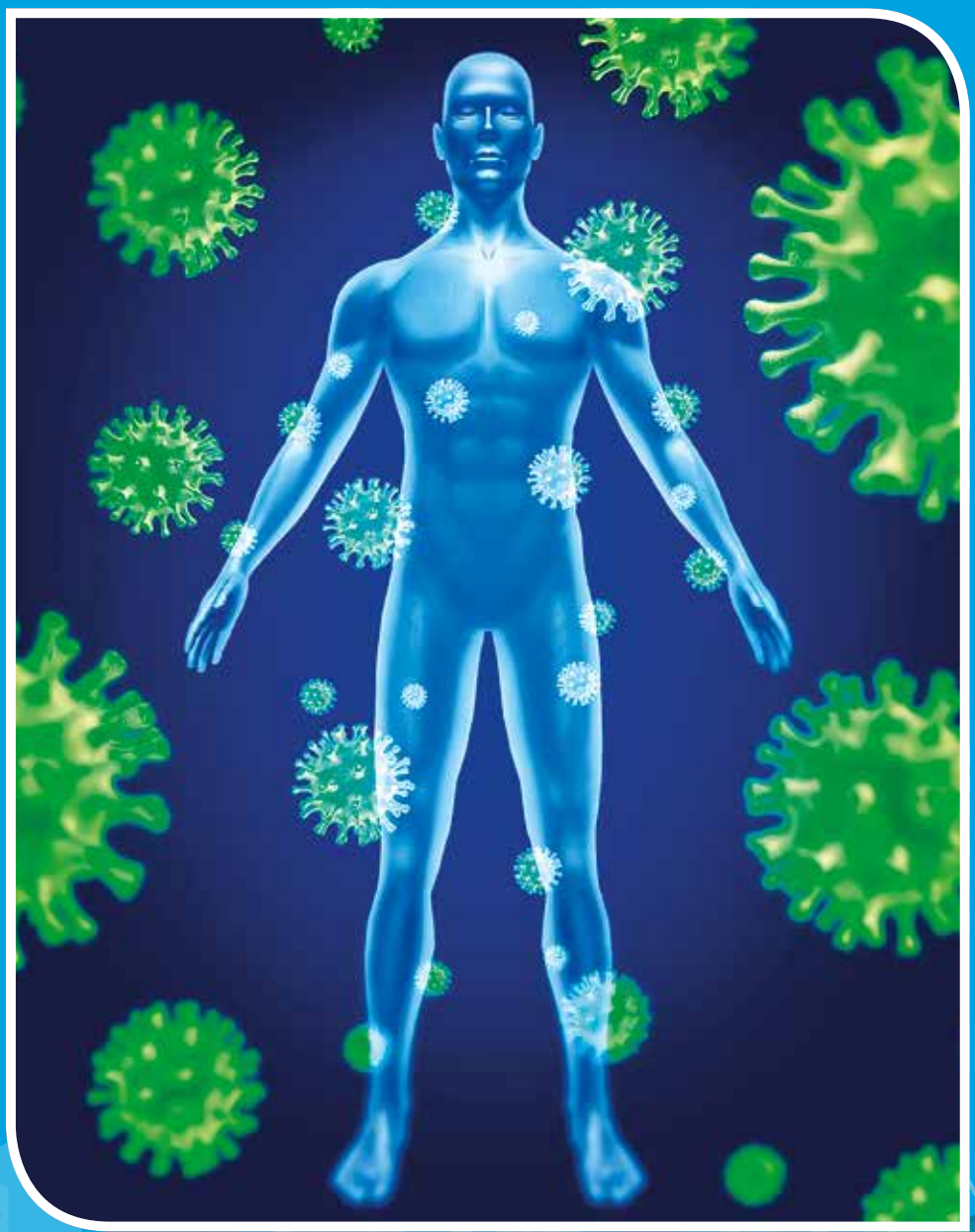
REGISTERED AT THE DEPARTMENT OF POSTS UNDER NO. DOP/NEWS/76/2023

SLMA NEWS+

The Official Magazine of The Sri Lanka Medical Association

WWW.SLMA.LK

SEPTEMBER 2023 | VOLUME 16 | ISSUE 09 ISSN : 1800 - 4016 (PRINTED) 2550 - 2778 (ONLINE)



SCAN THIS CODE TO READ ONLINE

Cover Story : Infectious Diseases

A legacy of excellence.

Asiri Health, the pioneer in private healthcare and modern medicine continues to grow with you. With over 30 years of being the front runners of healthcare, we continue to serve you with unparalleled medical excellence.

Having always set itself higher standards than those defined by industry benchmarks, Asiri Health sets itself apart through a standardized globally accepted care delivery model across all its hospitals and laboratory services, maintaining credentials as one of the few world-class hospital chains in the Asian sub-continent.

Driven by the prerogative to make world class healthcare accessible to every Sri Lankan, Asiri is on a continuous drive to expand its footprint across the country.

ASIRI HEALTH
LIVE MORE
A Softlogic Group Company

SLMA NEWS+

ISSN : 1800 - 4016 (PRINTED) 2550 - 2778 (ONLINE)

"Wijerama House", No. 6, Wijerama Mawatha, Colombo 07, Telephone: +94 112 693 324, Email: office@slma.lk

PRINTING AND PUBLISHING
Kandy Offset Printers (Pvt.) Ltd.
947, Peradeniya Road,
Kandy, Sri Lanka
Tel : 081 4 946 426

CONTENTS

SLMA President

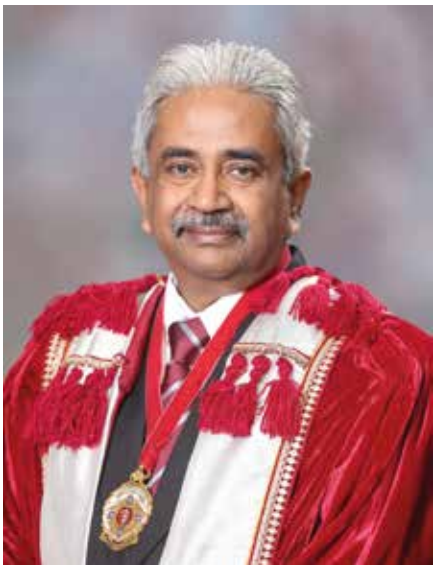
Dr Vinya Ariyaratne
MD, MPH, MSc Com. Med. MD Com, Med., FCCPSL
Specialist in Community Medicine,
Past President of College of Community Physicians of Sri Lanka,
President of Sarvodaya Movement

President's Message

Dear SLMA Members,

The current disease burden of the country is somewhat dominated by non-communicable diseases (NCDs). However, infectious diseases remain as an important public health concern in Sri Lanka. This issue of SLMA Newsletter focuses on Infectious Diseases as they are ever so important for a country like Sri Lanka. At the time we publish this Newsletter, an outbreak of the Nipah virus in our neighbouring India is drawing global attention and causing public concern in Sri Lanka. Sri Lanka Medical Association (SLMA) was the first to hold a press conference to present the verified and scientific information on this disease to the public as there were signs of excessive panic due to media reporting of the outbreak of Nipah virus disease in the Kerela State in India. This demonstrates the importance of pandemic preparedness and Nipah virus probably offers us an opportunity to test our own readiness to such eventualities.

The burden of infectious diseases in the world varies significantly depending on several factors, including geographic location, socioeconomic conditions, healthcare infrastructure, vaccination coverage, and public health measures. Infectious diseases have historically been a major cause of mortality worldwide. Diseases such as HIV/AIDS, tuberculosis (TB), malaria, and lower respiratory infections (including pneumonia) have been among the leading causes of death in many parts of the world. However, the impact of these diseases can vary widely by region. Infectious diseases can also lead



to significant morbidity, causing illness and reducing the quality of life for those affected. New infectious diseases can also emerge, while others may resurface due to various factors, including changes in ecosystems, human behaviour, and global travel. Examples include COVID-19, Ebola outbreaks, and the ongoing threat of influenza pandemics.

Sri Lanka has made substantial progress in controlling many infectious diseases. Malaria, for example, is nearly eliminated, and the country has also made strides in controlling diseases like Tuberculosis (TB), measles, Rubella and other vaccine-preventable diseases. However, diseases such as Dengue and Sexually Transmitted Diseases (STDs) remain major threats to public health, and diverse interventions are currently being taken towards their control. A related challenge in controlling infectious diseases is Antimicrobial Resistance (AMR): The rise of AMR, where bacteria, viruses, and other pathogens become resistant to antibiotics and antiviral drugs, poses a growing threat. This can complicate the treatment of infectious diseases and potentially lead to increased mortality and healthcare costs.

When the armed conflict in Sri Lanka ended in May 2009, there were serious concerns as to whether infectious and communicable diseases would rapidly spread due to mass displacement of people with overcrowding in camps for internally displaced persons (IDPs). However, the health system was able to cope with the sudden increase in demand for services and managed this threat without undue increase in mortality. Sri Lanka is also prone to natural disasters such as floods which cause increased risk of spread of infectious diseases.

It is important to note that the landscape of infectious diseases is constantly evolving due to factors like globalization, urbanization, climate change, and advances in healthcare and technology. Public health efforts, research, and international cooperation are crucial in addressing and mitigating the burden of infectious diseases worldwide. It is also important to emphasize that healthcare policies, public health campaigns, and interventions can change the disease burden pattern over time. It is important that Governments, professional bodies and healthcare organizations continuously work to address existing health challenges and adapt to new ones as and when they arise. Attention towards controlling infectious diseases should not be swayed or swamped by priority given to NCDs.

Dr Vinya Ariyaratne
President SLMA.

Activities in Brief
(16th August 2023 - 15th September 2023)

SLMA Saturday Talks

19th August

'Pre-diabetes: How & What is the time to act?' by Dr Umesha Wijenayake, Acting Consultant Endocrinologist, District General Hospital Negombo.

26th August

'Microbial Battlegrounds: The dilemma of dispensing antibiotics' by Dr Kushlani Jayatillake, Consultant Microbiologist, Sri Jayawardenapura General Hospital.

9th September

'A – Z of Rheumatoid Arthritis: A case based discussion' by Dr Chiranthie Liyanage, Senior Lecturer, Department of Pharmacology, University of Colombo.

