INA-RESPOND

INDONESIA RESEARCH PARTNERSHIP ON INFECTIOUS DISEASE



NEWSLETTER April 2019

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NATIONAL INSTITUTE OF HEALTH RESEARCH AND DEVELOPMENT MINISTRY OF HEALTH REPUBLIC OF INDONESIA

INA-RESPOND newsletter

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Badan Penelitian dan Pengembangan Kesehatan RI, Gedung 4, Lantai 5. Jl. Percetakan Negara no.29, Jakarta 10560 <u>www.ina-respond.net</u>

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The Inauguration Ceremony of INA-RESPOND Reference Laboratory

By: M. KARYANA



n 9 April 2019, on behalf of *Bupati Pemerintahan Kabupaten Tangerang*, Mr. Maesyal Rasyid—the Secretary of Tangerang District Government inaugurates the INA-RESPOND reference laboratory building at RSU Tangerang.

The Head of Center for Health Resources and Services Research and Development, Indonesia Ministry of Health, Dr. Irmansyah, said that The Indonesia Research Partnership on Infectious Disease (INA-RESPOND) is a collaborative initiative between the United States and Indonesian government institutions. The network was formed to promote and conduct clinical research on high-quality infectious diseases in Indonesia through the development of collaborative, sustainable and wellrecognized research. INA-RESPOND has conducted clinical research since 2011 in line with the infectious diseases prioritized by the Indonesian Ministry of Health namely malaria, avian influenza, dengue, HIV/AIDS, tuberculosis, and neglected infectious diseases.

It is expected that with this new laboratory building, it will further strengthen the goal of the INA RESPOND Network in conducting high-quality clinical research, increasing understanding of the pathogenesis of a disease, and preventing major problems resulting from infectious diseases.

Drg. Naniek Isnaeni, *the Director of RSU Tangerang* added the hospital hopes that with the addition of this new facility, it will be able to significantly improve its services to a wider community.

TRIPOD & INA-PROACTIVE Study Updates



PARTICIPANT STATUS

Per 31 March 2019, the total ongoing participants in TRIPOD study are 256 out of 490 enrolled participants. Fifty participants have completed the study while 184 participants were terminated early (including death). Therefore, there are still 52.2 % of participants from the total enrolled participants in the follow-up status. From the uploaded CRFs, there are four participants from site 520 (RS Sanglah, Denpasar) who still need to be followed up; 16 participants from site 550 (RSUP dr. Wahidin Sudirohusodo, Makassar); 78 participants from site 560 (RSUP dr. Kariadi, Semarang); 67 participants from site 570 (RSUD dr. Soetomo, Surabaya); 23 participants from site 580 (RSUP dr. Sardjito, Yogjakarta), 56 participants from site 590 (RSUP Persahabatan, Jakarta); and 12 participants from site 600 (RSUP dr. Adam Malik, Medan).



Total

Figure 2. Total Participants Status based on uploaded CRF per 31 March 2019

INA104

I N A -P R O -ACTIVE

was activated on 10 January 2018, the study currently has 14 actively recruiting sites. By 1 April 2019, the study had screened 3,310 patients and enrolled a total of 2,040 participants which consist of 90 pediatrics and 1,950 adults. The enrollment rate was 61.63% from total screening. Details are shown in Figure 1.

The enrollment failure rate is 38.37% from total screening. The failure reasons can be seen in the table below.

Site visits for INA-PROACTIVE study that were conducted last month and early this month are:

- 1st Site Monitoring Visit to RSUP dr. Hasan Sadikin, Bandung on 11-12 March 2019
- 2nd Site Monitoring Visit to RSUP dr. Kariadi, Semarang on 12-14 March 2019
- 3rd Site Monitoring Visit to RSUP dr. Whidin Sudirohusodo, Makassar on 18-20 March 2019
- 2nd Site Monitoring Visit to RS Budi Kemuliaan Batam on 25-27 March 2019
- 1st Site Monitoring Visit to RSPI Sulianti Saroso, Jakarta 1-2 April 2019



Figure 1. All Site Number Screened vs Enrolled

For the site preparation update, site 670 – RSUD dr Zainoel Abidin, is currently requested for activation approval and hopefully, its activation and first enrollment could be done on the 2nd week of April 2019. Meanwhile, Site 680 – RSUD dr Soedarso, Pontianak is scheduled for SIV on 2nd week of May 2019 by CRA. Also, a site assessment visit was conducted at TC Hillers Hospital, East Nusa Tenggara on 1 March 2019.

