertension (PAH) caused by schistosomiasis is closely related to an increase in TGF-beta.

**Conclusion:** There were risen TGF-beta levels in schistosomiasis patients.

**Keywords:** *schistosomiasis; pulmonary hypertension; TGF-beta levels*

## OP2-7

### **Challenges Management and Diagnostic Approach on Pulmonary Adenocarcinoma and Head Metastases with COVID-19 Infection: What can be done and hope for?**

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**Introduction:** Lung cancers are a high-risk group. Lung cancer genes can mediate viral entry into host cells via angiotensin-converting enzyme-2 (ACE-2) and transmembrane protease serine 2 (TMPRSS2). We report a case of pulmonary adenocarcinoma and head metastases with COVID-19 infection. A review is focused on management and the diagnostic approach in such a case.

**Case Presentation:** A 60-year-old man was referred to the pulmonology department with a chief complaint single nodule in the head. The nodule getting bigger in a short time and painful. The patient also felt shortness of breath, had a productive cough, fever, and anosmia. Chest examination showed tachypnea, decreased breath sounds on the right side with unequal chest rise. Laboratory findings showed anemia, leucocytosis, increased NLR ratio, hypoalbuminemia, and hyper coagulopathy. Chest x-ray result suggested a right lung mass with bilateral pneumonia. CT scan suggested malignant mass and lymphadenopathy subcarinal and paratracheal bilateral. PCR swab test had a positive result. The patient was diagnosed with pneumonia COVID-19 confirmed with a right lung mass and head metastases. The patient was treated with antiviral, antibiotics, anticoagulant, and supportive therapy. The patient's conditions gradually improved and after PCR swab negative. head biopsy, bronchoscopy, and lung biopsy were performed and showed adenocarcinoma. EGFR mutation test showed mutation-positive on exon 19 and treated with targeted therapy.

**Conclusion:** Lung cancer can affect the immune system by spreading into the bone marrow. Studies show that COVID-19 increases complications and the risk of death in patients with lung cancer. Compared to the general population, lung cancer has a 3-fold vulnerability to death due to COVID-19 because of the weakened immune system by cancer and its treatments. Patients with stage IV metastatic cancer and COVID-19 led to high risks of death, ICU admission, severe conditions, and use of mechanical ventilation. Managing cancer care in the pandemic era is challenging and requires a collaborative multidisciplinary approach for optimal care of cancer patients in hospital settings.

**Keywords:** lung cancer; adenocarcinoma; EGFR mutation; COVID-19

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