Other Activities

16th, 23rd August & 6th September

A webinar series on *'Drug Allergy'* was organized by the Sri Lanka College of Paediatricians, Allergy & Immunology Society of Sri Lanka in collaboration with SLMA Doc Call 247.

The resource person was Professor M Thirumala Krishna, Chair of Allergy, Clinical Immunology & Global Health, Institute of Immunology & Immunotherapy, University of Birmingham.

He covered the topics '*Introduction to drug allergy, Tackling the burden of inaccurate Penicillin allergy labels: perspectives from high income countries & Peri-operative anaphylaxis: A clinical challenge'*.

21st August

A discussion was held with the Opposition Leader and Health Professionals on the healthcare facing the country pertaining to health professional's migrations, drug quality issues, shortage of drugs, etc.

The following persons participated on behalf of SLMA, Dr Lucian Jayasuriya, Dr Ruvaiz Haniffa, Professor Indika Karunathilake, Past Presidents of SLMA, Dr Ananda Wijewickrama, President Elect, SLMA & Dr Sajith Edirisinghe, Honorary Secretary, SLMA.

22nd August

A clinical meeting was held with the collaboration of the College of Ophthalmologists of Sri Lanka on the topic *'Beyond Eyes'*.

Case presentations were done by Dr Medhavini Dissanayake on *'Steven-Johnson Syndrome/ TEN: Combating the ocular-complications'*, Dr Dimuthu Gunasekara on *'Sudden loss of vision presenting with psoriasis like rash'* & Dr Supul Banagala on *'Beyond cotton wool spots in retina'*. All presenters were Senior Registrars.

Case discussions were conducted by Dr Kusum Rathnayake, Consultant Cornea & External Eye Disease, Dr KR Dayawansa, Consultant Ophthalmologist & Dr Kushlani N Gooneratne, Consultant Ophthalmologist.

All resource persons were attached to the National Eye Hospital, Colombo.

24th August

Expert Committee in Medical Rehabilitation, Sri Lanka Medical Association organized the 3rd Annual Conference on Medical Rehabilitation.

The resource persons and the topics are as follows;

Session 1: Neurodevelopmental disorders of the young

Dr Saraji Wijesekara, Senior Lecturer, University of Sri Jayewardenepura on *'Rehabilitation with early interventions in cerebral palsy'*, Mr Nuwan Rodrigo, Physiotherapist, Lady Ridgeway Hospital on *'Management of spasticity in cerebral palsy; physiotherapy perspective'* & Ms Lakshika Udugama, Speech and Language Therapist, Sirimavo Bandaranaike Children's Hospital on '*Speech and Language Pathologist's role in adolescents with autism'*.

Session 2: Stroke rehabilitation

Mr Iranga Nayanajith Aluthge, Principal, School of physiotherapy and oocupational therapy on *'Physiotherapy for stroke'*, Dr Nandana Welage Senior lecturer, University of Kelaniya on *'ADL and IADL for stroke'* & Ms Thushari Anuruddhika, Special Grade Nursing officer, NHSL on *'Nursing care for stroke'*.

Session 3: Rehabilitation of disorders with cognitive impairment

Dr Manjula Caldera, Consultant Neurologist, Teaching Hospital Anuradhapura on '*Cognitive assessment and diagnosis of dementia'*, Dr Chishara Paranawithana, Psychologist, Asiri Central Hospital on *'Cognitive therapy for disorders with cognitive impairment'*, Dr Malsha Gunathilaka, Consultant Psychogeriatric Specialist, CSTH on *'Coping up with dementia'* & Ms Darshani Karunaratne, Deputy Director, Department of Social Services on '*Social services available for persons with disabilities in Sri Lanka'*.

Session 4: Rehabilitation of musculo-skeletal disorders

Dr Lakshmi Jayalath, Senior Lecturer in Physiotherapy, University of Colombo on *'Physiotherapy in musculoskeletal disorders'*, Dr Duminda Abeysinghe, Consultant in Rheumatology and Rehabilitation, RRH on *'Rehabilitation of spinal cord injuries'* & Ms H V Dhammika Dilani, Principal, School of P&O, RRH on *'Role of P&O in amputee rehabilitation'*.

Session 5: Sports, falls and recreation

Dr Chathuranga Ranasinghe, Senior Lecturer, University of Colombo on *'Rehabilitation in sports injuries'*, Dr Padma S Gunaratne, Consultant Neurologist on *'Prevention of falls in the elderly'* & Dr Samitha Samanmalee, Rehabilitation Hospital, Ragama on *'Recreation in persons with disability'*.

31st August

Professor Indika Karunaratne, Professor in Medical Education, Faculty of Medicine, Colombo was a resource person at the Pre-conference workshop on *'Bench to Bedside: Bridging the gap between basic sciences & clinical research'* at the 16th International Research Conference organized by the Sir John Kotelawala Defence University

Dr Sajith Edirisinghe, Secretary, SLMA was the co-moderator of the session.

1st September

A public seminar was held on the topic *'Crises in the medicinal drugs: causes, consequences & potential remedies'*.

The resource persons were Dr Vinya Ariyaratne, President, SLMA, Dr Ananda Wijewickrama, Consultant Physician, Emeritus Professor Krishantha Weerasuriays, Former Advisor to WHO, Professor Priyadarshani Galappaththi, Professor of Pharmacology & Dr MK Ragunathan, Consultant Physician

7th September

The SLMA Expert Committee on Disaster Resilience & Management organized a webinar on *'Drought & Floods: The dilemma of rational use of water amidst a poly-crises'* by Eng. SCP Sugeeshwara, Director of Irrigation (Hydrology & Disaster Management), Irrigation Department, Sri Lanka

11th September

Dr Vinya Ariyaratne, President, SLMA attended a discussion on TV1 (MTV) Newsline on the topic *'Sri Lanka Healthcare on verge of collapse'*

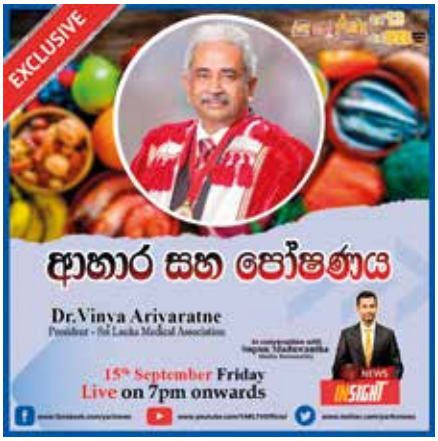
12th September

The SLMA Expert Committee on Communicable Diseases organized a symposium in collaboration of the Media Committee of SLMA on *'Recently reported Measles cases in Sri Lanka: Lessons to be Learnt'*.

Dr Manjula Kariyawasam, Consultant Epidemiologist, Epidemiology Unit, MoH spoke on *'Global & Local situation of Measles & prevention'*, Dr Janaki Abeynayake, Consultant Medical Virologist & Head, Department of Virology, MRI on *'Virology & laboratory diagnosis of Measles'* and Dr BJC Perera, Senior Consultant Pediatrician, on *'Clinical presentations & management of Measles'*.

15th September

Dr Vinya Ariyaratne, President, SLMA participated in a discussion on *'Food & Nutrition'* on YarlITV News Insight



Loads of Gifts for the Little Ones who Save with HNB Singithi

Great benefits including exciting gifts and vouchers for kids from the Singithi Savings Account!

From October 2nd to November 17th 2023

The value of vouchers for your deposit

Deposit amount	Value of vouchers
Rs.5,000/-	Rs.250/- Voucher or a Jumbo Pen Holder
Rs.10,000/-	Rs.500/- Voucher or a Stationery Pack
Rs.25,000/-	Rs.1,000/- Voucher
Rs.50,000/-	Rs.2,000/- Voucher
Rs.100,000/-	Rs.5,000/- Voucher
Rs.250,000/-	Rs.15,000/- Voucher
Rs.500,000/-	Rs.30,000/- Voucher
Rs.1,000,000/-	Rs.60,000/- Voucher

Other benefits from HNB Singithi:

- Cash gifts for all kids who pass the Grade 5 scholarship exam
- When you place a monthly standing order to your child's HNB Singithi Account, if you ever had to separate from your loved ones permanently, this standing order amount will be saved in your child's Singithi Account until he or she reaches the age of 18

Cinnamon Gardens Branch
Udara - 077 355 5724

Only till stocks last
The gifts may differ from the images shown.
Only children under 16 with HNB Singithi, HNB Teen and HNB Singithi Surakum accounts are eligible to receive gifts.

HNB Singithi
YOUR PARTNER IN PROGRESS

sarasavi DSI FASHION BUG Barbie LUMALA LEGO Abans STONE 'N' STRING ZUZI KIDS JOY FARLIN

*Conditions apply. Fitch Rating A(lka) Hatton National Bank is a Licensed Commercial Bank supervised by the Central Bank of Sri Lanka. Hatton National Bank PLC - PQ 82

Dengue - Basics for Primary Health Care Doctors

Professor Chamara Dalugama
MBBS(Cey), MD(Col), MRCP(UK), FRCP(Edin), MRCP (Acute Medicine), MRCP (Diabetes and Endocrinology), MRCP (Geriatrics)
Coordinator - Center for Research in Tropical Medicine - Peradeniya
Professor in Medicine
University of Peradeniya

Case scenario

Mr Darshana is a 35-year-old banker from Kandy who presents to his family doctor with a 1-day history of high fever. He complains of severe muscle pains and joint pains.

What are the possible differential diagnosis?

Dengue is a top differential in any patient presenting with an acute febrile illness in Sri Lanka as it is hyperendemic. Other differentials include viral fever, influenza, leptospirosis, and rickettsial infections.

Dengue is a tropical infection caused by dengue virus. Four serologically distinct dengue viruses (DENV) of the genus flavivirus called DENV1 to DENV4 exist. It is transmitted by Aedes aegypti and Aedes albopictus mosquitoes. Dengue has an incubation period ranging from 3 to 14 days.

Interestingly, most dengue-infected people are asymptomatic; only 10% of people will be symptomatic and seek medical advice.

What is your approach to this patient at the presentation?