We also have some updates on site agreement. Site 690 RSUD Abepura, Jayapura has recently signed the PROAC-TIVE study agreement. We are currently processing the agreement for site 700, RSUD. TC Hillers, Nusa Tenggara Timur. Hopefully, INA-PROACTIVE will soon have a new active site representing the east part of Indonesia.

Reason for Failure	510	530	540	550	560	570	580	590	600	610	630	640	650	660	Total
Suspect HIV	0	0	0	4	0	0	0	0	0	5	3	0	0	4	16
Refuse to consent or not cooperative	0	1	1	4	6	0	0	7	1	2	0	0	1	1	24
Unwilling to comply with study procedur	0	25	1	2	15	4	9	0	28	22	0	9	4	1	120
Plans to move away	0	5	1	9	7	0	2	4	10	2	6	9	0	3	58
A. No Show	1	18	6	58	2	2	0	19	289	167	57	13	0	7	639
B. Busy / in a hurry	0	4	3	30	3	6	1	4	4	17	5	36	12	17	142
C. Has been enrolled	0	0	0	68	3	5	0	15	11	72	35	3	7	5	224
D. Participated in other study	0	0	0	0	0	0	7	0	0	0	0	0	0	0	7
E. Hospitalized or unwell	0	0	0	7	0	0	0	2	0	0	0	0	0	0	9
F. Other: specify (e.g. no referral letter	0	2	0	1	0	3	8	0	0	11	6	0	0	0	31
from other health facility, equipment															
trouble)															
Grand Total	1	55	12	183	36	20	27	51	343	298	112	70	24	38	1270

Newsletter

HAJI ADAM MALIK GENERAL HOSPITAL, MEDAN

By: KEUMALA AT THAARIQ



Site 600 team members (from left to right): Junita S. Si, dr. Cicimei P. Siregar, dr. Nelly E Samosir, Sp.PK, dr. Tambar Kembaren, Sp.PD-KPTI, dr. Rita Evalina, Sp.A(K), dr. Keumala At Thaariq, Ms. Melpinna F. Marpaung, S.kep, Ners

SUP Haji Adam Malik is a general hospital managed by the Indonesian national government and the government of North Sumatera Province. The hospital is also an educational hospital for medical students of *Universitas* Sumatera Utara (FK-USU).

The hospital, also known as site 600, officially joined INA-RESPOND network at the end of 2017 with the start of TRIPOD, a study of Tuberculosis, as the site's first study; which was later followed by PROACTIVE, an HIV research, in March 2018. The PROACTIVE study involves several clinics/departments such as *Pusat Pelayanan Khusus* (*Pusyansus* Clinic) for adult HIV patients, Allergy and Immunology Clinic for pediatric patients, and Clinical Pathology Laboratory. The team at this site consists of eight women: 1 Principle Investigator, 2 Co-Principal Investigators, 2 Research Assistants, 2 Laboratory Technicians, and 1 Study Nurse. Here is the profile of each member:

dr. Tambar Kembaren, Sp.PD-KPTI

dr. Tambar Kembaren's career started in Tapanuli Utara where she became a civil servant in 1981. She was transferred to Jakarta in 1985 and worked there until 1990. In 1992, she moved to RSUP H. Adam Malik, Medan, and she has worked at the hospital since then. While working, dr. Tambar Kembaren took an Internal Medicine program at *Universitas Sumatera Utara* and graduated in 1998. She began to take an interest in HIV in 2004. Later, she continued her study by taking the Tropical Infection program and received her Sp.PD-KPTI







From top to bottom: dr. Tambar Kembaren, Sp.PD-KPTI, dr. Rita Evalina, M.Ked(Ped), Sp.A(K), dr. Nelly E. Samosir, Sp.PK

degree in 2014. Her role in the PROACTIVE study is as the Principal Investigator (PI) of this site.

