



GALLE MEDICAL ASSOCIATION

80th Annual Academic Sessions – 2021

PROGRAMME & PROCEEDINGS

“Sustaining Healthcare Amidst Challenges”

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GALLE MEDICAL ASSOCIATION

80th Annual Academic Sessions - 2021

Inauguration Ceremony

Programme

Wednesday, 15th September 2021

- 18:00 hrs - **Log in time**
- 18:05 hrs - **National anthem**
- 18:10 hrs - **Lighting of the traditional oil lamp**
- 18:15 hrs - **Address by the President - GMA**
Professor Sampath Gunawardena
Professor of Physiology, Faculty of Medicine, University of Ruhuna
- 18:40 hrs - **Keynote address by the Chief Guest**
“Seeing problems from different perspectives; can we do better?”
Professor M D Lamawansa
Vice Chancellor, University of Peradeniya
- 19:10 hrs - **GMA awards 2021**
- 19:15 hrs - **Galle Medical Association Oration – 2021**
“Sustaining healthcare amidst the COVID challenge: An opportunity for scientists and academics”
Professor Saroj Jayasinghe
Emeritus Professor of Medicine, Faculty of Medicine, University of Colombo
- 20:00 hrs - **Vote of thanks**
Dr. Upeksha Liyanage
Jt. Secretary - GMA
- 20:10 hrs - **Entertainment event**

Session I – FREE PAPERS 1

14:00 – 15:00 hrs

Co-Chairpersons: Dr. Eisha Waidyaratne
Dr. Samantha Lelwala

- 14:00 – 14:10 hrs - **01. COVID-19 surveillance during the early stages of the pandemic in the Southern Province, Sri Lanka**
Wijayaratne WMDGB, Gunasena S, Nagahawatte A de S, Weerasinghe NP, Tillekeratne LG, Nicholson B, Woods C, Danthanarayana N, Gunasekara N, Dharmasiri GNJ, Mahaliyanage DT, Wickramasinghe SS, Thabrew HHPMJ, Piyasiri DLB, Priyanthi D, Lewkebandara R, Ubeysekera HA, Bodinayake CK, Devasiri IV, Amarasena TSD
- 14:10 – 14:20 hrs - **02. Notified incident cases of dengue and leptospirosis; time series analysis for two commonest vector-borne diseases in Sri Lanka**
Darshana ILAN, Chamika RMA
- 14:20 – 14:30 hrs - **03. Evaluation of a staining technique using toluidine blue in comparison to Gram stain for direct detection of bacteria in the positive blood culture broth**
Kumara YNB, Wickramasinghe SS, Peiris HH
- 14:30 – 14:40 hrs - **04. Prevalence of pain among institutionalized older adults in Galle district; a descriptive study**
Abeysekera NWBY, De Zoysa GED
- 14:40 – 14:50 hrs - **05. Incidence of anthracycline induced cardiotoxicity in breast cancer patients admitted to Teaching Hospital Karapitiya**
Sandamali IAN, Hewawasam RP, Fernando MACSS, Jayatilaka KAPW, Madurawe RD, Sathanandan PP, Ekanayaka U, Horadugoda J
- 14:50 – 15:00 hrs - **06. Cardiac rhythm abnormalities among patients underwent total cavopulmonary connection completion**
Sooriyasena IAGP, Pflaumer A, Jones B

Session II – PLENARY LECTURE 1

15:00 – 15:30 hrs

Co-Chairpersons: Prof. Channa Yahathugoda
Dr. Arosha Abeywickrama

Snakebite envenoming treatment; future perspectives

Prof. Ariarane Gnanathanan

Senior Professor in Medicine

Faculty of Medicine, University of Colombo

15:30 – 15:45 hrs -

Break

Session III- SYMPOSIUM 1

15:45 – 17:15 hrs

Co-Chairpersons: Dr. Sarath Kularatna
Dr. Rohan Pullaperuma

“RECENT ADVANCES IN HAEMATOLOGY; BENCH TO BEDSIDE”

Update on haemophilia care in Sri Lanka

Dr. (Mrs.) Chandima Thevarapperuma

Consultant Haematologist

Lady Ridgeway Hospital for Children, Colombo

State of the art haematology in diagnostics and treatment

Dr. Manu Wimalachandra

Lecturer in Pathology

Faculty of Medicine, University of Colombo

COVID-19: Haematological manifestations in pregnancy

Dr. Nadishani Ediriwickrama

Consultant Clinical Haematologist

Castle Street Hospital for Women, Colombo

Session IV – FREE PAPERS 2

08:00 – 09:00 hrs

Co-Chairpersons: Prof. Mahinda Kommalage
Dr. Lanka Dasanayake

- 08:00 – 08:10 hrs - **07. A comparison of the outcomes of management in dengue haemorrhagic fever using minimal intervention and the standard management protocol in paediatric units of Teaching Hospital Karapitiya**
Kaushalya PGC, Liyanarachchi ND, Wijesinghe CJ, Lakpriya RGS, Wimalasena TBGH
- 08:10 – 08:20 hrs - **08. Trends in clinico-pathological profile of thyroid cancers diagnosed over a period of 19 years at a single histopathology unit**
Liyanage TG, Mudduwa LKB, Mudduwa YDB, Abey Siriwardhena DS, Liyanage AUG
- 08:20 – 08:30 hrs - **09. Assessment of advanced ECG knowledge among postgraduate trainees in emergency and general medicine in Sri Lanka**
Gunawardana MABM, Lanerolle MI, Silva SN
- 08:30 – 08:40 hrs - **10. Effect of alendronate and vitamin D₃ treatment on bone turnover markers in postmenopausal women with high fracture risk: A double-blind, randomised controlled trial.**
Rathnayake H, Lekamwasam S, Wickramatilake CM, Lenora J
- 08:40 – 08:50 hrs - **11. Seroprevalence of COVID-19 among high-risk population in Galle, Sri Lanka - A story behind successful control of the first wave of the COVID-19 pandemic**
Palangasinghe DR, De Zoysa PDWD, Dahanayaka NJ, Herath HMM, De Silva PV