History

- Clearly establish and document the onset of fever, as accurately as possible (e.g., Fever started on Monday around 7 in the morning)
- Inquire about other associated symptoms (arthralgia, myalgia, retro-orbital pain, headache etc)
- Ask about any organ-specific symptoms which might point towards an alternative diagnosis (e.g., Dysuria, Cough, Sore Throat, bloody diarrhoea)
- Always inquire about foreign travel in acute fevers (Malaria may present like dengue at the outset)
- Look for the medical co-morbidities and current medications with special attention to anti-platelet drugs, anticoagulants and NSAIDs
- Understand the education level, insight into the condition and home situation as it has management implications

Examination

On day 1 of the fever

- Looks for signs of dehydration
- Pulse rate and blood pressure
- Organ-specific signs of alternative diagnoses (consolidation in the chest or renal angle tenderness, pustular tonsillitis, conjunctivitis etc.)

Investigations

- It is important to appreciate that a full blood count could be normal in dengue fever on day 1. Normal white count and platelets would not exclude dengue on day one. This should be emphasized to the patient as it may provide false assurance to the patient. But a full blood count on day 1 could be useful to have baseline values, including the haematocrit.
- A positive NS1 Antigen would serologically confirm the diagnosis of dengue viral infection but a negative test would not exclude it. The sensitivity and specificity of NS1 are highest during the first 1-2 days, so it would be an ideal time to do an NS1 Antigen test if you are planning on it.

Mr Darshana gets the blood investigations the same day. His WBC is WBC is 5.5 * 106 /L, Platelets 180*106/L and haematocrit is 40%. **His NS1 antigen is positive.**

Will you admit the patient?

All serologically confirmed dengue patients do not need hospital admission at the time of presentation. Most patients can be managed as outpatients in the febrile

phase of dengue except for special circumstances which will be discussed later.

How would you facilitate the outpatient management of the patient?

It is very important to educate the patient about the natural history of dengue viral infection. The patient should take adequate oral fluids. This is around 2500ml for a 24-hour period in adults. Plain water intake should be actively discouraged. The patient should be taking a combination of fluids consisting of oral rehydration fluid (jeewani), king coconut water, other fruit juices, kanji or soup with restricted amounts of plain water. It would be better to exclude red and brown drinks which could cause confusion with haematemesis or coffee ground vomitus. Patients should be advised to take adequate physical rest (off school and work) and avoid any strenuous work.

1. Managing symptoms

a. Fever and body aches

Fever and body aches are the most common symptoms of dengue viral infection. Paracetamol is the recommended antipyretic and the analgesic. The patient should be advised not to exceed the recommended dose and frequency (1000mg every six hours for adults)

NSAIDS and steroids should be strictly avoided for symptom control in the febrile phase of dengue fever.

b. Nausea and vomiting

Anti-emetics such as domperidone or metachlopramide are recommended. Proton pump inhibitors or H_2 receptor blockers can be used if there are reflux or gastritis symptoms

3. Routine medications

Aspirin, Clopidogrel, Dipyridamole and Xa inhibitors, in patients who take these on a long-term basis can be withheld. But might need a specialised opinion and close monitoring in special circumstances such as dual antiplatelets in a patient with a recent coronary stent or warfarin in a patient with a mechanical heart valve. For such patients, early admission is advised.

4. Review of the patient

A full blood count should be arranged on Day 3 of the illness. Just for completeness of information, in pregnant patients and in patients with co-morbidities, FBC is recommended in the first day of the illness. A Full Blood Count should be arranged daily thereafter if the platelet count is >150, 000/ mm^3. FBC should be done twice daily if the platelet count is <150, 000/ mm^3.

5. Safety netting of the patient

It is of utmost importance to give clear verbal and preferably written instructions in outpatient management. Patients are advised to return for a review or for hospital admission if there is one of the factors stated below

1. Clinical deterioration with settling of fever
2. Severe nausea and vomiting with inability to tolerate oral fluid
3. Severe abdominal pain
4. Cold and clammy extremities
5. Lethargy or irritability/restlessness
6. Bleeding tendency including inter-menstrual bleeding or menorrhagia
7. Not passing urine for more than 6 hours

Mr Darshana is followed up by the primary care doctor daily with clinical assessment and daily full blood count. On day 3 he presents to his GP complaining of postural dizziness and right upper abdominal pain. He has severe right hypochondriac tenderness. His WBC is 1.5*106/L, Platelets 98*106/L and haematocrit is 42%.

Will you admit the patient now?

Yes. He needs admission to the hospital. He has several warning symptoms, signs and concerning blood investigations warranting him to get admitted as soon as possible.

The following factors in a dengue patient would warrant a prompt hospital admission

1. Platelet count less than 100,000/mm^3
2. Abdominal pain or tenderness/Persistent vomiting
3. Clinical signs of plasma leakage: pleural effusion, ascites
4. Mucosal bleeding
5. Lethargy, restlessness
6. Liver enlargement >2 cm
7. Increase in haematocrit concurrently with a rapid decrease in platelet count in a Full Blood Count (FBC)

Even without the above factors, consider admitting the following categories of dengue patients early in the course of the disease due to complex interplay of the

patient factors and dengue illness

1. Pregnant mothers
2. Very old patients
3. Very obese patients
4. Patients with co-morbid conditions like poorly controlled diabetes, advanced renal failure, ischaemic heart disease and other major medical problems
5. Patients with adverse social circumstances- e.g. living alone, living far from health facility without reliable means of transport.

How would you differentiate Dengue Haemorrhagic Fever from Dengue Fever?

Dengue is considered a serious viral infection among other viruses mainly because of the risk of plasma leakage leading to shock, seen in a minority of patients. Prompt diagnosis of plasma leakage is the cornerstone of the successful management of a patient with dengue infection.

The good old triad of history, examination and investigations would help the clinician to identify the plasma leakage of a dengue patient.

Generally, A white cell count of 5000/mm3 or less with a platelet count of less than 100,000/mm3 may indicate that the patient is in danger of going into a critical phase of plasma leakage within the next 24 to 48 hours.

Symptoms such as postural dizziness, vomiting, abdominal pain or reduced urine output would indicate possible leaking

On examination, the presence of cold extremities, prolonged capillary refill time >2 seconds and unexplained tachycardia would suggest possible leaking. A narrowing of pulse pressure and a postural drop would suggest intravascular volume depletion due to plasma leak. Tender hepatomegaly is also a reliable sign of plasma leakage

These physical symptoms and signs should be further supported by simple bedside investigation of haematocrit. A progressively rising haematocrit, even before reaching a rise of 20%, may indicate that the patient is entering the critical period. The objective evidence of selective plasma leak confirms the diagnosis of dengue haemorrhagic fever. The presence of **pleural effusion and ascites** indicate that the patient is already in the critical phase. Now this selective plasma leak can be detected very early in the course with the use of bedside ultrasound scans

What are the general principles in the management of the critical phase of dengue haemorrhagic fever?

Selective plasma leak in the critical phase of dengue fever is transient and it tentatively lasts for a period of 24-48 hours. The leak usually starts slowly, increases gradually, slows down and then ceases altogether at the end of the leakage phase. However, this may vary significantly from patient to patient.

Sri Lankan guidelines recommend the calculation of a fluid quota for the assumed 48-hour period of this critical phase, which involves maintenance fluid and 50 mL/kg fluid deficit (up to 50 kg) administered over the 48-hour period of the critical phase. Finally, this amounts to 4,600 mL for a 50 kg person for 48 hours.

The rationale for fluid management in the critical phase of dengue fever is to keep the intravascular compartment adequately filled while avoiding fluid overloading of the patient. This is a meticulous task needing very close monitoring of clinical parameters, urine output and haematocrit. **VERY CAREFUL MONITORING OF ALL VITAL PARAMETERS IS THE ONE THING THAT CONTRIBUTES TO SUCCESSFUL OUTCOMES**.

The first-line therapy is normal saline. In patients where the response to the crystalloid boluses is not adequate, colloids are used (dextran 40, Hetastarch)

For any deteriorating patient with DHF, looking for and correcting ABCS is important. A- Acidosis, B- Bleeding (Overt or concealed), C- Calcium and S- Sugar

What is the place for other therapies?

a. Blood products

Platelet transfusions are not routinely indicated even for patients with very low platelets. However, it is indicated in patients with severe bleeding with thrombocytopenia or patients needing emergency surgery.

Blood transfusions are indicated in patients with bleeding (overt or concealed) commonly manifested with clinical deterioration with a dropping haematocrit. In addition to bleeding, there is evolving evidence that the use of blood transfusion in complicated dengue such as severe liver involvement or refractory acidosis, may be beneficial.

b. Steroids

Given the immune pathogenesis of DHF, the use of steroids is hypothesised to be useful in DHF. But currently, there is no convincing evidence from larger studies to make definite recommendations

What are the important factors to consider when transferring a dengue patient from a peripheral unit to a higher unit?

It is important to secure good iv access and initiate fluid resuscitation with normal saline. The patient should be adequately fluid resuscitated prior to transfer. It is important to inform the higher-level institution and obtain advice on resuscitation from the consultant physician receiving the patient. The patient needs to be accompanied by a doctor and a nurse during transport. Adequate information regarding the patient should be provided in the transfer form and this should include daily fluid balance, investigation results and treatment given.

How would you decide on the discharge of the patient?