dr. Rita Evalina, M.Ked(Ped), Sp.A(K)

dr. Rita Evalina is a Consultant in pediatrician immunology. She has been interested in HIV Pediatric since the beginning of her Pediatric specialist study. She started to join in HIV Pusyansus team in 2007, and she is currently active in the Pediatric Allergy and Immunology division as well as in the Department of Pediatric, *Universitas Sumatera Utara*.

dr. Nelly E. Samosir, Sp.PK

dr. Nelly E. Samosir started her career as a General Practitioner in Simalungun and Langkat, Sumatera Utara. Since 2005, she has been working as a staff in the Department of Clinical Pathology FK-USU / RSUP. H. Adam Malik, Medan, and has been actively involved in HIV laboratory diagnostic services since 2008. She often attends training, workshops, and seminars. Moreover, she has been invited to many scientific activities/events as a speaker.

dr. Keumala At Thaariq

dr. Keumala At Thaariq is a General Practitioner. She finished her co-assistant medical study at RSUP. H. Adam Malik, Medan and completed her term of internship in *Porsea, Tobasa, Sumatera Utara* Province. Her role in the PROACTIVE study is as the first Research Assistant. Her strong sense of discipline makes her the best person for the position.

dr. Cicimei Putriyadi Siregar

dr. Cicimei Putriyadi Siregar graduated from *Universitas Sumatra Utara* in 2015. She completed her term of internship in Riau province. In April 2018, she joined the PROACTIVE study as the second Research Assistant. Being a Research Assistant in this HIV study is her first working experience.

Melpinna F. Marpaung, S.Kep-NERS

Ms. Melpinna F. Marpaung is the Study Nurse in this HIV study. She has worked at RSUP H. Adam Malik Medan since 2002 and has been serving in Pusyansus clinic since 2007. She was a CST facilitator in 2012, and she has been active in taking HIV training to broaden her knowledge.

Junita Siahaan, S.Si

Ms. Junita Siahaan is the first Laboratory Technician at this site. She has worked in the Clinical Pathology Department of RSUP H. Adam Malik, Medan since 1997 and has been actively involved in HIV laboratory diagnostic services since 2009.

Ennyke C. Ginting, AMAK

Ms. Ennyke C. Ginting is the second Laboratory Technician at this site. She worked at RSUP H. Adam Malik, Medan in the Clinical Pathology department since 2005. She is the mother of two children, who enjoys traveling and culinary tourism.

Photos (upper left going clock wise): dr. Keumala At Thaariq, dr. Cicimei Putriyadi Siregar, Ms. Melpinna F. Marpaung, S.Kep-NERS, Junita Siahaan, S.Si, Ennyke C. Ginting, AMAK; team members taking photo in front of Pusyansus.





DENGUE VIRUS INFECTION

By: MUNAWAROH FITRIAH



engue hemorrhagic fever is a disease caused by dengue virus infection (IVD) which is transmitted through the bite of the Aedes aegypti and Aedes albopictus mosquitoes. Dengue virus is a single-stranded RNA virus from the genus Flavivirus, a family of Flaviviridae, which consists of 4 serotypes namely DEN-1, DEN-2, DEN-3 and DEN-4 (Figure 1).

Dengue virus infection is an endemic disease that appears throughout the year, especially in the rainy season in various tropical and sub-tropical regions including in Indonesia. The rainy season is an optimal condition for breeding mosquitoes, so there can be an increase in cases that are high and fast. According to WHO, Indonesia is the second largest country with dengue cases among 30 endemic regions.

This disease has clinical manifestations that vary from

asymptomatic, dengue fever (DD), dengue hemorrhagic fever (DHF), dengue shock syndrome (SSD) to expanded dengue syndrome. DHF is differentiated from DD based on the presence of signs of plasma bleeding or leakage such as increased hematocrit (hemoconcentration), decreased plasma volume, hypotension, thrombocytopenia, and hypoproteinemia.

