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Cover Story

Epidemic of road traffic crashes in Sri Lanka and a justification for the establishment of a Presidential Task Force for Prevention

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CONTENTS

SLMA President

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MBBS (Colombo)
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President
Sri Lanka Medical Association

President's Message

Dear SLMA Members,

It is with great pleasure that I write this message to the March 2022 newsletter of the Sri Lanka Medical Association (SLMA). The lead article was dedicated to road traffic crashes, injuries and deaths, a man-made epidemic, killing more than 8 road users daily in Sri Lanka.

The SLMA completed the month of February successfully, with the Deshabandu Dr. C. G. Uragoda Oration on History of Medicine being held on the 26th, delivered by Dr. Jayantha P. Jayasuriya, Past President College of Anaesthesiologists & Intensivists on "The Evolution of Anaesthesiology in Sri Lanka".

The popular Saturday talks were held on the 5th, 12th, and the 19th. The February Council meeting was held on the 4th with a joint clinical meeting with the Clinical Society of the Colombo South Teaching Hospital on the 25th. Two media conferences were held on the 3rd and the 24th, a COVID-19 update and a discussion on preventing road traffic crashes and making roads safe in Sri Lanka.

The Council of the SLMA plan to continue this trend during the month of March and invite you all to join with us to make the year an interesting and a memorable year for the Sri Lanka Medical Association and for Sri Lanka.

Myself as the President and the Council of Sri Lanka like to wish the members and all Sri Lankans a Very Happy Sinhala & Tamil New Year.

With Best Wishes

Professor Samath D. Dharmaratne
President - SLMA

Brief description of activities (16th February – 15th March)

19th February

The SLMA Saturday Talk on 'Managing Heart Disease Complicating Pregnancy; A Pathophysiological Approach' was done by Dr Prabodhana Ranaweera, Senior Lecturer, Department of Obstetrics & Gynaecology, Faculty of Medicine, University of Colombo.

22nd February

A clinical meeting was conducted with the collaboration of the Sri Lanka College of Haematologists on 'Bleeding in Antiphospholipid Syndrome'.

The resource persons were Dr Ahalyaa Sivashangar, Lecturer & Consultant Clinical Haematologist, Dr Manu Wimalachandra, Lecturer & Acting Consultant Clinical Haematologist, both from Department of Pathology, Faculty of Medicine, University of Colombo and Dr M H T Kumarasiri, Lecturer & Acting Consultant Clinical Haematologist, Department of Pathology, Faculty of Medicine, University of Wayamba.

24th February

A media seminar was organized by the Expert Committee on Prevention of Road Traffic Crashes on 'Let's Prevent Road Traffic crashes in Sri Lanka – 2022, Together'.

Dr Clifford Perera, Co-Chair SLMA Expert Committee on Prevention of Road Traffic Crashes, Mr Janaka Hapugoda, DIG, Traffic, Mr Dilantha Malagamuwa, Brand Ambassador "Safe Sri Lanka" Road Safety Programme and Dr Ruwan Thushara Matiwage, Convener, Expert Committee on Prevention of Road Traffic Crashes participated as resource persons.

25th February

A joint regional meeting was held with the Clinical Society of The Colombo South Teaching Hospital (CSTH), Colombo.

The welcome was delivered by Dr Ruwanthi Perera, President, Clinical Society, CSTH and Professor Samath Dharmaratne, President, SLMA.

The lectures were delivered by the resource persons at the meeting were;

'When will the pandemic end?', by Professor Neelika Malavige, Professor & Head Department of Immunology & Molecular Medicine, '

Chronic Cough in Children: Approach to a Generalist', by Dr Ridma Jayarathne, Paediatric Pulmonologist & lecturer in Paedeatrics,

Psychosocial impact of the pandemic on children & adolescents: a neglected aspect', by Dr Yasodha Rohanachandra Consultant Child and Adolescent Psychiatrist & Senior Lecturer,

'Ivermectin and COVID', by Professor Hasini Banneheke, Head, Department of Parasitology, and

'Effects of micro-plastics to human Anatomy and COVID 19 pandemic', by Dr Sajith Edirisinghe, Senior Lecturer and Clinical Geneticist, Department of Anatomy.