08:50 – 09:00 hrs - **12. Clinical profile of patients with cerebrovascular accidents admitted to the emergency treatment unit at Teaching Hospital Karapitiya**

Weerasuriya MA, Munaweera NW, Ranasingha RDNN, Dahanayake RLS, Irangi SAN, Karunanayake A

Session V – GMA RESEARCH GRANT

09:00 – 09:10 hrs

Co-Chairpersons: Dr. Kesharie De Silva
Dr. Nayana Liyanarachchi

09:00 – 09:10 hrs

**“Presentation of the recipient of
GMA Research Grant 2020”**

**Evaluation of performance
characteristics of selected albumin
assay kits**

Dr. Deepani Siriwardhana

*Senior Lecturer in Pathology**

Faculty of Medicine, University of Ruhuna

* Senior Lecturer, Department of Biochemistry and Clinical Chemistry, Faculty of Medicine, University of Moratuwa

Session VI – PLENARY LECTURE 2

09:10 – 09:40 hrs

Co-Chairpersons: Dr. D. K. Dias
Dr. Satish Goonesinghe

Miracles of Plastic Surgery

Dr. Sathis Wijemanne

Consultant Plastic Surgeon

Teaching Hospital Karapitiya

Session VII – YOUNG SPECIALISTS' FORUM

WINNER'S PRESENTATION

09:40 – 10:00 hrs

Co-Chairpersons: Prof. H. M. M. Herath
Dr. Ganaka Senaratne

Stethoscope of the 21st Century: Are you ready for the new era in Medicine?

Dr. Tharindu Eranga Kanakkaheva

Senior Registrar in Medicine

Teaching Hospital Karapitiya

10:00 – 10:15 hrs - **Break**

Session VIII – SYMPOSIUM 2

10:15 – 11:45 hrs

Co-Chairpersons: Dr. P. P. Sathananthan
Dr. Arosha Dissanayake

**“ADVANCES IN CARDIOLOGY;
BEATING THE BEAT”**

Arrhythmia in young adults

Dr. Keerthi Divulwewa

*Consultant Cardiac Electrophysiologist
Teaching Hospital Kurunegala*

**Interventional cardiology; current and future
perspectives of Sri Lanka**

Dr. Vajira Senaratne

*Consultant Cardiologist
National Hospital of Sri Lanka, Colombo*

Treatment of chronic heart failure

Dr. W. S. Santharaj

Senior Consultant Cardiologist

Session IX – PLENARY LECTURE 3

11:45 – 12:15 hrs

Co-Chairpersons: Dr. Kalum Deshapriya
Prof. Sampath Gunawardena

The application of evidence-based dietary management in patients with irritable bowel syndrome

Prof. Peter Gibson

Professor and Director of Gastroenterology

Monash University and Alfred Health Melbourne, Australia

Session X – POSTER SESSION

12:15 – 12:35 hrs

Co-Chairpersons: Dr. Gayani Punchihewa
Dr. Aruna de Silva

- 12:15 – 12:20 hrs - **1. Prevalence of SARS-CoV-2 infection among Ruhuna medical undergraduates during the first two waves of COVID-19 pandemic in Sri Lanka**
Weerasinghe NP, Gunasena S, Wijayaratne WMDGB, Wickramasinghe SS, Thabrew HHPMJ, Tillekeratne LG, Nagahawatte A de S, Herath HMM, Bodinayake CK, Pathirana MD, Handunneththi R, Gunasekara NCA, Padmini JL, Dharmasiri GNJ, Mahaliyanage D, Nicholson B, Woods C, Ubeseekara HA, Devasiri IV, Amarasena TSD
- 12:20 – 12:25 hrs - **2. The knowledge, practices, and associated factors related to COVID-19 infection, among doctors and nurses work in emergency treatment units in selected state hospitals in Kalutara district, Sri Lanka**
Fernando TNMS, Ranasinghe N, Athukorala KM

12:25 – 12:30 hrs - 3. **Effect of COVID-19 pandemic situation on congenital hypothyroidism screening performances in Faculty of Medicine, Galle**

Liyanage D, Hettiarachchi M

12:30 – 12:35 hrs - 4. **Prevalence of anastomotic leakage among patients who underwent intracorporeal and extracorporeal anastomosis in laparoscopic right hemicolectomy in Diana Princess of Wales Hospital in United Kingdom and National Hospital of Sri Lanka**

De Silva KPVR, Senevirathne RW, Manawadu NW

12:35 – 13:15 hrs - ***Lunch Break***

Session XI – SYMPOSIUM 3

13:15 – 14:45 hrs

Co-Chairpersons: Prof. T.P. Weeraratna
Dr. Krishantha Jayasekera

“COVID-19: FACING THE EMERGING CHALLENGES WITH CONFIDENCE”

COVID-19 Vaccines; a current global perspective

Prof. Suranjith Seneviratne

Professor and Consultant in Clinical Immunology and Allergy

*Institute of Immunity and Transplantation and Health Services Laboratories,
London, UK*