The incubation period in the human body is usually four to seven days (ranging from 3-14 days) after a mosquito bite occurs which is then followed by the appearance of clinical symptoms. The clinical symptoms generally consist of three phases: the fever phase, the critical phase, and the recovery phase (Figure 2). The fever phase lasts for two to seven days, on the first to the third day the patient feels a sudden high fever that can even reach 40° C. The fever goes up and down (Bifasik), accompanied by headache, muscle aches, joint pain, and reddish face/skin. The critical phase generally occurs on the fourth day to the seventh day which is characterized by a decrease in body temperature as if the patient is recovering and can react again, but in this phase there can be a dramatic decrease in platelets, increased vascular permeability and increased hematocrit. Shock due to plasma leakage, heavy bleeding and multiorgan failure can occur in this phase if there is not adequate treatment. In the third phase, the recovery phase occurs on day 6-7, the patient will feel fever again and platelets will slowly rise to normal again.

Routine laboratory tests used as screening include complete blood examination, PT, APTT, SGOT, SGPT and peripheral blood smear (table 1). Laboratory tests to establish an IVD diagnosis are serological examination (antibody and antigen detection), viral RNA examination and virus isolation. RNA examination and isolation of dengue virus is the gold standard for diagnosis of IVD, but it is not routinely done because it requires expensive equipment and trained personnel.

Serological examination can detect antigens namely NS1 or antibodies such as antidengue IgA, IgM and IgG. Immunochromatography and enzyme linked immunosorbent assay (ELISA) methods are used. Non Structural-1 protein antigen (NS-1) is a 50 kDa glycoprotein which plays an important role in viral viability and replication, found in the circulation in both primary and secondary infections. NS-1 antigen can be detected in



Parameters	Abnormalities
Hemoglobin & Hematokrit	Increased Indicates the presence of a hemoconcentration (if the increase is> 20% of the initial hematocrit)
Trombosit	Decreased
Leukosit	Normal or decreased. If accompanied by relative lymphocytosis
SGOT & SGPT	Increased
Edge blood smear	Limfositosis relatif. Limfosit plasma biru (+)
Physiology of Hemostasis PT / APTT	Normal or longer



the first 9 days of fever with a peak on the third to fifth day. NS-1 diagnostic ability is better in primary infections than in secondary infections. NS1 levels will decrease with increasing levels of anti-dengue IgM and IgG, where these antibodies will form complexes with NS1 so that free NS1 levels in circulation are reduced.

Anti-dengue IgM is detected in the blood from the fifth day of the onset of fever, increases to the third week, then decreases but is still detected until the ninety day can even last up to 8 months. Anti-dengue IgM levels were higher in primary infections than secondary infections. Anti-dengue IgG in primary infection began to be detected in a low titer at the end of the first week after the onset of fever, increasing generally on day fourteen. Secondary IgG infection can be detected on day 2 with a high titer. Anti-dengue IgM / IgG ratio is used to distinguish primary or secondary IVD. Anti-dengue IgA begins to be detected on the sixth day of the onset of fever, reached a peak on the 8th day and then rapidly declined until it was not detected on the 40th day. Antidengue IgA is in circulation for a shorter period of time because it is very helpful in the diagnosis of IVD especially in endemic areas. Anti-dengue IgA is better at distinguishing acute infections from secondary IVD than primary, especially in conditions with Ig M that last for up to 8 months.

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Dr Munawaroh Fitriah Sp.PK Co-Pi PROACTIVE Site 570 (RSUP Soetomo, Surabaya)

Newsletter

NATIONAL INSTITUTES OF HEALTH (NIH)

By: LOUIS GRUE



he Indonesia Research Partnership on Infectious Disease (INA-RESPOND) is a collaborative initiative between United States and Indonesian government institutions formed to promote and conduct high-quality infectious disease clinical research in Indonesia through development of a collaborative, sustainable, and well-recognized research network. The following is a brief overview the US NIH to introduce you to the organization.