All resource persons were from Faculty of Medical Sciences, University of Sri Jayewardenepura.

26th February

The Deshabandu Dr C. G. Uragoda Memorial Oration on the History of Medicine – 2022 was delivered by Dr. Jayantha Jayasuriya, Past President, College of Anaesthesiology & Intensivists of Sri Lanka on 'The Evolution of Anaesthesiology in Sri Lanka'.

The event was conducted as a hybrid event.

3rd March

A webinar on the theme 'Birth Defects: Care and Prevention: Touching the Untouched Areas' was jointly organized by the SLMA Expert Committee on Birth Defects, Family Health Bureau (FHB) – MoH and the Sri Lanka College of Paediatricians (SLCP).

The welcome addresses were delivered by Professor Samath Dharmaratne, President, SLMA, Dr Chitramalee de Silva, Director, FHB and Professor Sharmen Rajindrajith, President, SLCP.

The following resource persons delivered lectures at the webinar.

Dr Kapila Jayaratne, National Programme Manager, Child Morbidity & Mortality on 'Overview of Birth Defects', MoH,

Dr Manjula Danansuriya, NPO, World Health Organization on 'Global Best Practices in Birth Defect Care & Prevention',

Professor Vajira Dissanayake, Dean, Faculty of Medicine, Colombo 'Diagnosing the Unndiagnosed: Genetic Testing & Counselling',

Professor Neelika Malavige, Professor & Head, Department of Immunology & Molecular Medicine on 'COVID-19 and possible birth effects',

Dr. Duminda Samarasinghe, Consultant Paediatric Cardiologist, LRH on 'Caring for a child with congenital heart disease' and

Dr. Saraji Wijesekara, Secretary, SLMA Expert Committee on Medical Rehabilitation on 'Management of a child with Down's Syndrome'.

Dr. Dineshani Hettiarachchi, Convenor of the Expert Committee on Birth Defects gave the closing remarks and summarized the session.

The poster on National Birth Defects Registry was launched on the same day.

4th March

The book 'A Patient Management Companion: A Brief Compendium of Cases Presenting at First Contact Care Level' developed by the SLMA DoC Call 247 was launched at the council meeting by handing over the first copies to Professor Samath Dharmaratne, President, SLMA, Professor Ishan de Zoysa, Secretary, SLMA and Dr Kalyani Guruge, Council Member who had answered most number of calls (3542) since the reactivation of SLMA DoC Call 247 in August 2021 by the Co-Editors of the book Dr BJC Perera and Professor Indika Karunathilake, both Past Presidents of SLMA.

5th March

The SLMA Saturday Talk on 'Common Geriatric Presentations' was done by Dr Dilusha Lamabadusuriya, Consultant Physician, University Hospital, KDU.

9th March

Professor Samath Dharmaratne, President SLMA and representatives of the SLMA Expert Committee on Prevention of Road Traffic Crashes met Hon. Dullas Alahapperuma, Minister of Mass Media to discuss about initiating an awareness campaign to reduce road traffic crashes in Sri Lanka.

12th March

The SLMA Saturday Talk on 'Systemic Lupus Erythematosus' was done by Dr Gunendrika Kasthurirathne, Consultant in Rheumatology & Rehabilitation, NHSL, Colombo.

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Epidemic of road traffic crashes in Sri Lanka: Proposal for the establishment of a Presidential Task Force for its prevention

Prof. Samath D. Dharmaratne

MBBS (Colombo), MSc (Community Medicine), MD (Community Medicine)