Simply a piece of bad news wrapped up in protein; Sri Lankan perspective

Dr. Chandima Jeewandara

Director Allergy, Immunology & Cell Biology Unit

University of Sri Jayewardenepura

COVID-19; treating severe cases

Dr. Ananda Wijewickrama

Consultant Physician

National Institute of Infectious Diseases, Colombo

Session XII – SYMPOSIUM 4

14:45 – 16:15 hrs

Co-Chairpersons: Dr. R. W. Kodikaraarachchi
Dr. Binari Wijenayaka

“EVOLUTION OF DERMATOLOGY: TO TOUCH OR NOT TO TOUCH”

Common sense Dermatology

Prof. Jayamini Seneviratne

Consultant Dermatologist

Lady Ridgeway Hospital for Children, Colombo

Dermatophytosis: A new challenge to Dermatologists

Dr. Nayani Madarasingha

Consultant Dermatologist

National Institute of Infectious Diseases, Colombo

Dermatology beyond borders; to achieve “perfect skin”

Dr. Chalukya Gunasekera

Consultant Dermatologist

National Hospital of Sri Lanka, Colombo

Tele-dermatology; opportunities and challenges

Dr. Janaka Akarawita

Consultant Dermatologist

National Hospital of Sri Lanka, Colombo

16:15 – 16:25 hrs -

Award ceremony & Concluding remarks

16:25 hrs -

Close of the academic sessions



**PROCEEDINGS
OF THE
ANNUAL ACADEMIC SESSIONS
2021**

Message from the President



Galle Medical Association, the second oldest medical association in Sri Lanka, is holding its 80th Annual Academic Sessions on 15th and 16th of September 2021. I have the pleasure in welcoming all of you to this very important event of the GMA. For the first time in the history of GMA, this year we are holding the Annual Academic Sessions as a virtual event in the midst of a continuing third wave of the COVID-19 pandemic affecting our country.

I take this opportunity to welcome the Chief Guest of the inauguration, Professor M. D. Lamawansa, Vice Chancellor of University of Peradeniya and Professor Saroj Jayasinghe, Emeritus Professor of Medicine, University of Colombo, who delivers an invited oration today.

The theme for the year and the Annual Academic Sessions is 'Sustaining Healthcare Amidst Challenges'. Relevance of the theme is ever increasing, with ever increasing severity of the pandemic, bringing about severe challenges to our healthcare system. Curative as well as preventive healthcare sectors have been forced to make significant adjustments to sustain their activities without breakdown.

While addressing different aspects of COVID-19, we tried as usual to provide the audience of Annual Academic Sessions with valuable inputs on different aspects of Medicine. I must thank local and overseas resource persons for their contribution in the middle of their very busy and COVID-challenged work schedules.

I must thank the executive committee of the GMA, especially the two secretaries, two editors, the social secretary and the office management assistants for their invaluable contribution in making this virtual experience a success.

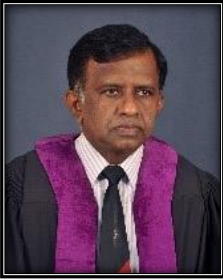
Wishing all of you a safe and healthy future.

Professor Sampath Gunawardena

President

Galle Medical Association

Message from the Chief Guest



It is a singular honour bestowed on me to have been invited as the chief guest at the Inauguration of the 80th Annual Academic Sessions of the Galle Medical Association. It is especially so as I am the first graduate from the Faculty of Medicine, Galle, to have received this honour.

As a student of the second batch of Ruhuna, I have benefitted immensely from the vibrant evening discussions conducted by the Galle Clinical Society, forerunner of the Galle Medical Association, initially at Mahamodera hospital and thereafter at the Karapitiya premises. Since then, I have witnessed, although from a distance, the transformation of the Galle Clinical Society into a very active Medical Association under the able medical fraternity, some of whom are the greatest medical teachers and practitioners of our time.

The steadfast effort made to hold this year's conference despite the current pandemic is testimony to the GMA's commitment to its core functions. This year, under the leadership of Professor Sampath Gunawardena, and as a consequence of his meticulous attention to detail, I am most certain that you will experience a successful conference notwithstanding the pandemic, and that you will, therefore, achieve a memorable year.

At the time of writing this message, I am looking forward to attending the conference physically, and I sincerely hope that this aspiration will not become a mere dream.

I wish the GMA every success in coming years!

Professor M D Lamawansa

*Professor of Surgery, Faculty of Medicine, University of Peradeniya
Vice Chancellor, University of Peradeniya*

Sustaining healthcare amidst the COVID challenge: An opportunity for scientists and academics



COVID-19 pandemic is an unprecedented challenge to global health and healthcare. It is a novel infection affecting humans across all societies leading to significant morbidity and mortality. What began as a crisis in health has now involved societies, economies, governments, and even human civilization. Sri Lanka too will not escape its devastating impacts. It has currently affected about 208.5 million, killed approximately 4.38 million and is predicted to affected millions more.

The COVID-19 pandemic offers a unique opportunity for scientist and academics to observe and experience a pandemic of historic proportions. Unlike previous pandemics the epidemic is unfolding in real-time in the full glare of an interconnected and social media driven world.

The oration will summarize original concepts and research related to COVID. The studies range from concepts on origins using systems approaches, mathematical models of the epidemic, descriptions of the clinical features of the disease including tests of exertional hypoxia, the humane and ethical perspectives of the crisis, controversies in therapies including Ayurvedic preparations, hydroxychloroquine and ivermectin, and medical devices that assess endothelial dysfunction. These are examples of opportunities in research that emerged during a crisis created by the pandemic that could help sustain healthcare and improve health.