A Short History of the National Institutes of Health

The NIH traces its roots to 1887, when a one-room laboratory was created within the Marine Hospital Service (MHS), predecessor agency to the U.S. Public Health Service (PHS). The MHS had been established in 1798 to provide for the medical care of merchant seamen. One clerk in the Treasury Department collected twenty cents per month from the wages of each seaman to cover costs at a series of contract hospitals. In the 1880s, the MHS had been charged by Congress with examining passengers on arriving ships for clinical signs of infectious diseases, especially for the dreaded diseases cholera and yellow fever, in order to prevent epidemics. During the 1870s and 1880s, moreover, scientists in Europe presented compelling evidence that microscopic organisms were the causes of several infectious diseases. In 1884, for example, Koch described a comma-shaped bacterium as the cause of cholera.

Officials of the MHS followed these developments with great interest. In 1887, they authorized Joseph J. Kinyoun, a young MHS physician trained in the new bacteriological methods, to set up a one-room laboratory in the Marine Hospital at Stapleton, Staten Island, New York. Kinyoun called this facility a "laboratory of hygiene" in imitation of German facilities and to indicate that the laboratory's purpose was to serve the public's health. Within a few months, Kinyoun had identified the cholera bacillus in suspicious cases and used his Zeiss microscope to demonstrate it to his colleagues as confirmation of their clinical diagnoses. "As the symptoms . . . were by no means well defined," he wrote, "the examinations were confirmatory evidence of the value of bacteria cultivation as a means of positive diagnosis."



Dr. Francis Sellers Collins The 16th Director of the National Institutes of Health The 2nd Director of the National Human Genome Research Institute

Organization

The National Institutes of Health is made up of 27 different components called Institutes and Centers. Each has its own specific research agenda, often focusing on particular diseases or body systems. All but three of these components receive their funding directly from Congress and administrate their own budgets. NIH leadership plays an active role in shaping the agency's research planning, activities, and outlook. The Office of the Director is the central office, responsible for setting policy for NIH and for planning, managing, and coordinating the programs and activities of all the NIH components.

What began as a one-room Laboratory of Hygiene in 1887, the National Institutes of Health (NIH) today is one of the world's foremost medical research centers. An agency of the Department of Health and Human Services, the NIH is the Federal focal point for health research.

NIH Office of the Director

The Office of the Director (OD) is responsible for setting policy for NIH and for planning, managing, and coordinating the programs and activities of all 27 of NIH's Institutes and Centers. The OD program offices include the Office of AIDS Research, Office of Behavioral and Social Sciences Research, Office of Disease Prevention, The Office of Strategic Coordination and Office of Research on Women's Health, among others.

Mission and Goals

NIH's mission is to seek fundamental knowledge about the nature and behavior of living systems and the application of that knowledge to enhance health, lengthen life, and reduce illness and disability.

The goals of the agency are:

- to foster fundamental creative discoveries, innovative research strategies, and their applications as a basis for ultimately protecting and improving health;
- to develop, maintain, and renew scientific human and physical resources that will ensure the Nation's capability to prevent disease;
- to expand the knowledge base in medical and associated sciences in order to enhance the Nation's economic well-being and ensure a continued high return on the public investment in research
- to exemplify and promote the highest level of scientific integrity, public accountability, and social responsibility in the conduct of science.

In realizing these goals, the NIH provides leadership and direction to programs designed to improve the health of the Nation by conducting and supporting research

- in the causes, diagnosis, prevention, and cure of human diseases;
- in the processes of human growth and development;
- in the biological effects of environmental contaminants;
- in the understanding of mental, addictive and physical disorders
- in directing programs for the collection, dissemination, and exchange of information in medicine and health, including the development and support of medical libraries and the training of medical librarians and other health information specialists.

NIH Institutes

- National Cancer Institute (NCI)
- National Eye Institute (NEI)
- National Heart, Lung, and Blood Institute (NHLBI)
- National Human Genome Research Institute (NHGRI)

- National Institute on Aging (NIA)
- National Institute on Alcohol Abuse and Alcoholism (NIAAA)
- National Institute of Allergy and Infectious Diseases (NIAID)
- National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS)
- National Institute of Biomedical Imaging and Bioengineering (NIBIB)
- Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD)
- National Institute on Deafness and Other Communication Disorders (NIDCD)
- National Institute of Dental and Craniofacial Research (NIDCR)
- National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK)
- National Institute on Drug Abuse (NIDA)
- National Institute of Environmental Health Sciences (NIEHS)
- National Institute of General Medical Sciences (NIGMS)
- National Institute of Mental Health (NIMH)
- National Institute on Minority Health and Health Disparities (NIMHD)
- National Institute of Neurological Disorders and Stroke (NINDS)
- National Institute of Nursing Research (NINR)
- National Library of Medicine (NLM)