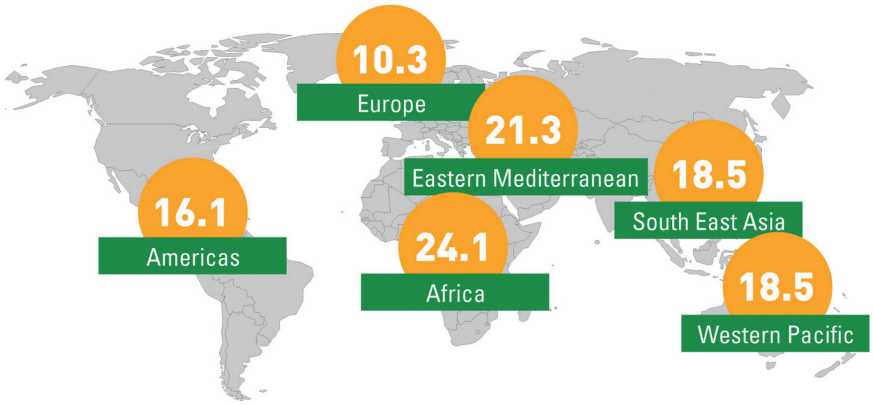
President
Sri Lanka Medical Association

The problem

The first self-propelled road vehicle – and the first motor accident : Cugnot and his steam tractor, 1769–70

This image depicts the documented first motor vehicle crash that occurred in 1769-70, involving the first self-propelled road vehicle. Approximately 1.35 million people die each year because of road traffic crashes (RTCs), that is one every 24 seconds. It is the 8th leading cause of death, with 54% of deaths attributed to vulnerable road users, namely, motorcyclists (28%), pedestrians (23%), and cyclists (3%). 93% of the world's fatalities on roads occur in low- and middle-income countries, even though these countries have only 60% of the world's vehicles. Road traffic injury death rates are highest in the African region. Even within high-income countries, people from lower socioeconomic backgrounds are more likely to be involved in RTCs. Significantly, road traffic injuries are the leading cause of death for children and young adults aged 5-29 years. Although, low-income countries have 1% of all vehicles they report 13% of all deaths compared to the high-income countries which have 40% of all vehicles with 7% of all deaths. It is estimated that every year, RTCs cost US $ 518 billion globally, representing 1 to 2% of the Gross National Product with low- and middle-income countries contributing US$ 65 billion, which exceeds the total amount of development assistance received. RTCs and associated injuries and deaths have become an important economic problem and an important socio-cultural issue.

The chance of dying in a road traffic crash depends on where you live



Road traffic fatalities per 100 000 population

In Sri Lanka, each day 8 people are killed (more than 3,000 annually). Every hour 2 are injured from a RTC and an RTC is reported every 10 minutes. From 2010 to 2020, 29,769 lives were lost from RTCs with 83,154 serious injury crashes being reported (Figure 1, 2).

The annual economic loss from RTCs ranges from Rs. 5 billion to Rs. 10 billion. Prevention and control efforts do not seem to work as indicated by the increase of RTCs. This is likely to be due to the uncoordinated nature of road safety programs and initiatives.

Gaps

Historically, successive governments, ministries of health, transport, defense, and highways to name a few, have been addressing the problem of RTCs. Perhaps due to the uncoordinated nature of these actions and activities, RTCs do not seem to decrease. All these programs/activities should be brought on to one table and a concerted effort made to prevent and control this man-made epidemic, which can kill any one of us and our relatives and friends at any time.

Solution

We, the Sri Lanka Medical Association, propose, to establish a Presidential Task Force, consisting of all stakeholders, including medical doctors and health personnel, Engineers, Police, Policy makers, Examiners of Motor Vehicles, Road Development Authority and Urban Development Authority representatives, drivers (CTB, PVT bus, TW, School vans) and any others that are considered necessary to address this man-made epidemic.