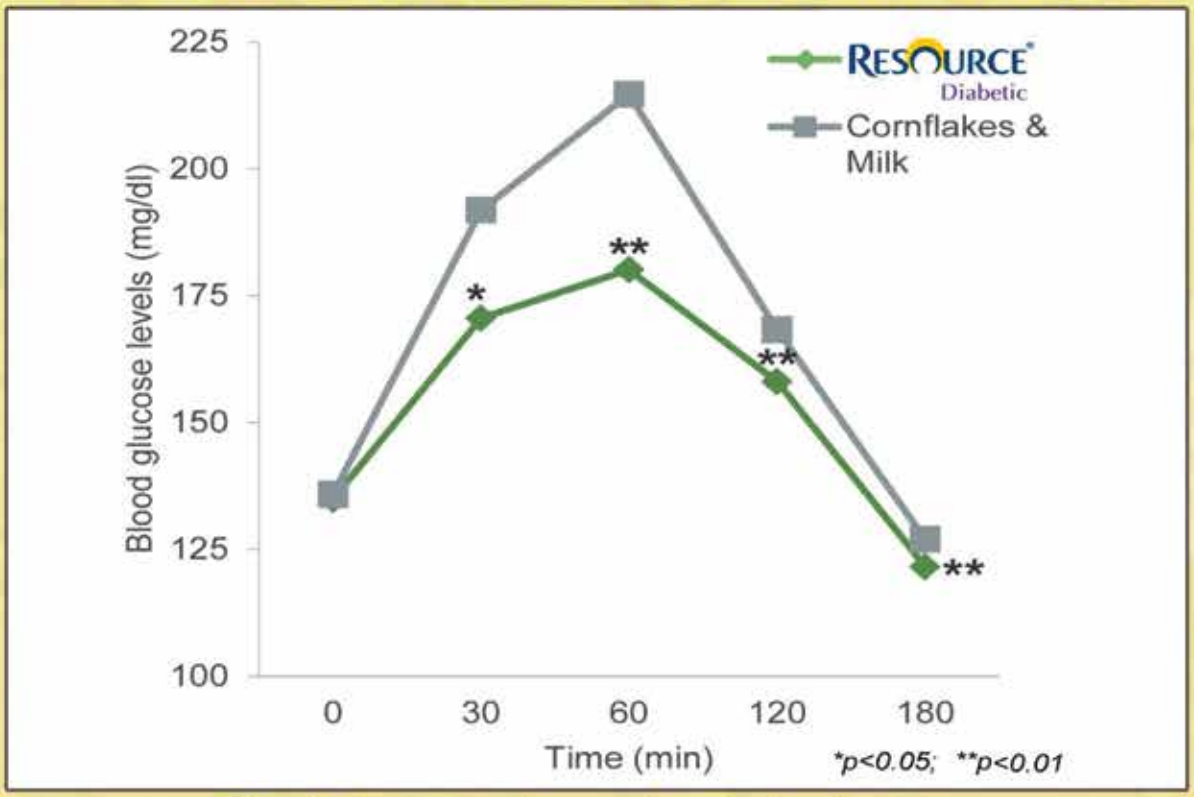
It is important that the patient should be fever free for at least 24 hours without paracetamol prior to discharge. The patient's general condition should be improved. Patients with DHF, at least 2 days should have lapsed from the shock and should not be having distress from pleural effusions or ascites. There should be a clear rising trend in the platelet count.

Mr Darshana was discharged from the hospital on day 6 following an uncomplicated dengue infection with rising platelets and he presents to the primary care doctor after a week complaining of lack of energy and easy fatigue.

How would you manage his symptoms?

Post-dengue syndrome is a well-described entity and full recovery is the norm which might take a few days to weeks. The patient must be reassured and advised on eating a nutritious, well-balanced diet, getting adequate rest and staying hydrated.

Average blood glucose levels after consumption of **RESOURCE DIABETIC** vs isocaloric breakfast



Blood glucose and serum insulin levels were
significantly reduced for up to 3 hours post-meal
in T2DM patients who consumed **RESOURCE DIABETIC**
compared to cornflakes & milk*

RESOURCE DIABETIC

is clinically proven
to help manage
PPH and blood glucose levels
in individuals with
type 2 diabetes

Reference - * Gulati S et al. Diabetes Metab Syndr 2015

Nestlé HealthScience

Nestlé Health Science Division
C/o A. Baur & Co. (Pvt.) Ltd.
No. 62, Jetawana Road, Colombo 14.

www.nestlehealthscience.lk
optifast@baurs.com
0114 619399 | 0772 992131

An update on Sexually Transmitted Infections and application at primary health care level

Dr Thilani Ratnayake
MBBS, MD, DFRSH(UK),
Consultant venereologist,
STD clinic,
Anuradhapura

Sexually Transmitted Infections (STIs) can cause serious health implications in men, women and children in every part of the world crossing all social boundaries. They include infertility, ectopic pregnancy, cancers, death and psychological disturbance.

The burdenof STIs in any health system is significant due to the large of number of patients and the increasing trend. According to WHO estimates, more than 1 million curable STIs are acquired every day. In 2020, it was estimated that globally 374 million new infections were of curable STIs, including chlamydia, Gonorrhea, syphilis, and trichomoniasis (1). Genital herpes infection was estimated to be more than 500 million, indicating the burden of non-curable viral STIs. Over 311,000 cervical cancer deaths are associated with Human Papilloma Virus(HPV) infection each year. Additionally, it is estimated that 38.4 million people were living with HIV in the world, with 1.7 million new infections in 2021.

In addition to the burden on the health system due to a high number of STI patients, there are serious consequences on human lives that can end up even in death. The severity can vary depending on the etiology of the disease. Complicated gonorrhea and chlamydia infections can permanently damage the reproductive system, making both males and females infertile (1). Scarring of the fallopian tube is directly related to ectopic pregnancy with chlamydia infection. Furthermore, both infections can lead to PID and chronic prostatitis, causing patients to suffer from long-term pelvic pain and some ending up with sexual dysfunctions like vaginismus and erectile dysfunction.

Herpes is a lifelong infection that makes patients suffer from recurrent painful ulcers.

Many STIs are associated with adverse birth outcomes with perinatal transmission. Globally, it was estimated that 1 million pregnant women were infected with syphilis, resulting in over 350,000 adverse birth outcomes in terms of stillbirths, miscarriages and congenital syphilis in 2021(1). Neonatal herpes is a rare complication of Herpes Simplex Virus (HSV) infection with high mortality and morbidity in newborns, which can end up with permanent brain damage. Neonatal conjunctivitis and blindness are serious outcomes of gonococcal and chlamydia infections transmitted from an infected mother at the time of labor (1).

Some STIs are direct causes of serious cancers. HPV infection is the primary cause of cervical cancer, which is the fourth most common cancer in women. HPV is also associated with anal cancer in men, particularly Men who have Sex with Men. Hepatitis B is sexually transmitted virus with an estimated 296 million people infected globally and is a major cause of deaths from cirrhosis and hepatocellular carcinoma (1).

Besides the clinical burden, STIs are always associated with stigma and discrimination, resulting in psychological adverse effects not only on the individual with the infection but also on their family. Drug resistance has been identified as a critical problem in managing STIs, especially with Gonorrhoea and HIV (1).

Sri Lankan Situation in Sri Lanka

National STD/AIDs Control Program reported more than 6000 males and females diagnosed with different types of STIs in 2021. Genital herpes was reported in the highest numbers. Gonorrhoea, syphilis, and genital warts are other common STIs reported. Trichomoniasis, on the other hand, has been reported in low numbers (2).

Further it is estimated that 3600 to 4000 people are living with HIV in Sri Lanka, with 607 new infections reported in 2022. More males are infected, primarily through homosexual transmission, resulting in a female-to-male ratio of 1:7 indicating the masculinization of the epidemic during the last 1-2 decades. A total of 648 AIDS-related deaths were reported for Sri Lanka, with a cumulative number of 95 children acquiring the infection from their infected mothers (3).

Etiology

Many different types of viruses, bacteria and parasites are sexually transmissible through various types of sexual acts including unprotected vaginal sex, oral sex and anal sex. Eight pathogens are linked to the greatest incidence of STIs. Of these, four are currently curable: Syphilis, Gonorrhoea, Chlamydia, and Trichomoniasis.

The other four are viral infections: HBV, Herpes Simplex Virus (HSV), HIV and HPV. Gonorrhoea and Syphilis have been known to man since the very early stages of human evolution and is still reported from every part of the world. Common STIs and their causative organisms are shown in the following table.

Outbreaks of novel infections transmitted through sex have been reported in different parts of the world making the list of STIs longer. Shigella spp. are known to transmit through direct and indirect sexual contacts which involve anal and oral sex, anal play or rimming, fingering, and the use of sex toys, especially among men who have sex with men (MSM) (4). Sexual transmission of the Monkeypox virus is also commonly reported among MSM and Female Sex Workers (FSW) presenting with ulcers and blisters on the genitals, apart from involvement of other parts of the body such as the face, palms and soles (5). Ebola virus could also be sexually transmitted, presenting with generalized symptoms without significant genital signs and has been reported in karge numbers in Africa (6).

Mycoplasma genitalium is a facultative bacterium responsible for 10-20% of NGU and 10-35% of recurrent and persistent urethritis in males. It is further known to cause cervical infection which can lead to Pelvic Inflammatory Disease(PID) in women (7). Lympho Granuloma Venereum(LGV) is a rare tropical STI caused by *Chlamydia trachomatis* subtypes L1, L2, and L3 strains, presenting with genital ulcers and inguinal bubo, Reemergence of LGV has been reported as rectal infection or proctitis among MSM (7).

STI Transmission and Sexual Behaviors

Unprotected sex is the main mode of STI transmission and the risk of sexual transmission varies according to the type of sex, number and type of partners. Depending on sexual behaviours, some people are at a higher risk for STIs and HIV than others. In Sri Lanka MSM, Transgender people (TG), FSW and Injecting Drug Users (IDUs) are considered as high-risk groups. Clients of FSW, prisoners, young people and beach boys are also considered as at risk depending on the circumstances.

HIV transmission rate through unprotected vaginal sex has been estimated to be 0.09% and anal sex is considered as the most high-risk act which can increase the risk of HIV transmission up to 18 times higher than receptive vaginal sex (8). This is because anal sex is more likely to cause trauma exposing underlying blood to the infection. Furthermore, MSM and TG population groups are not accepted in many societies, especially among those more culturally preserved. In such a context having a stable partner is not an easy task when compared to heterosexual relationships, making MSM to have a more frequent partner change which in turn is a high risk for acquiring STIs. Oral sex has a relatively low risk for HIV transmission but the presence of inflammation and infections increases the risk.

Other associated factors such as commercial sex and influence of alcohol and illicit drugs increase the risk for STI and HIV transmission. Under the influence of drugs and alcohol, the ability to make correct decisions and inhibition is impaired making individuals more likely to engage in unprotected sex. Addiction to drugs may further push individuals to more risky behaviours like exchanging sex for drugs and vice versa.