Professor Saroj Jayasinghe

MBBS, MD(Colombo), FRCP(London), MD(Bristol), PhD(Colombo), FCCP, FNASSL

Emeritus Professor of Medicine, University of Colombo

Consultant to the Department of Medicine, Faculty of Medicine

Sabaragamuwa University of Sri Lanka

PLENARY LECTURE – 1

Snakebite envenoming treatment; future perspectives



Snakebite is a neglected public health problem in all tropical countries including Sri Lanka, causing significant morbidity, mortality. Survivors often afflicted by psychological disorders and left handicapped with amputations, blindness or other sequelae.

In 2017, the WHO added snakebite envenoming (SBE) to its list of highest priority neglected tropical diseases (NTDs) of category A. The WHO has started the process of preparing a strategic road map that aims at reducing deaths and disability by 50% before 2030". **One of the four pillars of the global strategy is to ensure safe, effective treatment.**

The main clinical features of snakebites are local swelling, tissue necrosis, shock, spontaneous systemic haemorrhage, incoagulable blood, paralysis, rhabdomyolysis, and acute kidney injury. These clinical manifestations result from complex biochemical venom constituents comprising of cytotoxins, haemotoxins, neurotoxins, myotoxins, and other substances.

Since the last decade of 19th century, the main stay treatment for SBE is the timely administration of safe and effective antivenoms. Current antivenoms are heterologous and polyclonal in nature, as they are still manufactured via hyperimmunization of large domesticated animals such as horses, sheep, donkeys or camels. However, while antivenoms save countless lives, they are associated with adverse reactions, limited potency, and are relatively inefficacious against presynaptic neurotoxicity and in preventing necrosis. These difficulties need to be circumvented by novel developments and interventions that could improve and complement antivenom in the therapy of envenoming.

The major scientific and technological advances are facilitating the development of new generation of antivenoms comprising human monoclonal antibodies with broader and more potent neutralization capacity and less immunogenicity. Repurposed pharmaceuticals based on small molecule inhibitors (e.g., marimastat and varespladib) used alone and in combination against enzymatic toxins, such as metalloproteases and phospholipase A2, have shown promise in animal studies. These orally bioavailable molecules could serve as early

interventions in the out-of-hospital setting if confirmed to be safe and efficacious in clinical studies.

Overall, the improvement of clinical management of SBE requires sustained, coordinated, and multifaceted efforts involving basic and applied sciences, new technology, product development and therapeutic approaches, supported by improved supply of existing antivenoms.

Professor C A Gnanathan

Senior Professor in Medicine

Faculty of Medicine, University of Colombo

SYMPOSIUM - 1

RECENT ADVANCES IN HAEMATOLOGY; BENCH TO BEDSIDE

Update on haemophilia care in Sri Lanka



Haemophilia is an X-linked recessive bleeding disorder caused by either coagulation factor VIII (haemophilia A) or factor IX (haemophilia B) deficiency. Haemathrosis is the most common manifestation accounting for 70 - 80% of bleeding episodes. In addition, life-threatening internal bleeding, including central nervous system bleeding can occur. The treatment of haemophilia involves replacement therapy using plasma derived or recombinant factor VIII or IX concentrates. It can be given as episodic when patient with haemophilia has bleeding or as prophylactic therapy to prevent bleeding. Major challenges in implementing prophylaxis are limited resources, difficult venous access and frequent visits to the hospital. Newer products with longer half-lives have reduced the frequency of administration. The most serious complication of replacement therapy is development of inhibitors against clotting factors, rendering replacement therapy ineffective. Currently bleeding in inhibitor patients is managed using bypassing agents like recombinant activated factor VII and activated prothrombin complex concentrate. For patients with persistent inhibitors, ultimate goal is the eradication of inhibitor using immune tolerance therapy. Emerging non-factor product such as bispecific antibody, emicizumab offer an alternative approach for haemophilia A patients with or without inhibitors. Advantage of this drug is that it can be given subcutaneously, either every 2weeks or 4weeks. This lecture will be based on a case history that will describe management of a severe haemophilia with inhibitors.

Dr. Chandima Thevarapperuma

Consultant Haematologist

Lady Ridgeway Hospital for Children, Colombo

State of the art haematology in diagnostics and treatment



Since the turn of the millenium the field haematology has seen unprecedented changes in the areas of diagnostics and therapeutics. These developments have been as a result of years of painstaking scientific research focused on understanding the pathological basis of each disease at molecular level. This talk will focus on three such areas of science that have been embraced by haematology.

Next generation sequencing (NGS): The field of molecular genetic diagnostics has evolved from labor-intensive low throughput methods such as conventional karyotyping to cost effective high throughput methods such as NGS that is able to sequence an entire genome in a few days. NGS is a catch-all term used to describe a number of modern sequencing technologies. These complementary approaches include targeted gene sequencing, whole-exome sequencing, and whole-genome sequencing. Idiopathic bone marrow failure syndromes and myelodysplastic syndromes are two areas in haematology where NGS has made a substantial impact.

Genome editing: Genome editing therapies have made significant strides in precision medicine for the management of haematological diseases. The CRISPR/Cas9 genomic editing platform has to date emerged as the most successful program. Monogenic disorders such as haemophilia, sickle cell anaemia and beta thalassemia have shown remarkable results in clinical trials. However, challenges remain. Off target effects of gene editing, high cost and limited accessibility and ethical issues of germline genomic editing remain to be fully addressed.

Cellular therapy: Immune-surveillance is a normal function of the immune system. Failure of the body's natural immune-surveillance mechanism contributes to the development of malignancies. Cellular therapies are designed to improve the immune system's ability to fight cancer. Chimeric antigen receptor (CAR) T therapy stands at the forefront of this exciting treatment modality. 647 clinical trials of CART therapy are in progress or have been completed. With China and India producing affordable CART products, this seemingly inaccessible treatment has almost reached our doorstep.