NIH Centers

- Center for Information Technology (CIT)
- Center for Scientific Review (CSR)
- Fogarty International Center (FIC)
- National Center for Advancing Translational Sciences (NCATS)
- National Center for Complementary and Integrative Health (NCCIH)
- NIH Clinical Center (CC)

Location

Headquarters for the Office of the Director and the Institutes and Centers are located in Bethesda, Maryland, USA. NIH has more than 75 buildings in a campus-like environment over 300 acres. Some research is performed on campus in state-of-the-art laboratory facilities, although more than 80% of research activities are conducted by scientists working in every state and around the world.

Impact of NIH Research

NIH is the largest public funder of biomedical research in the world, investing more than \$30 billion in taxpayer



Anthony S. Fauci, M.D. Director of the National Institute of Allergy and Infectious Diseases (NIAID)

dollars to achieve its mission to enhance health, lengthen life, and reduce illness and disability. In pursuing this mission, NIH improves health by promoting treatment and prevention, contributes to society by driving economic growth and productivity, and expands the biomedical knowledge base by funding cutting-edge research and cultivating the biomedical workforce of today and tomorrow.

Evidence of the varied, long-term impacts of NIH activities comes from a variety of sources, ranging from studies of individual diseases, to broader analyses of NIH as a whole.

Global Health at NIH

Institutes, Centers and Offices across the National Institutes of Health (NIH) are engaged in global health research and research training activities. To learn more about the global reach of the NIH explore the Fogarty International Center web site at https://www.fic.nih.gov/ Pages/Default.aspx

To learn more about the NIH explore the web site at https://www.nih.gov/

SCIENCE & HEALTH



FROM BERLIN TO LONDON TO DÜSSELDORF: THE JOURNEY OF HIV CURE

By: M. HELMI AZIZ



Photo credit: Center for Health Journalism

imothy Ray Brown was diagnosed with HIV in 1995 while he was studying in Berlin, Germany. Twelve years after that, in 2007, he underwent a procedure called hematopoietic stem cell transplantation for his acute myeloid leukemia. The team of doctors tried to match Timothy Ray Brown with 60 potential donors. Then, they selected an individual with CCR5- Δ 32 homozygous, which means that the donor was immune to HIV (CCR5 is a protein that opens the door for HIV to enter blood cells – Fig 1). The first transplant took place in February 2007, and Timothy Ray Brown stopped his antiretroviral treatment on that day.

Three months after the transplantation his HIV was undetectable, even though he has stopped his medication. Unfortunately, his leukemia strikes back again, and Brown underwent a second stem cell transplant from the same donor. The side effects of the transplantation were tremendous. Brown was temporarily paralyzed and nearly went blind. After rehabilitation, he finally got better. The transplant doctor, Gero Hütter, published Timothy Ray Brown's case in the Conference on Retroviruses and Opportunistic Infections (CROI) 2008, but the case did not come under the spotlight. Later, in the same year, Hütter was invited to present his case by a nonprofit foundation for AIDS research. In November 2008, the Wall Street Journal published the story which was headlined "A Doctor, a Mutation and a Potential Cure for AIDS," making Timothy Ray Brown famous as the Berlin patient.



After the famous Berlin patient, scientists all over the world tried to recreate the Berlin patient's condition. Six other HIV-positive patients with cancer underwent the same procedure as Timothy Ray Brown did. However, all six patients died due to their disease or from transplant complications. Five of them died soon after the transplantation, and one patient had an HIV that used CXCR4 instead of CCR5 to enter the cells; hence he had a viral rebound after the transplantation.

Twelve years after Timothy Ray Brown miracle, in March 2019, we received news from London saying that there is a second patient who experienced sustained remission from HIV-1. The remained anonymous London patient underwent bone marrow transplantation due to Hodgkin's lymphoma and received a donor who also had the CCR5 mutation. The patient stopped taking ART for 18 months, and the virus remains undetectable until now.