A new trend of illicit drug use reported as “chemsex” is commonly practiced among MSMs and bisexual groups in societies, where three specific illicit drugs called "chem drugs" in which combination of both inhibitors and stimulants are taken to increase sexual desire and keep the sex drive for a long period. The risk of STI and HIV transmission is known to be very high among chem-sex users because of long sessions of unprotected anal sex with multiple male partners (9).

Clinical Presentation

A wide range of clinical presentations are described for STIs. A significant number of STIs are asymptomatic and can be easily missed at primary health care clinics. The majority of women with gonococcal and chlamydia infections are asymptomatic, while syphilis and HIV infections have a long latency period that can go up to an average of eight years or more without symptoms. On the other hand patients may have typical symptoms linked to genitals such as urethral and vaginal discharge, genital ulcers, scrotal swelling, and lower abdominal pain making it an easy diagnosis. Atypical presentations are also common in STIs, in which presenting symptoms are not related to genitalia such as conjunctivitis, arthritis, skin rashes, weight loss, long-standing cough, menorrhagia, anemia, and thrombocytopenia where a high degree of suspicion and clinical experience is needed to rule out the possibility of STI.

Approach to Diagnosis and Treatment of STIs at Primary Health Care(PHC)

Three approaches are described for STI diagnosis. Clinical diagnosis depends on presenting signs and symptoms and is an easy approach for STI diagnosis but accuracy may vary according to the clinician's experience and skills.

Syndromic management for STI care is recommended by WHO and other standard organizations for Primary Health Care PHC with limited resources. The basic principle in syndromic management is to treat all possible pathogens responsible for common clinical

symptoms and signs using standard algorithms and can be applied in settings with limited laboratory facilities for microscopy and serology for STI diagnosis. Advantages of syndromic management are ability to treat on the same day, cover many patients with minimum skill and training, but over-treatment is a possible disadvantage (10).

Third approach for STI management is etiological diagnosis where treatment is commenced after confirming the diagnosis with investigation results. Therefore, laboratory facilities including microscopy, molecular tests, and serology are essential. It may not be possible to treat the patient on the same day and hence the risk of onward transmission and losing the patient before treatment are disadvantages. In most settings, it is common to practice a combination of clinical and etiological or syndromic approaches depending on the availability of facilities (10).

Treatment of STIs

Different types of antibiotics and antivirals are recommended by standard guidelines for treatment of STIs and HIV. For curable STIs commonly used antibiotics are penicillin, cephalosporins, doxycycline, metronidazole, and azithromycin. Penicillin is the drug of choice for syphilis of all stages for many years as it has been effective since 1943 without developing resistance. On the other hand, antibiotic resistance has become a significant problem in gonococcal infection. Both plasmid-mediated and chromosomal-mediated resistance to different types of commonly used antibiotics have been reported. High-level of resistance of gonococci to quinolones and penicillin has been reported in many parts of the world including Sri Lanka. Currently third generation cephalosporins are recommended as the first line antibiotic for gonorrohea. Therefore, routine culture for antibiotic sensitivity and following standard guidelines when prescribing antibiotics are key factors in the management of gonococcal infection. (11)

Treatment of viral STI is always a challenge. Aciclovir is recommended for treating primary and recurrent episodes of herpes. Valacyclovir and famciclovir are useful in treating patients who do not respond to aciclovir. Genital warts are treated with different treatment modalities such as topical application of podophyllin, acetic acid, imiquimod which is a topical immune modulator. Further, physical ablation methods which include electric cauterization, cryotherapy and hy-frication also available for treatment of genital warts. Response to treatment vary between individual patients and selecting the best treatment option is a difficult decision. (11)

Anti Retroviral Treatment(ART) is a promising answer to control HIV infection making the disease a chronic rather than a lethal disease. There are different classes of ART depending on their action on the HIV life cycle. The basic principle in prescribing a standard ART regimen is to include at least three drugs from at least two classes to prevent development of resistance. Combination of different classes of ART into a fixed dose tablets has simplified ART regimens to one pill once a day. The main goal of ART is to bring down the viral load to a very low level or undetectable level to preserve a near normal immune level so that opportunistic infections and malignancies can be prevented.

Most new ARTs are safe with minimum side effects and some of the known side effects of ART are renal insufficiency, liver enzyme elevation, anemia, neurological symptoms and serious allergic reactions. The ability to produce mutations leading to drug resistance is well recognized cause for treatment failure in HIV with sub optimum ART regimens and poor compliance to treatment. (12)

Prevention

STI prevention strategies are described under two categories as biological interventions and behavioural interventions. Behaviour change communication to reduce the number of sexual partners and limit sexual intercourse to one faithful partner are important and long practiced for STI prevention.

Correct and consistent use of condoms is an effective method of STI/HIV prevention with an effectiveness of more than 90% for prevention of HIV transmission. This is a cheaper preventive measure for HIV and STI with long experience which can be delivered through PHC.

Novel biological interventions are mainly studied for HIV prevention and some have shown positive results in research. Male circumcision has shown to reduce HIV acquisition by 60% among heterosexual men and WHO recommended as an option for high HIV prevalence settings. Vaginal microbicides is a female control method for HIV prevention in which topical ARTs are used as vaginal or rectal rings, gels, films, inserts suppositories. (13)

HIV treatment as a mode of prevention incorporated into the practice with successful evidence from randomized clinical trial HPTN052 that showed 96% reduction in sexual transmission of HIV with undetectable viral load. (9) HIV treatment is considered as a prevention strategy and known as undetectable equals non transmissible or U=U. (14) Post exposure is a preventive measure to take ART within 72 hours after risky sexual exposure or risky occupational exposure such as needle stick injury.

Further, pre exposure prophylaxis or PrEP is to take ART prior to high risk exposure and proven with research evidence as an effective method of HIV prevention high risk individuals such as MSM, TG. (15)

Two successful vaccines are currently in use to prevent Hepatitis B and HPV related cancer and genital warts. Hepatitis B vaccine in three doses is recommended for all sexual contacts of acute hepatitis B infection, MSM, drug users and HIV positive individuals. Since 2003 hepatitis B vaccination has been offered to children from 2 months of age under expanded program of immunization(EPI) in Sri Lanka.

HPV vaccine has proven to be effective in preventing 90% of cervical cancers. Girls between the age of 9-12 years are eligible for HPV vaccination also included in EPI. Bivalent, quadrivalent and nine valent HPV vaccines are approved with evidence from clinical trial and available in many countries to prevent both cervical cancer and genital warts caused by HPV. There is accumulating evidence that HPV vaccine can also prevent HPV recurrences of genital warts and HPV related anal cancer in men. (16) Current practice of HBV and HPV vaccine under EPI is a good example of successful STI prevention through PHC in Sri Lanka.

Stigma and discrimination are always attached to HIV and STIs resulting a negative impact on prevention and control of HIV/STIs. Not only the patients but also their families and friends can suffer with stigma and a considerable barrier for HIV testing and treatment.

In addition to diagnosis and treatment there are many opportunities for STI screening and case detection at PHC level that can be easily integrated into and prevention at PHC level that can be easily integrated into a HIV and syphilis screening at antenatal clinics introduced through PHC is the entry point for prevention of mother to child transmission. Pap's smear to screen cervical cancer is a successful milestone to prevent HPV associated cancer. Condom as a method of contraception has been promoted through PHC and emphasis on its benefit as a prevention method for STI need to be continued. Further integrating STI/HIV prevention education into PHC at various contact points such as well women clinics, school health programs and community programs are other possible ways.

References

1. Sexually transmitted infections (STIs) - World Health Organization (who.int) URL: https://www.who.int/news-room/fact-sheets/detail/sexually-transmitted-infections-(stis)
2. Annual Report NSACP 2021 - National STD/AIDS Control Programme, Sri Lanka
3. HIV_4th_Q_2022docx.pdf - National STD/AIDS Control Programme, Sri Lanka
4. Shigella Infection Among Gay, Bisexual, and Other Men Who Have Sex with Men | Shigella – Shigellosis | CDC URL: https://www.cdc.gov/shigella/msm.html
5. Mpox (Monkeypox) - World Health Organization (who.int) URL: https://www.who.int/news-room/questions-and-answers/item/mpox-(monkeypox)
6. Ebola: Overview, History, Origins, and Transmission - GOV.UK URL: https://www.gov.uk/government/news/ebola-overview-history-origins-and-transmission
7. Guidelines | British Association for Sexual Health and HIV (bashh.org)
8. Risk of Exposure to HIV - Stanford Health Care URL: https://stanfordhealthcare.org/medical-conditions/sexual-and-reproductive-health/hiv-aids/causes/risk-ofexposure
9. What is Chem Sex? - Rainbow Project URL: https://www.rainbow-project.org/chemsex
10. WHO Guidelines for Management of Symptomatic Sexually Transmitted Infections - June 2021
11. Sexually Transmitted Infection Management Guidelines – NSACP, SLCoSHH: 2019
12. Guide to Anti retroviral Treatment; NSACP 2020
13. Cutler B, Justman J. Vaginal microbicides and the prevention of HIV transmission. Lancet Infect Dis. 2008 Nov;8(11):685-97. doi: 10.1016/S1473-3099(08)70254-8. PMID: 18992405; PMCID: PMC2627483.
14. Myron S. Cohen, M.D., Ying Q. Chen, Ph.D., Marybeth McCauley, M.P.H., Theresa Gamble, Ph.D., Mina C. Hosseinipour, M.D., Nagalingeswaran Kumarasamy, M.B., B.S., James G. Hakim, M.D., Johnstone Kumwenda, F.R.C.P., Beatriz Grinsztejn, M.D., Jose H.S. Pilotto, M.D., Sheela V. Godbole, M.D., Suwat Chariyalertsak, M.D., et al., for the HPTN 052 Study Team; Antiretroviral Therapy for the Prevention of HIV-1 Transmission: N Engl J Med 2016; 375:830-839.
15. Pre Exposure Prophylaxis for the prevention of HIV in Sri Lanka,Clinical practice guideline 2023 NSACP
16. Cervical cancer (who.int)

IMC
Nurturing Caring Minds for the World

Dr.eam
It's not only a dream anymore

NO. 01 MEDICAL PLACEMENT ORGANIZATION

www.imcedu.com

STUDY MEDICINE
MBBS | MD
(Fully English Medium)