Dr. Manu Wimalachandra

*Lecturer in Department of Pathology
University of Colombo*

COVID-19: Haematological manifestations in pregnancy



COVID-19 pandemic is caused by SARS-CoV-2. As of 25 August 2021, 214,468,601 confirmed cases of COVID-19, including 4,470,969 deaths, reported to WHO. Up to 30th August 2021, the total affected is 431519 in SL with total number of deaths being 8775 including 48 maternal deaths. 80% of infected individuals are asymptomatic or show only mild symptoms, but 20% of infected individuals become severely ill and 2 - 5% die.

Several publications have looked in to the haematological manifestations in COVID-19. The commonly observed issues can be categorized as cytopaenias, coagulopathy and thrombosis.

The FBC abnormalities noted are, leukopaenia, lymphopaenia, neutrophilia, anaemia and thrombocytopaenia. Of them, lymphopaena and thrombocytopaenia are associated with severity of the disease and in turn prognosis. The aetiology for cytopaenias are multiple. Sparse data on pregnant patients affected by COVID-19 shows inconclusive evidence on the development of cytopaenias in pregnancy.

Changes can be observed in D Dimer, Fibrinogen, PT and APTT levels. It has been shown that the increase in these parameters correlates with the severity of the disease. D-dimer level is the most useful and consistent marker for identifying COVID-19 disease severity. Elevated D-dimer levels are difficult to interpret, as the etiology of rise can be multifactorial. D-dimer has no utility in the diagnosis of VTE; it has a poor positive predictive value but a high negative predictive value. Three to six times higher rates of thrombosis are noted in COVID-19. Pathophysiology for thrombosis and coagulopathy is complex. However no clear information regarding the pregnant population.

Patients with a thrombosis or suspected thrombosis, therapeutic anticoagulation is recommended. The treatment with a therapeutic anticoagulation may be beneficial for patients who are not critically ill. All pregnant women admitted with confirmed or suspected COVID-19 should be offered prophylactic LMWH till 10 days discharge.

Dr. Nadishani Ediriwickrama

Consultant Clinical Haematologist

Castle Street Hospital for Women, Colombo

Evaluation of performance characteristics of selected albumin assay kits



Urine albumin is measured using immunochemical methods. The international standard, ISO 15189 : 2012 for Medical laboratories - Requirements for quality and competence requires laboratories to use methods which are traceable to higher order reference measurement procedures or reference material. Currently laboratories use urine albumin assay kits of which the calibrators have been value assigned against the ERMDA470k/IFCC or ERMDA470.

The aim of this study is to evaluate the performance characteristics of manual urine albumin assay kits which are currently in use in Sri Lankan laboratories. The study is conducted in two phases, a desk evaluation of kit information followed by a laboratory evaluation of manufacturer claimed performance characteristics.

The local agents registered with the University of Ruhuna for the supply of laboratory reagents were invited for the study. Kits with calibrator traceability for ERMDA470k/IFCC or ERMDA470 are included for the evaluation. Five urine albumin kit manufacturers have consented for the desk evaluation whilst four of them provided written consent for the laboratory evaluation. The selected kits show a linearity range varying from 0 – 400 mg/L for urine albumin. Coefficient of variation (CV%) vary from 0.5-5.7 for inter assay and 0.9 -4.23 for intra assay precision, based on the desk evaluation.

During the phase of laboratory analysis, the linearity ranges are verified using the standards of each kit in a dilution experiment and the precision profiles are verified using commercial internal quality control materials. The accuracy is evaluated by the assay of urine albumin concentration of 14 patient samples with all four kits and compared with the values obtained through an interlaboratory experiment of an accredited laboratory for urine albumin testing. The laboratory analysis would provide verification data for the performance of commonly used manual urine albumin assay kits in Sri Lankan laboratories.

Dr. Deepani Siriwardhana

Senior Lecturer, Department of Pathology
Faculty of Medicine, University of Ruhuna*

* Senior Lecturer, Department of Biochemistry and Clinical Chemistry, Faculty of Medicine, University of Moratuwa

PLENARY LECTURE – 2

Miracles of Plastic Surgery



In the last century, reconstructive and aesthetic plastic surgery has evolved exponentially beyond its boundaries. During world war times McIndoe and Gillies introduced several plastic surgical techniques to think differently. Structured training in plastic surgery has produced modern plastic surgeons to create or reconstruct birth defects and damaged tissue by novel methods, have changed their lives.

Eastern medicine took more readily to plastic surgery as recorded cases of skin grafts and reconstructive surgery in history.

However, micro vascular surgery has made possible transfer of vascularised tissue from one part of the body to another part to correct any soft tissue or bony defect. This restores the form and functioning of the body parts. Replantation of de-vascularised hands, fingers, scalp, nose, ears is something common to hear now.

In peripheral nerve surgery, neurotising targeted muscle or its motor nerve has given new life for patients with Bell's palsy and brachial plexus injuries.

Correcting birth defects is a fortune for the parents and for the child as it improves the disability as well as the appearance. Proper selection of affected children at the correct age for the correct procedure is crucial for success.

Advances in recent burn care and intensive care has significantly reduced mortality. This brings up another challenge, more scars. Evolutions of plastic surgery over decades have brought hope for the burn victims and change the outcome of patients suffering from this devastating injury. Early intervention of rehabilitation has been able to cease the contractures and restore the function.

Dr. Sathis Wijemanne

Consultant Plastic Surgeon

Teaching Hospital Karapitiya

SYMPOSIUM - 2

**ADVANCES IN CARDIOLOGY -
BEATING THE BEAT**

Arrhythmia in young adults



Varies types of both tachyarrhythmia and bradyarrhythmia can affect young adults. Most commonly arrhythmias present as either brief or sustain palpitations or transient loss of conscious. However sudden cardiac arrest or sudden cardiac death sometimes can be the most tragic presentation.