Shortly after the London patient, at the CROI in Seattle, there was another patient from the Netherlands (the Düsseldorf patient) who had the same success story as the Berlin and London patients. The patient also underwent the same type of bone marrow transplant and stopped taking ART for three months. Biopsies from the patient's gut and lymph nodes show no infectious HIV. However, it is still too early to say that the Düsseldorf patient is really in complete-HIV remission or not. The big question is, can we recreate the first Indonesian patient that is entirely on HIV remission? I guess the next steps for us are to determine the prevalence of CCR5 mutation in our country since we do not have the national data related to that mutation. Second, instead of using an invasive procedure that Timothy and the other two patients underwent, we can start to focus work on an HIV cure that is based on the CCR5 cellular pathogenesis. With the advancement in science, the researchers all over the world are attempting to focus on gene editing therapies for CCR5. We cannot just wait for the next good news on HIV cure.

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London patient becomes second man to be cleared of AIDS virus

Newsletter

NO MORE PAIN. PERIOD.

By: RIA LESTARI

enstruation is often described as a monthly guest, and sometimes its presence brings suffering. Although most women do not feel disturbed by it, for others, the date of menstruation is like horror for them. The fear is in the form of painful menstruation (dysmenorrhea).

When dealing with menstrual pain, many women -who are not ready usually drink various types of potions and drugs to relieve their pain. Many women forced to curl up on their bed and their daily activities are forced to stop. The percentage of women who experience menstrual pain is quite large. However, it is rare for them to come to the doctor regarding their pain. In the USA, 30-50% of women feel menstrual pain; 10-30% of them must leave work or school.¹ In Indonesia, there was a study involving 733 iunior high school students in Jakarta, and it turned out 74.1% of the students had mild to severe stage of menstrual pain. The students also complained of dizziness, headaches, and nausea as symptoms that accompany their menstrual pain.^{2,3} Another study from the USA revealed that menstrual pain was experienced by 20% - 90% of women in their reproductive age.⁴



Why Can Menstrual Pain Happen?

Menstrual pain is described as mild to severe pain in the lower abdomen. ⁵ The pain is spasmodic, which is a pain like cramping and throbbing. From the lower abdomen, pain can spread to the inner thighs or the buttocks area. The degree of pain can differ from one woman to another. If the menstrual pain described above is accompanied by nausea, vomiting, diarrhea, or even fainting, then the pain is classified as severe menstrual pain.

In the medical world, menstrual pain is called dysmenorrhea, derived from the words "dis" (difficult, painful, abnormal), "meno" (menstruation) and "rhea" (flow). There are two types of dysmenorrhea, namely primary and secondary. It is primary dysmenorrhea if there are no organic abnormalities found. ⁶ The pain arises on the first day of menstruation and disappears or decreases sharply on the second day. The cause is uterine contractions coupled with the influence of several hormones.

Although the mechanism of the primary dysmenorrhea is not yet clear, it is suspected that pain arises due to excessive release of prostaglandin hormone. This prostaglandin causes uterine contractions and can cause pain. ⁶ High levels of prostaglandin are caused by low levels of the progesterone produced from the corpus luteum. Nevertheless, in the secondary dysmenorrhea, menstrual pain arises due to abnormalities in the reproductive organs. The natures of the pain are also different:

- They occur in adulthood, where the women have never previously experienced menstrual pain before.
- Pain begins to appear on the first day of menstruation, but the longer it is, the more menstruation blood that flows. The pain can last until the end of the menstruation cycle.
- Pain is more severe, and painkillers are almost always needed

Exercise Can Help to Ease the Menstrual Pain

What's interesting is that menstrual pain is also related to the psychological condition of a person. The study from Iran showed that a woman whose personality was imma-



ture, who felt uncomfortable when she was menstruating, who experienced conflicts related to her femininity, mostly they experienced more severe menstrual pain. ⁷ Likewise, women who lack exercise and who have a lower nutritional status turn out to suffer more often from menstrual pain compared to those who exercise and have a balanced diet.