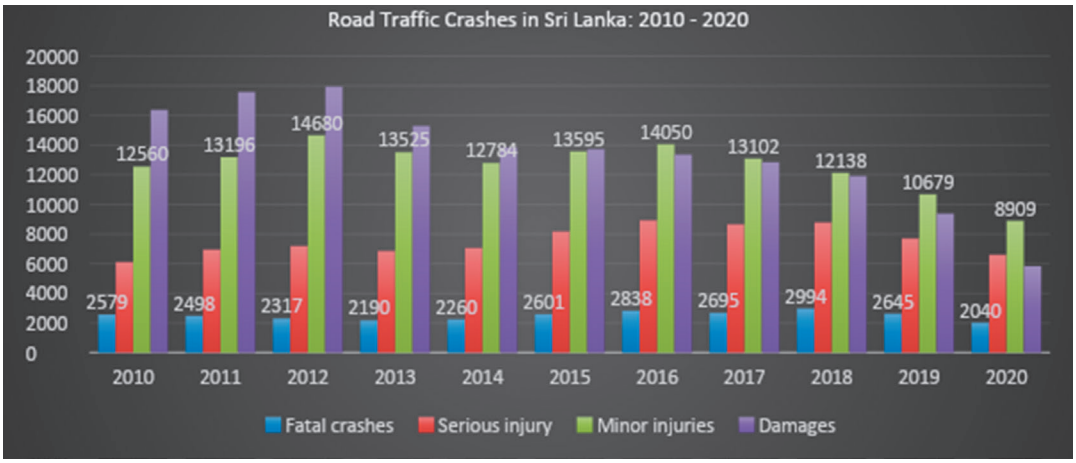


Figure 1 - Road traffic crashes in Sri Lanka from 2010 to 2020
Source: Traffic Police, Sri Lanka

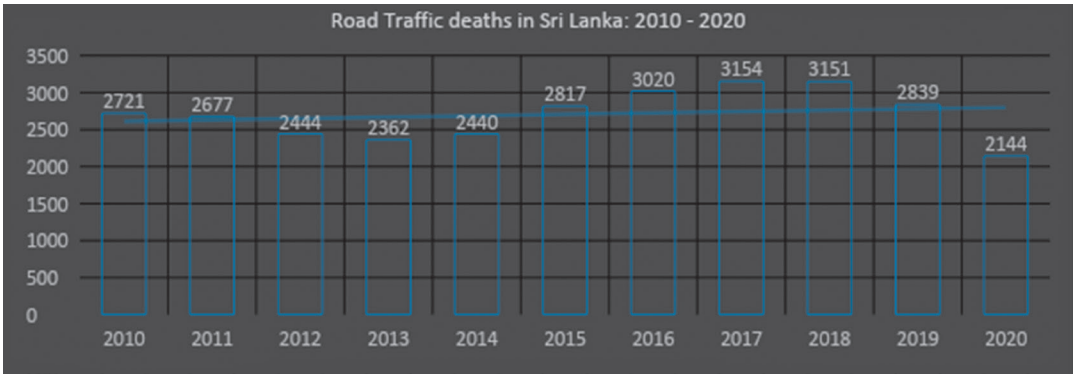


Figure 2 - Road traffic deaths in Sri Lank from 2010 to 2020
Source: Traffic Police, Sri Lanka

Social issues

Majority of road users killed and injured from RTCs are young adult males who are needed for the development programs of the country. Sri Lanka, a developing country needs them for the future, especially in the context of the aging population. Most of them are and could be the principal wage earners in the family and their death and injury will push the family towards poverty. This could be a reason for the ineffectiveness of poverty alleviation programs initiated and established by successive governments in the country.

Legal issues

To obtain compensation for injured road users, legal proceedings need to be initiated. The police will only try to prove the reason for the crash and do not have the power or the resources to represent the injured and help them to seek compensation. Legal support is expensive and is difficult to obtain. A Presidential Task Force can address this important deficiency existing in our country at present.

Medical issues

Death results in funeral expenses and injury needs medical treatment which is expensive, especially rehabilitation and chronic illness care. Although Sri Lanka has a free health care system, it does not cover measures to address catastrophic health expenditure. A Presidential Task Force can address this significant deficiency in our health care system.

Environmental issues

RTCs could damage one's house, garden and other property in addition to injury and death to the road user. There is no method or a way for the affected to obtain compensation for the damage to their property. A Presidential Task Force could be able to address this issue also.

Other issues

In addition to the directly associated issues of RTCs discussed above, there are a number of known as well as unknown issues that are related and could be caused by RTCs and its associated injuries and deaths. A Presidential Task Force will be very helpful, not only to prevent and control RTCs, but also to address related issues that could aid the affected road users.

Conclusion

As a country Sri Lanka needs a concerted, collaborative, multi-sectoral, stakeholder driven, sustainable effort/program/ initiative to prevent and control RTCs and associated deaths and injuries. A Presidential Task Force is one important suggestion the Sri Lanka Medical Association is proposing. We at the SLMA is convinced that a Presidential Task Force once initiated can reduce this man made epidemic.