Categorically arrhythmias in young adults comprise a heterogeneous group. Inherited channelopathies, arrhythmias among adult congenital heart diseases, arrhythmias among patients with inherited or acquired myopathies and arrhythmias among structurally normal hearts are among that heterogeneous group.

Focused history taking pertaining to index episode, previous episodes, previous history of structural heart diseases and family history of sudden unexplained deaths, cardiac diseases are all important.

Careful assessment of both tachycardia and non-tachycardia ECG is very crucial. It is very important to establish to symptoms ECG correlation. Sometimes long term and ambulatory rhythm is required with Holters, Event recorders and Implantable loop recorders. Cardiac structural assessment with 2D echo and cardiac MRI are important tool to determine structural abnormalities.

Most arrhythmias are now can be treated effectively with minimally invasive approach. Cardiac implantable electronic devices and catheter ablations are well established treatment options for most of arrhythmias to reduce symptoms, reduce hospitalisation, minimize premature deaths, and improve quality of life.

Dr. Keerthi Divulwewa

Consultant Cardiac Electrophysiologist

Teaching Hospital Kurunegala

Interventional cardiology; current and future perspectives of Sri Lanka



The Field of Cardiology is one of the most rapidly progressing branches of medicine, particularly with new advancements in Interventional Cardiology. The first successful Coronary Angioplasty was done by Gruentzig in 1977 and leading to today's panoply of devices used percutaneously to revascularize the coronary arteries in a variety of clinical settings.

In Sri Lanka the first Cardiac catheterization laboratory was installed at the NHSL in the latter part of 1989. The initial work involved left and right heart catheterizations, Coronary angiograms and Pulmonary Valvuloplasties started with the support of overseas consultants.

Since then, the field of Cardiology has achieved a remarkable growth, including several milestones such as Mitral Valvuloplasties (PTMC) and alcohol septal ablations for HOCM patients which were started in 1997. After 2000, interventions for structural heart diseases such as device closure of PDA, ASD and VSD were made enabling Cardiac Surgeons to perform more complex structural cardiac surgeries and CABG.

With experience, more complex coronary interventions for acute STEMI, LMCA, Coronary artery bifurcations, calcified coronaries and chronic total occlusions were performed keeping in line with the stipulated guidelines.

In our toolbox the most recent developments are the IVUS and OCT which gives us the ultrasonic appearance of vessels. Hence we can accurately assess the size of vessels and other characteristics of vessels to make precise judgments.

The rotational a thoracotomy has helped us to fight our greatest enemy in coronary Intervention which is Calcium.

Introduction of FFR gives physiological importance of coronary lesions and helped us to make a decision in doubtful lesions. Several randomised studies have shown that the FFR guided intervention has survival benefits.

The expertise of the operators has joined hands with the new innovations to conquer the sometimes almost unconquerable lesions keeping par with regional and international standards.

Dr. Vajira Senaratne

*Consultant Clinical & Interventional Cardiologist,
National Hospital of Sri Lanka, Colombo*

Treatment of chronic heart failure



Heart Failure is a highly prevalent condition. Over 60 million people in the world suffer from this disease. It is associated with high morbidity and mortality, 50% of them die within 5 years of diagnosis. Heart failures possess significant strain in the health care system, and it is the number one reason for hospitalisation in patients aged 65 years of worldwide.

Although there are number of causes ischaemic heart disease, valvular heart disease, hypertension and cardiomyopathies are the commonly encountered causes.

Diagnosis of heart failure should be made on typical clinical features and appropriate investigations like ECG, Chest X-ray, Echocardiogram and Biomarkers (BNP or Pro BNP). An attempt should be made to find a cause and precipitating factors and treated properly.

Loop Diuretics are excellent medications for symptom relieve but it has not been shown to improve the prognosis of heart failure. Diuretic dosage should be reduced to minimum once patient reach euvolemic status. This will facilitate to commence and increase the doses of medications improve the prognosis.

Ace inhibitors and ARB blockers are Class I A indications for heart failure. Almost all the Clinical trials have shown that these agents comparing with placebo give a risk reduction of 30 - 40%. Paradigm-HF trial publish in 2014 showed when combine an ARB blocker Valsartan and Neprilysin inhibitor Sacubitril an additional 20% risk reduction when compared to Ace inhibitor Enalapril. Valsartan/ Sacubitril combination is now recommended as a first line medication or in patients who are not responding well with Ace inhibitors or ARB Blockers.

Beta blockers are Class I A indication for heart failure therapy. Three clinical trials Copernicus (Carvedilol), MERIT-HF (Metoprolol LA), and CIBIS II (Bisoprolol), showed 30% risk reduction in heart failure.

Mineralocorticoid antagonists Spironolactone and Eplerenone showed another 15-30% risk reduction in Rales, Emphasis and Ephesus Clinical trials. These agents are also recommended as Class I A indication in Guidelines.

More recently anti diabetic medications of SGLT 2 inhibitors have been shown to reduce risk 25 - 30% in Dapa-HF and Emperor – Reduced Clinical trials. Dapagliflozin and Empagliflozin are now recommended for patients with heart failure with reduced ejection fraction in both Diabetic and Non-Diabetic patients.

These four types of medications are the cornerstone of Heart failure therapy used in combination.

Those patients with wide QRS complex and resistant to drug treatment may benefit from Cardiac Resynchronization therapy.