Another research concluded that aerobic exercise could be used as a preventive, therapeutic or therapeutic approach to control dysmenorrhea and other menstrual disorders. It can be said that performing regular aerobic exercise through mental and physical relaxation and improving blood flow can improve menstrual symptoms.^{8,9}

When Do You Need to See a Doctor?

Menstrual pain does not always have to be treated, but if it is felt necessary, do not hesitate to consult with a doctor. Medical treatment is recommended if there is a suspicion of secondary menstrual pain. Women who have primary menstrual pain that makes them difficult to do their activities can freely consume any pain relievers. However, they should take the drug according to the recommended dosage and do not take them carelessly and excessively. It would be better if changes in lifestyle and diet are considered. ^{9, 11} There are several alternatives that can be followed:

- 1. Exercise regularly.
- 2. Eat healthy food with lots of vegetables and fruits.
- 3. Reduce the consumption of salt, sugar, and fat.
- Use warm compress gently in the painful part of the abdomen.

Conclusion

Menstrual pain or dysmenorrhea is a very common problem among women. However, the good news is that the condition is treatable and manageable. Because of that, many women must be aware of their body and choose the appropriate intervention; a change in lifestyle is preferable than consumption of medications.

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Pygmalion Effect: A Hidden Magic to Hocus Pocus Your Team?

INA-RESPOND

By: ALY DIANA

he name Pygmalion is taken from a person in Greek mythology. Pygmalion in Ovid's Metamorphoses was a sculptor who fell in love with an ivory statue of his own making and begged the gods to give him a wife in the likeness of the statue. The gods granted the request, and the statue came to life. The 'Pygmalion effect' works through the self-fulfilling prophecy – that one's positive expectations about someone's behavior, capability or performance lead to a higher propensity for the behavior, capability or performance to manifest.

The classic Pygmalion effect has been introduced by Rosenthal and Jacobson in 1968 using a classroom study, where teachers were led to believe that some students showed "signs of a spurt in intellectual growth and development". In fact, these students were just selected at random. This in turn led the teachers to unconsciously facilitate learning and expect higher performance for these students. When subsequently tested at the end of the year, the "high potential" students showed a significant gain in intellectual growth compared to their peers (their IQ scores increased more). This classic study has been cited thousands of times by both followers and critiques. Critiques mostly highlight the replication crisis of this classic study.

Nevertheless, in the past 2 decades, researches have conducted more studies to observe Pygmalion effect, not only in a classroom but also in a working place. One study has focused to see the Pygmalion process and employee creativity. The study provides support for the basic relationships proposed by the classic Pygmalion model. The most fundamental belief of the Pygmalion process is that supervisor performance expectations will ultimately influence employee performance. Although supervisor's innovation expectations have been directly tied to creative productivity, these expectations link to a series of intermediate steps that may culminate in employee creativity. Those employees for whom supervisors held higher creativity expectations reported that their supervisors rewarded and recognized their creative efforts, provided more resources, encouraged the sharing of information, collaboration, and creative goal setting, and modelled creativity in their own work.

As expected, employees who felt they were expected to be creative reported having stronger beliefs in their creative capacity. However, in the absence of acknowledgement, supervisors' actions may have less impact on employees' beliefs in their creative efficacy. This fact may become particularly relevant among members of the workforce who do not naturally view themselves as creative. Employee's sense of mastery for creative tasks is linked to that employee's interpretations of the supervisor's actions, highlights the importance of supervisors clearly communicating high expectations for employees' creative potential. Nevertheless, it is not enough for supervisors to expect creativity on the part of their employees. They must also ensure that their employees recognize these creativity expectations and are confident that they can fulfil them. Thus, steps must be taken to clearly communicate expectations and bolster employee confidence for creative work.

To put it in simpler words: encourage our employees to set innovative goals; praise creative efforts - even if they weren't successful; be creative ourselves – serve as a role model; 'stand up' for our employees' innovative efforts; take pride in our employees' achievements; publicly recognize innovative work; reward creativity properly; ... and we can always be creative to figure out the rest.

On the side note (just my humble unproven opinion): We can also use Pygmalion effect to expect and inspire our employers to be a better manager or more creative, don't you think?

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