Malaysia
- Melaka Manipal Medical College
- IMU (Transfer options to UK, Australia, New Zealand and Ireland)
- Newcastle University Medicine Malaysia (UK)
- Management Science University
- Quest International University
- MAHSA University
- Lincoln University

Belarus
- Vitebsk State Medical University
- Grodno State Medical University
- Gomel State Medical University

Nepal
- Kathmandu Medical College
- Manipal College of Medical Sciences
- College of Medical Sciences

India
- SRM Institute of Science & Technology

REGISTER NOW FOR SEPTEMBER INTAKE

GMC (UK), AMC (Australia), ECFMG (USA), MCNZ (New Zealand), MCC (Canada) Approved

Dr. Vidhi Chand (MD)
Vitebsk State Medical University,
Belarus - 2022

SLMC APPROVED

VSM+U · Grodno State Medical University · IMU · QUEST International University · msu management & science university · Lincoln University · SRM University · MAHSA University · Newcastle University Medicine Malaysia · AIMST University

Colombo - No. 154, Havelock Road, Colombo 05 | **Kandy** - No. 111, Peradeniya Road, Kandy
Kurunegala - No. 40/1/3, Kathiresan Kovil Road, Puttalam Road, Kurunegala | **Jaffna** - No. 400/4, Clock Tower Road, Jaffna

For Inquiries
077 308 8840 | 077 441 0782 | 077 442 1597 | 076 826 8170 | 076 675 9393

Battle against HIV: Challenges in the last 30 years

Dr Ariyaratne Manathunge
MBBS, MD, Consultant Venereologist,
National STD/AIDS Control Program, Sri Lanka

Dr Thilani Ratnayake
MBBS, MD, DFRSH
Consultant Venereologist, STD clinic, Anuradhapura

Dr Nimali Jayasuriya
MBBS, MD Consultant Venereologist,
National STD/AIDS Control Program, Sri Lanka

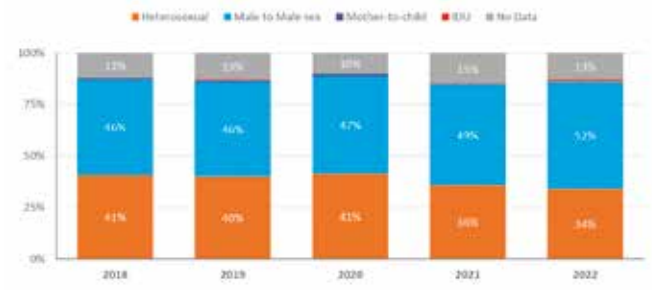
The number of newly diagnosed and reported HIV cases has been on the rise, with an alarming increase in infections among both males and females. The data presented below show a steady upward trend in reported HIV diagnoses from 2011 to 2022, emphasizing the need for immediate attention and action.

Figure 1. **Annually reported HIV diagnoses 2011-2022**

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Male	81	119	127	167	174	188	223	286	358	298	336	531
Female	63	63	69	61	61	61	61	64	80	65	75	76
Total	144	182	196	228	235	249	284	350	438	363	411	607

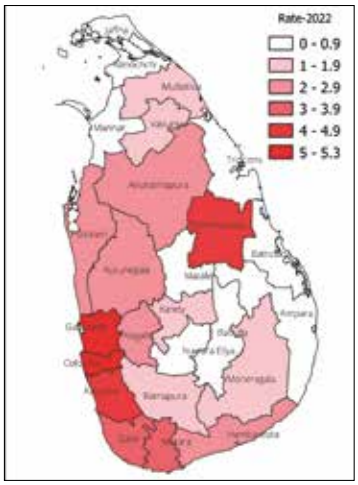
When it comes to HIV modes of transmission, male-to-male sex transmission is the most prevalent, followed by heterosexual transmission. These statistics highlight the importance of addressing the specific needs of different population groups and implementing targeted interventions for effective prevention.

Figure 2. **Trends of the probable mode of HIV transmission, 2018 - 2022**



Another significant aspect is the rate of HIV cases per 100,000 population. Higher rates are seen in all three districts of the Western province. A higher rate is also seen in the Polonnaruwa district.

Figure 3. **Rate of newly diagnosed HIV cases per 100,000 population, 2022**



The advancements in technology and healthcare have opened up new avenues for virtual access to HIV services. Platforms like the Know4sure.lk website and other mobile applications have made it easier for individuals to access information, testing, and treatment services.

The adoption of biomedical HIV interventions has also been identified as a crucial opportunity. Treatment as Prevention (TasP), where antiretroviral therapy (ART) is used to prevent HIV transmission, has shown promising results. Pre-Exposure Prophylaxis (PrEP) and Post-Exposure Prophylaxis (PEP) are additional interventions that can significantly reduce the risk of acquiring HIV

It is important of addressing the needs of key populations, including men who have sex with men, people who inject drugs, sex workers, transgender women, and prisoners. These populations are at a significantly higher risk of HIV transmission and require targeted interventions to ensure their access to prevention, testing, and treatment services.

Stigma and discrimination remain significant barriers to HIV prevention and care in Sri Lanka. Studies have shown that a considerable percentage of people living with HIV have experienced stigma and discrimination, leading to negative outcomes such as loss of employment and even suicidal thoughts. Addressing these issues through education, advocacy, and the development of protective policies is crucial to reducing barriers and increasing access to services.

Community involvement was highlighted as a vital component of a comprehensive HIV response. Collaboration with organizations of people living

with HIV such as PLHIV- Lanka Plus, Positive Women's Network (PWN), and various key population groups is essential to tailor interventions to the specific needs of different communities.

There is an urgent need for comprehensive sexual education in schools and universities. The lack of sufficient education on safe sex practices and condom use contributes to the spread of HIV among young people. Initiatives should focus on providing age-appropriate, evidence-based sexual education to empower young individuals with the knowledge and skills to make informed decisions about their sexual health.

The elimination of pediatric HIV infections is a critical goal and the decreasing number of mother-to-child transmitted HIV cases over the years, showcases the success of prevention programs. However, continued efforts are required to ensure that every child is born free from HIV.

To achieve the ambitious goal of ending AIDS in Sri Lanka, it is important to meet the 95-95-95 targets by 2025. These targets include ensuring that 95% of people living with HIV know their status, 95% of those diagnosed are on antiretroviral therapy (ART), and 95% of those on ART achieve viral load suppression. These targets are in line with the global efforts to combat HIV and require a comprehensive and coordinated response.

The recent financial crisis has impacted the procurement of essential medications, test reagents, and the recruitment and retention of specialists. Advocacy to the Government of Sri Lanka for adequate resources, exploring opportunities for public-private partnerships, and seeking an extension of the Global Fund grant were identified as potential solutions to address these challenges.

Ending AIDS in 2030

In 2016, the UN General Assembly set a global target to end HIV as a public health threat by 2030 by reducing HIV incidence by 90% by 2030 (compared to incidence in 2010). However, as shown in Figure 4, HIV infections have not declined fast enough in Sri Lanka, unless we fast-track treatment and preventive services.

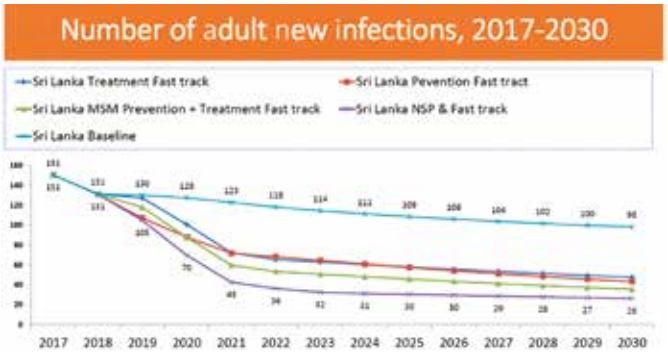


Figure 4 (source - strategic information management unit NSACP)

It is possible to minimize new infections by reducing transmission and acquisition. Early treatment, linkage, and retention in care, together with strong treatment adherence, will reduce AIDS-related deaths.

Do we need to focus on HIV testing?

HIV determines if a person is infected with HIV or not. HIV testing is the gateway to HIV prevention, treatment, care, and other support services. Studies show that the sooner people start HIV treatment after diagnosis, the more they benefit. HIV treatment reduces the amount of HIV in the blood (called the viral load), reduces HIV-related illness, and prevents transmission to others. The 052 clinical trial and PARTNER study demonstrate that when ART effectively suppresses a person's viral load to undetectable levels, the risk of sexual transmission of HIV to an uninfected sexual partner is essentially zero (1). Undiagnosed HIV infection has two major consequences. Individuals are at greater risk of transmitting HIV to others and cannot make informed decisions about their sexual behaviour. It is estimated that the per-act risk of HIV transmission is 26 times greater during the first three months of infection than during chronic infection (3). Individuals who are diagnosed late are at risk of serious clinical illness.

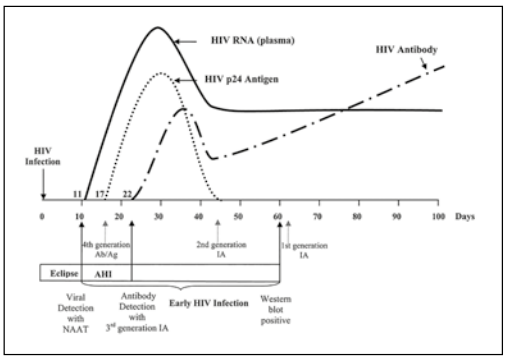
Diagnosis of HIV infection.

As acute seroconversion can mimic any viral infection, long asymptomatic stages and nonspecific symptoms in symptomatic stages make a clinical diagnosis of HIV difficult. Therefore, lab diagnosis is the only way forward.

The Evolving of HIV testing services in Sri Lanka

In the early phases, Sri Lanka only had HIV antibody tests. However, 4th generation HIV antibody/antigen tests are now the most used HIV tests. They detect the blood for HIV antibodies and antigens. Antigens will appear in the bloodstream sooner than antibodies after HIV exposure. NAT tests (nucleic acid tests) are available for diagnosis of very early HIV infection. There are numerous tests available to detect various stages of illness, making it impossible to miss the diagnosis.