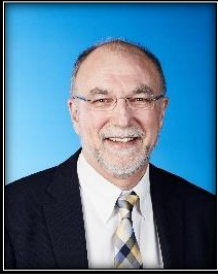
Despite availability of these agents heart failure still carry high mortality. This vulnerable population should be treated with Guideline based treatment to get maximum benefits.

Dr. W. S. Santharaj

Senior Consultant Cardiologist

PLENARY LECTURE – 3

The application of evidence-based dietary management in patients with irritable bowel syndrome



The use of dietary change to ameliorate symptoms in patients with irritable bowel syndrome (IBS) was frustratingly ineffective, with several dietary approaches (such as gluten-free diet) that had anecdotal support, but no quality evidence or even physiological basis for efficacy. The management of IBS changed when the low FODMAP diet was introduced and evidence supporting its efficacy provided in multiple randomised controlled trials from several countries. The diet has matured into a three-stage strategy that has long-term benefits for greater than 50% of patients with IBS. The diet has entered most international IBS guidelines. However, diet therapies are complex and require different skills to optimally use than do pharmacological therapies that gastroenterologists are trained to utilise. Awareness of the need to assess patient in terms of disordered eating and nutritional status with a view to their suitability for a restrictive diet and ability to do that is poorly developed in gastroenterologists. Assessing diet and teaching a new diet with a view to maintaining nutritional adequacy takes time and skills not available to most gastroenterologists. Gastrointestinal dietitians have these skills. Ways of value-adding to the diet or preventing problems have been studied. For example, the relative abundance of Bifidobacteria may reduce during the first phase of the diet and, while it can be corrected by the use of a probiotic, this did not improve efficacy of the diet. In contrast, supplementation with a minimally-fermented fibre and resistant starch can improve bowel actions and ensure even delivery of butyrate to the colonic mucosa. Thus, getting the best out of the FODMAP diet is more than prescribing it, but serious engagement with it has benefits for both the patient and the clinician.

Professor Peter Gibson

*Monash University and Alfred Health
Melbourne, Australia*

SYMPOSIUM - 3

COVID-19: FACING THE EMERGING CHALLENGES WITH CONFIDENCE

COVID-19 Vaccines; a current global perspective



Coronavirus Disease 2019 (COVID-19), has affected more than 210 million individuals worldwide and caused over 4.5 million deaths. Several vaccines and medications have been developed to prevent the SARS-CoV-2 infection and treat those affected. Globally, more than a dozen vaccines have been approved for general or emergency use. The principal categories of COVID-19 vaccines includes: genetic/ nucleic acid (mRNA or DNA) vaccines, viral vector (non-replicating or replicating) vaccines, recombinant spike or RBD-protein vaccines, inactivated virus vaccines and live attenuated virus vaccines. Certain countries have made significant progress in immunizing their citizens, whilst others have so far only been able to vaccinate a small proportion of their populations. In recent months, focus has moved towards the effectiveness of the vaccines against the different variants of concern (such as Alpha, Beta, Gamma and Delta) and the vaccination of specific groups such as children, pregnant women and immunodeficient individuals. In my talk, I would provide a global perspective on the currently used COVID-19 vaccines and discuss some future developments expected during the next year.

Professor Suranjith Seneviratne

*Professor and Consultant in Clinical Immunology and Allergy
Institute of Immunity and Transplantation and Health Services Laboratories,
London, UK*

Simply a piece of bad news wrapped up in protein; Sri Lankan perspective



The dawn of the year 2020 was a turning point in our modern era and in global health. We have learned a hard lesson about the intrinsic vulnerability of our societies to a single pathogen. Metagenomic sequencing allowed the scientists the ability for early sharing of SARS-CoV-2 genome sequences and allowed health authorities to develop countermeasures to prepare the world for the COVID-19 pandemic.

Revealing the sequences have a significant contribution on public health decisions during the current COVID-19 pandemic or future outbreaks, especially with the emerging variants of SARS-CoV-2 virus.

Identifying the causative agent for COVID-19 pandemic and its global spread was only possible through virus genome sequencing. Additionally, virus genome sequences are fundamental in investigating outbreaks, designing of diagnostic assays, drugs, and vaccines. Analysis of SARS-CoV-2 virus genomes can therefore complement, augment and support strategies to reduce the burden of COVID-19.

My talk will summarize our work at the Allergy Immunology and Cell Biology Unit of University of Sri Jayewardenepura on the SARS-CoV-2 sequencing from isolates collected throughout the different phases of the pandemic to determine the molecular epidemiology of SARS-CoV-2 in Sri Lanka. I will be highlighting the evolution of the SARS-CoV-2 virus, including current circulation of viruses with mutations that may confer greater transmissibility and/ or threaten the efficacy of vaccines in Sri Lanka.

Dr. Chandima Jeewandara

*Director Allergy, Immunology & Cell Biology Unit
University of Sri Jayewardenepura*

COVID-19; treating severe cases



In less than 20 months, COVID-19 pandemic has infected more than 225 million people and has killed nearly 5 million people. This high number of cases and deaths has become a huge challenge for treating clinicians. Fear created by this in the minds of health care workers made managing these patients difficult. In spite of a large number of studies, still poorly understood pathophysiology has made this situation worse. Initial theory of viral pneumonia was later challenged by the finding of thrombosis. Unprecedented number of clinical trials has finally resulted in finding only dexamethasone as an effective treatment while IL-6 inhibitor tocilizumab is useful in selected patients. Remdesivir and monoclonal antibodies have a very limited use. Abuse of these drugs in patients for whom they are not indicated or using in large doses has led to other complications. Lung fibrosis and other long term sequel in some patients with pneumonia have made more problems for clinicians. Severe COVID-19 cases have their unique issues. Severe impairment of gas exchange, thrombosis, embolism and bleeding are some of these and the management of such conditions is still not clearly defined. In this context, documentation of case management and sharing of experience can be of huge importance.