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* https://www.worldkidneyday.org/facts/take-care-of-your-kidneys/8-golden-rules/

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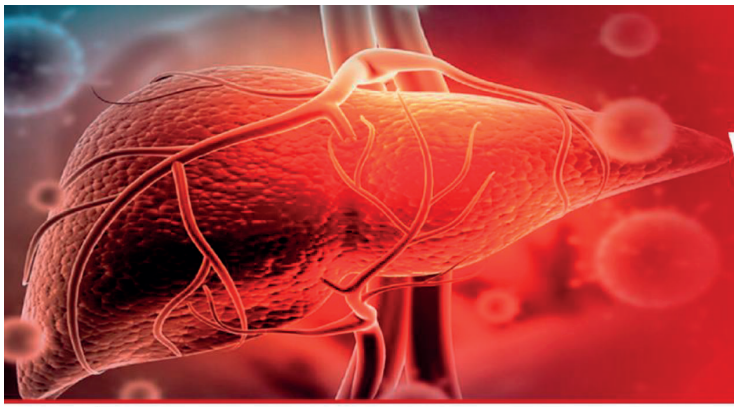

Achieve Weight Management Goals to Improve Liver Health*

% Weight loss (WL)	5%		7%		10%	
NASH-resolution	10%	26%		64%		90%
FIBROSIS-regression	45%	38%		50%		81%
STEATOSIS improvement	35%	65%		76%		100%
% Patients achieving WL	70%	12%		9%		10%

- Decrease in body weight by ≥5% has been shown to reduce liver fat.
- Decrease in body weight by ≥ 10% has been shown to improve liver inflammation and reduce fibrosis by at least one stage.

* J Hepatol. 2017 May 23. pii: S0168-8278(17)32052-4

VLCD Intervention 1 – 8 Week
3 OPTIFAST MEALS

Food Reintroduction 9 – 12 Week
2 weeks – 2 OPTIFAST MEALS
2 weeks – 1 OPTIFAST MEAL

Weight Maintenance 13 – 32 Week
Food Based Diet

• Mean Weight Loss – 10.3kg

Week 1 (Visit 2)
Week 3 (Visit 3)
Week 5 (Visit 4)
Week 7 (Visit 5)
Week 10 (Visit 7)
Week 12 (Visit 8)
Week 16 (Visit 9)
Week 20 (Visit 10)
Week 24 (Visit 11)
Week 28 (Visit 12)

Very Low Calorie Diet (OPTIFAST) to Achieve a Sustainable 10% Weight Loss in Patients With NAFLD#

- ≥ 10 % WL – 34 %
- ≥ 7 % WL – 51 %
- ≥ 5 % WL – 68 %

OTHER BENEFITS

LIVER HEALTH
Overall, liver enzymes significantly improved from baseline to post-VLCD, and these improvements were maintained at 9 months.

METABOLIC CONTROL
Glucose, HbA1c, and insulin improved from baseline to post-VLCD, and these improvements were maintained at 9 months.

CARDIOVASCULAR HEALTH
Overall, there was a significant reduction in blood pressure from 144/86 to 133/81 mm Hg post-VLCD.

QUALITY OF LIFE
Patients reported a significantly increased QoL at 9-month follow-up with a decrease in weight-related symptoms.

Scragg J et al. Feasibility of a VLCD to Achieve a 10% wt loss in patients with NAFLD. Clin Trans Gastro. 2020

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Nonalcoholic fatty liver disease - The silent tsunami

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Introduction

Nonalcoholic fatty liver disease (NAFLD), which is hepatic steatosis in the absence of significant alcohol consumption, is rapidly becoming the most important liver disease worldwide leading to cirrhosis and hepato-cellular carcinoma (HCC). NAFLD has assumed the status of a major global health concern in recent times. Its prevalence in the general population is estimated to be around 25% (1). NAFLD is increasingly being recognized not only in adults, but also in children and adolescents, adding further significance to its disease burden [2]. Furthermore, NAFLD is predicted to be one of the most common causes of death in the productive age group in the near future