Figure 5:



As illustrated in Figure 5, Individuals become viremic shortly after infection, and HIV is detectable in the plasma via nucleic acid amplification of viral RNA or detection of the viral capsid antigen p24. Seroconversion occurs when antibodies to HIV become detectable 4-6 weeks after infection.

There are several HIV testing options available in Sri Lanka. Standard laboratory-based testing, facility or community-based rapid point of care testing and home-based self-testing. There is multiple entry point for HIV testing in Sri Lanka. People at risk, symptomatic or asymptomatic people directly come to the STD clinic. Provider initiated testing mainly at Hospital settings and TB clinics. HIV testing services are available for antenatal mothers, blood donors and clients coming to private hospitals. Community-based testing is one of the cost-effective testing methods for most at risk groups, and partners/ contacts of HIV positive patients.

Out of all HIV testing groups, the highest yield was among STD clinic attendees, community-led testing and hospital-based testing. Table 1 shows the effectiveness of HIV testing among different categories in Sri Lanka in 2022. (Data source-HIV testing unit NSACP)

Category of the samples tested for HIV	Number tested	Number confirmed positive	% HIV positivity rate
Blood donor screening (NBTS and private blood banks	424,127	58	0.014
Antenatal mothers	185,569	9	0.005
Private hospitals, laboratories, and Sri Jayewardenepura GH	163,466	130	0.080
STD clinic samples *	37,423	286	0.764
Tri-forces	58,728	11	0.019
Hospital based testing	2,615	8	0.306
Prison	5,004	3	0.060
TB screening	6,686	8	0.120
Pre employment	25,477	1	0.004
Key population intervention programmes	22,115	87	0.393
Others **	72,045	6	0.008
Total	**1,003,255**	**607**	**0.061**

Are we effectively screening for HIV people with high-risk behaviours?

We have prioritized HIV testing among high-risk groups namely, Men having Sex with men, transgender women who have sex with men, people who inject drugs, female sex workers and beach boys. HIV transmission risk among those categories is shown in Figure 6.

The national STD/ AIDS control program has prioritized key population community-based testing in collaboration with NGO/CBO partners. There are number of key population intervention programs in 15 districts across the country. They keep track of the people who are most at risk of contracting HIV, as well as index case testing and network testing.

Is provider-initiated testing optimal in healthcare settings?

Out of all reported cases annually, 34% of patients are symptomatic and still in the late stages. Therefore, there is a need to accelerate HIV testing in hospital-based testing among clinical conditions that are indicated for HIV testing and conditions that need to be considered for HIV testing.

We are on the correct pathway of HIV diagnosis. But we must

- Scale up key population testing by community workers.
- Index case testing
- Social networking
- Screening of youth and vulnerable groups
- Screening of symptomatic patients
- Screen all TB and hepatitis patients.
- Provider initiated testing at health care settings.
- Expanding testing across multiple departments and hospitals

We are looking forward to use recency assays which can determine whether a person has recently been infected. There, it is possible to trace contacts and track the epidemic.

Paediatric HIV infection

Paediatric HIV infection is an evolving area in HIV medicine with many challenges in management in healthcare settings particularly in low and middle income countries.

In 2021 Globally it was estimated 160 000 (110 000 to 230000) new HIV infections among children aged 0-9 years. The estimated number of children living with HIV by the end of 2021 was 2.73 million children between 0-19 yrs. Globally 52% decline in HIV new infections since 2010 among children aged 0-9 years which is remarkable. (4)

Globally 650 000 people died due to HIV in 2021 and 17% (110000) of them were below the age of 20 years. The negative impact on children due to HIV is both direct and indirect. 14.9 million children under the age of 18 years have lost one or both of their parents due to AIDS related causes in 2021. (4)

With the success of the prevention of mother-child transmission programs established in the year 2000, new HIV infections among paediatric age group continue to decline and worldwide 2.5 million new HIV infections and 1.5 million deaths among children under the age of five have been averted. (5)

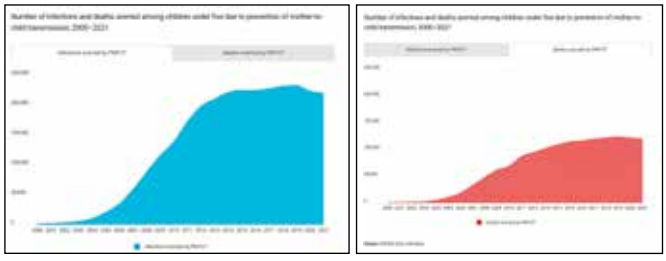


Figure 7 : Source UNAIDS 2022 Estimates

According to the National STD/HIV Control Program (NSACP) the cumulative number of 98 paediatric HIV infections were reported at the end of 2022 in Sri Lanka.

In 2019 WHO certified Sri Lanka as a country that successfully eliminated mother to child transmission of HIV infection. In 2022 total of 18 HIV infected mothers delivered and all the babies were confirmed free of HIV infection which is clear evidence for the successful EMTCT program in Sri Lanka. (6)

Risk of mother to child HIV transmission

HIV infected mother can transmit the infection to her baby during pregnancy, delivery and breastfeeding. About 50% of HIV transmission occurs between 36 weeks and delivery. The overall risk of mother to child transmission without any medical intervention is 25-45% in a mother breastfeeding for 18 to 24 months. (7)

Maternal viral load is an independent risk factor for MTCT. A study in Malawi among pregnant women reported a transmission risk of 14% when maternal viral load is > 1000 copies/ul compared to 0.9% risk when viral load is <40 copies or undetectable. Low CD4 count, preterm labour, prolonged rupture of membranes, invasive procedures during labour including forceps, fetal scalp electrodes, duration of breastfeeding and breast infections are other factors that increase the risk. (7)

Mortality and Morbidity

HIV infection in children has higher mortality and morbidity when compared to that of adults. Compared to adults, disease progression is more rapid in paediatric HIV. Also, children have a higher viral load that is directly responsible for higher mortality and morbidity.

Clinical presentation can vary from asymptomatic to symptomatic AIDS state with severe immune deficiency making it more liable to opportunistic infections and malignancies. Symptoms can appear from birth till 8 years of age and 57% of children become symptomatic within the first year of life. Clinical presentation in the majority are similar to that of adults but some clinical features are more common in children. Hepato-splenomegaly, failure to thrive and severe malnutrition are common presentations in paediatric HIV. Lymphocytic Interstitial Pneumonia (LIP), Bilateral Parotid enlargement, and extensive molluscum contagiosum are more likely to be in HIV infected children than adults. (8)

Prevention of Mother to Child Transmission of HIV(PMTCT)

A successful PMTCT program consists of five strategies that have proven to bring down the 45% risk of MTCT of HIV to <1%

1. Ante Natal Clinic (ANC) Screening of HIV in early pregnancy- is the entry point for PMTCT and a national policy in place is important for a successful

PMTC program. In 2014 a circular was issued by the Ministry of Health Sri Lanka to ensure testing of all pregnant women at the first visit under the EMTCT program. (6)

2. ART for all HIV positive mothers to bring down the maternal viral load to an undetectable level by the time of delivery minimizes the risk of HIV transmission. The landmark trial in 1994 by AIDS Clinical Trial Group (PACTG) showed Zidovudine reduce perinatal HIV transmission by 67.5% when compared to a placebo. (8)

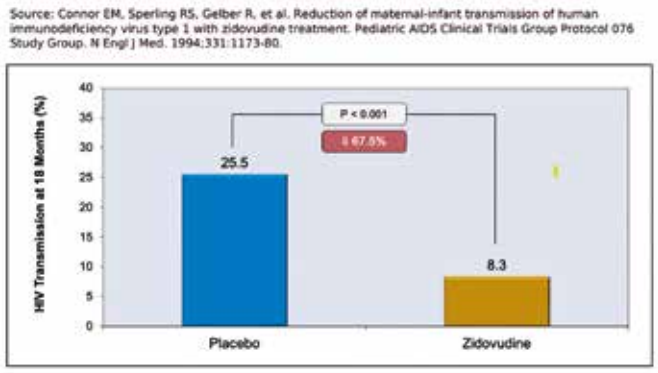


Figure: 8

3. Safe mode of delivery –

   HIV viral load at 36 weeks of pregnancy is the determining factor for the mode of delivery. Planned caesarian section is a safer option with a detectable high HIV viral load at the last trimester and an undetectable viral load while on treatment allows HIV positive women to go for normal vaginal delivery without significant risk.

4. Safe feeding options-

   Breastfeeding per se has a 15 to 20% additional risk of HIV transmission and this risk can be avoided by replacement feeding. On the other hand, breastfeeding has many benefits for both mother and the baby and the WHO recommendation is for exclusive breastfeeding for the first six months of life to prevent 87% of infant mortality. When the mother is on ART and the viral load is undetectable the risk of HIV transmission is very low making it safe for HIV positive mothers to breastfeed. Further mixed feeding is not recommended (formula milk and other solids in between breast milk) because damage to gut mucosa with mixed feeding makes the mucosal more permeable for HIV. WHO recommends exclusive breastfeeding as a safe option when the mother is on ART and where other infections including diarrheal diseases are common. (9)

5. Infant prophylaxis-

   ART prophylaxis is recommended for all HIV exposed infants started within the first 6 to 12 hours of birth and continued for 6 weeks with Nevirapine. (9)

Occasional failures in PMTCT programs have been reported and identified reasons for failures are mothers missing screening in pregnancy, new infections in the later part of the pregnancy and breastfeeding and mothers not receiving or poor compliance with ART.

Infant Diagnosis

Antibody tests are not that useful for infant diagnosis because passive transfer of maternal antibodies gives a false positive result until 18 months. Molecular tests including DNA or RNA PCR are more reliable and two negative tests in two separate occasions are recommended to exclude HIV infection among newborns. (9)

ART for Paediatric HIV

Most guidelines recommend starting ART as soon as HIV diagnosis is confirmed. Good clinical outcome in terms of growth and neurocognitive development has been proven in HIV infected children with ART. Systemic inflammation related end organ damage in HIV can also be prevented in children who received early ART. (10)

But access to ART is not to the optimum and out of the children living with HIV between 0-14 years of age, only 52% were able to receive ART in 2021. (10) Continuous supply of ART in the correct dose and appropriate to the age is always a challenge in managing paediatric HIV, especially in low and middle income countries.