Dr. Ananda Wijewickrama

Consultant Physician

National Institute of Infectious Diseases, Colombo

SYMPOSIUM - 4

EVOLUTION OF DERMATOLOGY: TO TOUCH OR NOT TO TOUCH

Common sense Dermatology



Skin lesions are encountered by all medical practitioners irrespective of their specialty. A proper scientific approach is essential for their diagnosis and management. As skin is an organ with immense reparative capacity, an environment conducive for healing should be created. A skin lesion may be the first sign of a systemic disease. Early recognition of this will direct the physician to a proper diagnostic pathway. A case series will be presented for better understanding of the above mentioned.

Professor Jayamini Seneviratne

Consultant Dermatologist

Lady Ridgeway Hospital for Children, Colombo

Dermatophytosis: A new challenge to Dermatologists



Dermatophytosis used to be an easily treatable cutaneous infection commonly encountered in clinical practice. However, increasing incidence of dermatophytosis, extensive and atypical presentations, inadequate therapeutic response to commonly used antifungals and increased recurrences are observed recently.

The causes are multifactorial. Overcrowding, hot, humid environments and recent fashion trends may contribute to the persistence of the fungi in the environment. The prevalence of more virulent fungal species may also play a role.

One of the significant modifiable contributors is the rampant usage of steroids to treat dermatophytosis. Adding a topical steroid in the initial phase of dermatophyte infections have been shown to mitigate the inflammation. However, steroids are inadvertently used in higher potencies and for long durations. Triple combination creams are sometimes used as a blanket treatment for any skin disease. Topical steroids cause a decrease in local cell-mediated immunity, which plays a pivotal role in eliminating fungi. This results in extensive, recurrent dermatophyte infections and atypical presentations, which require longer durations and higher doses of antifungals for a good therapeutic response.

Emerging antifungal resistance is another contributory factor. Usage of inadequate doses and durations of antifungals may facilitate the survival of resistant strains.

Recalcitrant dermatophytosis is becoming a massive challenge to dermatologists in Sri Lanka. Considering the commonness of the disease, a significant burden on quality of life and health costs is inevitable. Therefore, this should be identified as an important public health issue and dermatologists, mycologists, general practitioners and health care policymakers should get together to defeat this.

Dr. Nayani Madarasingha

Consultant Dermatologist

National Institute of Infectious Diseases, Colombo

Dermatology beyond borders; to achieve “perfect skin”



The skin is not only the largest but the most visible organ playing a complex role in human interactions. Not surprisingly, most skin conditions cause immense psychological impact irrespective of the nature of skin involvement. Hence, complete management of any skin affliction be it of disease origin or purely cosmetic, requires attempts to restore near normalcy. It is with this background that aesthetic dermatology has gained momentum within the past few decades, driving a multimillion-dollar cosmetic industry with increasing demand for skin perfection by the public.

As dermatologists with in-depth understanding of the skin it is important that we cater to this demand, which is already being exploited by unscrupulous and untrained individuals. Traditionally dermatologists have treated both simple and complex skin diseases successfully, but with lesser emphasis on the aesthetic impact. In order to deliver holistic dermatological care, cosmetic dermatology is a branch that has evolved providing a large number of therapeutic and procedural options at the disposal of the dermatologists of the current era.

These options not only play a role in routine skin maintenance and care but also in mitigating natural processes like ageing as well as in reversal of scarring and disfigurement caused by common dermatological conditions such as acne, birth marks, hirsutism, post inflammatory hyperpigmentation etc.

Starting with simple topical applications many more cosmetic procedures ranging from chemical peeling to laser will be discussed.

Dr. Chalukya Gunasekera

Consultant Dermatologist

National Hospital of Sri Lanka, Colombo

Tele-dermatology; opportunities and challenges



Telemedicine is defined as the use of communication technologies in healthcare for the exchange of medical information for diagnosis, treatment, prevention, research, evaluation, and education over a distance. Tele-dermatology is a mature and frequently used form of telemedicine. The visual character of dermatology makes it well-suited for telemedicine.

Tele-dermatology has three main modalities of delivery. They are; store and forward, real-time interactive and

hybrid. Different models of Tele-dermatology include; *Primary* (direct communication between the patient and the general practitioners or dermatologist); *Secondary* (indirect communication between the patient and specialist); *Tertiary* (“second” opinion among specialists); *Patient Assisted* (patient communicates with a healthcare professional, usually for follow-up or monitoring); *Direct to Consumer*: (Patient initiates the care by accessing a healthcare provider through personal devices).

Tele-dermatology is embraced by many as it produces new opportunities like; faster access to the health professional with increased convenience, and time savings for patients; improved equity of access to care between regions, previously denied because of socioeconomic constraints, especially in countries in the developing world, and the tendency for specialized services to be centralized in urban centres; improved access between and within primary, secondary and tertiary care; improved quality of care.

Though tele-dermatology has vast scope as an adjunct to face to face practice, there are many challenges as well, right from the adoption of a new technology till reimbursement. Those can embrace patients, technical, medico-legal, and financial aspects. Further aspects of concern are; a breakdown in the relationship between health professional and patient; a breakdown in the relationship between health professionals; issues concerning the quality and confidentiality of health information; organizational and bureaucratic difficulties.

In conclusion, it is crucial to be well aware of the opportunities as well as challenges in Tele-dermatology to entertain the maximum benefits of modern technical advancements.

Dr. Janaka Akarawita

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