Disclosure of HIV status in paediatric setting

Disclosing HIV status to infected children who are in a transition to adulthood is a challenge. Disclosing HIV status very early has issues like whether the child will be able to keep the secret and fear of stigma. On the other hand, waiting too late until a child is fully grown, will allow the child to believe that parents have been dishonest with them. Most parents do not disclose because of fear of being rejected and difficulty in facing questions related to transmission. But disclosure of HIV status to children reported to have more positive outcomes than negative outcomes. Therefore, WHO recommend children should know their own HIV status before they start sexual life. Ideally, disclosure should be a process which should start when the child is 5-6 years old and be completed by 12 years of age. (10)

The current evidence provides valuable insights for policymakers, healthcare professionals, and stakeholders

to work together towards a comprehensive and effective response to the HIV epidemic. By addressing the identified challenges and seizing the opportunities, Sri Lanka can make significant progress towards ending AIDS by 2030

References

1. https://www.froedtert.com › hiv
2. https://pubmed.ncbi.nlm.nih.gov › ...
3. https://www.ncbi.nlm.nih.gov/pmc/articles PMC5106226/
4. https://data.unicef.org/topic/hivaids/global-regional-trends
5. https://data.unicef.org/topic/hivaids/emtct/
6. http://aidscontrol.gov.lk/
7. Kalapila A.G. Preventing Perinatal HIV Transmission; National HIV Curriculum; Module 5
8. Delia M Rivera Richard E Frye;Peadiatric HIV infection Clinical presentation;e medicine Medscape:2020 Nov11
9. Guideline Management of pregnant women with HIV . NSACP ministry of health Sri Lanka 2016
10. https://www.hiv.uw.edu/go/prevention/preventing-perinatal-transmission

---

Call for Nominations for Election to the SLMA Council 2024

Dear members,

I hereby call for nominations for the Posts of Council Members (28 positions) of the Sri Lanka Medical Association (SLMA). Nomination Form for Election to the SLMA Council – 2024 and Eligibility Criteria for nomination can be obtained from the SLMA office or downloaded from the SLMA web site (https://slma.lk/).

For any further details, please contact the SLMA office.

Thank you,
Sincerely,
Dr Sajith Edirisinghe
Honorary Secretary
Sri Lanka Medical Association

The duly completed Application Form should reach Dr Sajith Edirisinghe, Honorary Secretary, No.06, Wijerama Mawatha, Colombo 07 by post or delivered by hand on or **before 15th November 2023 4.00 pm.**

The AGM will be held on 22nd ***December 2023 at 7.00 pm*** *in the Professor N. D. W. Lionel Memorial Auditorium of the Sri Lanka Medical Association.*

Rain again with water and soil bringing Melioidosis: Be prepared

A symposium organized by the Expert Committee on Communicable Diseases in collaboration with the Media Committee of the Sri Lanka Medical Association (SLMA)

Epidemiology of melioidosis: What do we know?

Professor Enoka Corea
Department of Medical Microbiology and Immunology Faculty of Medicine, Colombo

Melioiodisis is the name given to infections caused by the bacterium "*Burkholderia pseudomallei*". *B. pseudomallei*, is an environmental bacterium, found naturally in soil and water in the tropics. Therefore, infection is acquired accidentally during occupational, recreational or lifestyle exposure to soil and water. Infection usually manifests two days to two weeks after exposure. Melioidosis is notorious for its varied clinical manifestations, which range from acute sepsis (with or without pneumonia) to chronic, localized infection with abscess formation Since it is able to affect any tissue or organ of the body it can be difficult to diagnose and can be easily missed unless the physician is alert to the possibility. Fortunately, severe infection is more common in people with an underlying comorbidities such as diabetes, kidney, liver or lung disease, thalassaemia or alcoholism. In addition, the incidence of melioidosis increases after heavy rains and storms, as we have experience in the recent past and after the monsoon. Melioidosis has a high death, ranging from20% in Northern Australia to 50% in Thailand, which can be reduced considerably by early diagnosis and effective therapy.

Melioidosis is prevalent throughout Sri Lanka, in all nine provinces and all climate zones except the central highlands. The age range of patients is wide (2-92 years), reflecting the ubiquity of exposure to soil in the Sri Lankan population, with the majority being middle-aged, males. While farmers comprised about half of the patients, all population groups were seen including both white and blue collar workers, housewives and children, mirroring the rural, agricultural lifestyle of our population. Diabetes was the predominant risk factor but melioidosis was also seen in many healthy adults and children. Overall mortality was as high as 22%. Case clusters due to severe weather events was seen.

In conclusion, melioidosis is an important emerging infection in Sri Lanka with a wide demographic and geographic distribution.

Different clinical presentations of melioidosis; the dilemmas in clinical diagnoses

Dr Krishantha Jayasekera
Consultant Physician
Teaching Hospital Karapitiya

Melioidosis is a multi-spectrum disease in which almost any organ or system in the body can be infected by the causative organism *Burkholderiapseudomallei*. It is endemic in Malaysia, Thailand, Singapore and Australia, and now Sri Lanka is also considered as endemic with the diagnosis of several patients per year due to increased awareness among clinicians.

In Teaching Hospital Karapitiya, there had been many patients with different presentations including endocarditis, mycotic aneurysms, and post-partum disease which were reported for the first time in Sri Lanka, diagnosed and managed successfully since 2014 up to now.

Melioidosis is a great mimicker. It can mimic many chronic or acute diseases such as tuberculosis, malignancy, or leptospirosis etc.It is sometimes challenging for the clinician to suspect and diagnose melioidosis early,leading to increased morbidity and mortality.However, melioidosis can often be treated very successfully,with early diagnosis and prompt treatment.

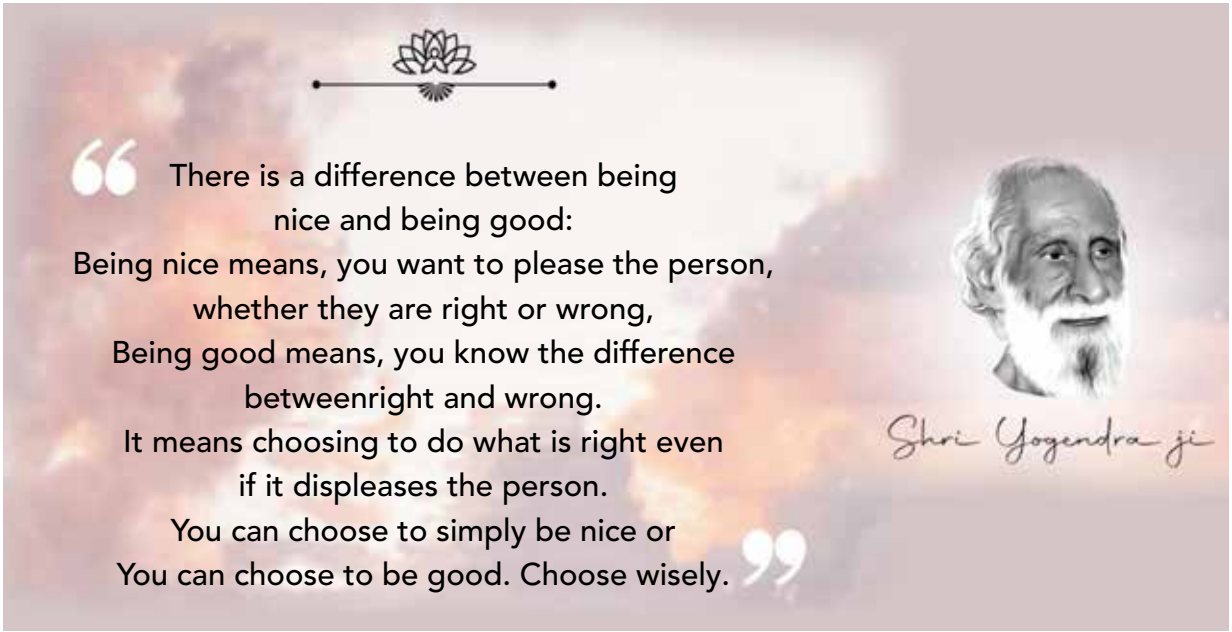
Antibiotic management and follow up of melioidosis patients; Galle experience

Dr Bhagya Piyasiri
Consultant Microbiologist
Teaching Hospital Karapitiya

Melioidosis is a potentially fatal infection caused by the bacterium, Burkholderiapseudomallei, which can give rise to a wide range of disease spectrum and complications. Most patients are diabetic or having other comorbidities as well.

Once the diagnosis is made the patients are put on correct antibiotics which are often a combination of intravenous and oral combination. Duration of the intravenous antibiotics will depend on the severity and the site of the illness frequently, but may depend on the clinical response, radiological response, haematological parameters or biochemical parameters too.

After the in-patient treatment course, the patient has to undergo eradication phase of treatment which is given to prevent relapses, eliminating the causative organism completely. The patient has to be closely followed up regularly with counseling, and with relevant investigations. During follow-up, patients might face side effects of the drugs, complications of the disease or worsening of comorbidities, all of which should be well-attended in order to cure the illness. For years the microbiology clinic has been doing this task successfully in collaboration with the physicians, surgeons, and other specialties which has ensured a great team work.



32M upwards

BEACH FRONT Phase II USWETAKEIYAWA

Step out onto the beach front for breathtaking sunsets; enjoy listening to the ocean waves and experience the ultimate relaxation. The miles of sandy beaches will lull you into tranquility you've quite never known. Situated on prime oceanfront property of Uswetakeiyawa which is **20 minutes'** drive from the Bandaranaike International Airport and **30 minutes** from Colombo City Centre, yet rich with the lush coastal vegetation that will amaze you.

PRIME RESIDENCIES

0710 777 666

WWW.SLMA.LK
"WIJERAMA HOUSE",
NO. 6, WIJERAMA MAWATHA,
COLOMBO 07,
+94 11 269 3324,
office@slma.lk

SCAN ME!

STAMP

The Official Newsletter of the Sri Lanka Medical Association

To:

.....

.....

.....

.....

If undelivered please return to;
Sri Lanka Medical Association (SLMA),
No. 6, Wijerama Mawwatha, Colombo 07

Registered at the Department of Posts Under No. DOP/NEWS/76/2023