Nearly two thirds of middle aged and elderly adults in urban Sri Lanka have NAFLD (2). However, around 20% of Sri Lankans in the estate sector, and nearly 10% of adolescents in urban Sri Lanka also have NAFLD detected on ultrasonography. About a tenth (10%) of these patients will go onto develop the progressive form of the disease which leads to Nonalcoholic steatohepatitis (NASH), advanced liver fibrosis, cirrhosis and HCC. These changes take place at varying paces over a period of 10- 20 years. Sadly, since most of these patients are asymptomatic, except perhaps for mild hypochondrial pain or discomfort, they present late with an episode of decompensation like ankle swelling, haematemesis or even with a hepatocellular carcinoma with a poor prognosis unless they receive a liver transplant. Therefore, we could be facing an epidemic of NAFLD related cirrhosis in the future without any warning.

Risk factors for NAFLD

The hallmark of NAFLD, is the accumulation of fat at ectopic sites like the liver, due to an excess of energy. This is primarily due to increased calorie intake & reduced expenditure due to a sedentary lifestyle. The resulting adipose tissue dysfunction & lipotoxicity from this accumulation of fat contributes to the inflammatory response which triggers liver damage (3). Furthermore, changes in the gut microbiome also contribute to the liver inflammation in NAFLD. The ever-increasing consumption of fast-food high in calories and saturated fats and very low in fibre, by the general population including children, contribute to the adverse changes in the gut microbiome. These changes also contribute to the inflammatory response in the liver in NASH. Another significant contributing factor for the accumulation of fat in the liver, is the excessive consumption of fructose (4). Fructose, which is a component of table sugar and is used widely in the food industry as a sweetener for its low cost and taste, contributes to the accumulation of hepatic fat due to its unique pathway of metabolism in the liver. Fructose is frequently encountered in commercially made deserts and beverages like soft drinks and cola, and behaves like alcohol in certain ways leading to addictive behavior (Fructoholism).

Accumulation of fat in the liver in patients with NAFLD leads to increased insulin resistance. NAFLD is also closely related to the other metabolic illnesses associated with insulin resistance such as diabetes mellitus, obesity and hyperlipidemia. These characteristics have prompted a proposal for change of its nomenclature to metabolic associated liver disease (MAFLD) by some groups (5). Due to these associations, patients with NAFLD have an increased risk of developing ischaemic heart disease, chronic kidney disease and malignancies. In fact, the most common cause of death in patients with NAFLD is cardiovascular disease, and not cirrhosis.

Genetic susceptibility contributing to the progressive forms of the illness is also well recognized. One genetic polymorphism, PNPLA3 is well recognized as a predisposing factor for the progressive form of the illness. These factors may contribute to the development of NAFLD in people without traditional risk factors like obesity (Lean NAFLD).

It's amply clear that with the possible exception of genetic factors, all other risk factors for NAFLD could be attributed to the modern way of life, which encompasses overindulgence of fast food as well as a sedentary lifestyle.

NAFLD & type 2 diabetes

NAFLD has a very interesting relationship with type 2 diabetes. NAFLD is present in nearly two thirds of patients with type 2

diabetes, and furthermore, a fifth of these patients have significant liver fibrosis, which is a risk factor for the progressive form of the illness and liver related mortality. A significant proportion of patients with NAFLD who have not yet developed diabetes, have impaired glucose tolerance (IGT) with an increased risk of developing diabetes in the future. Diabetic patients with NAFLD have greater insulin resistance, and the control of blood sugar is more difficult. Diabetes increases the risk of disease progression to cirrhosis and HCC in patients with NAFLD.

The American Diabetes Association (ADA) recently recommended in its guidelines that all patients with diabetes should be screened for NAFLD and significant fibrosis yearly with non- invasive tests (6).

Evaluation of patients with NAFLD

Evaluation of a patient with NAFLD includes the exclusion of other likely liver diseases, the presence of other metabolic risk factors and as mentioned earlier, evaluation for the stage of illness to identify the risk of progression to advanced forms of the illness. In addition, other underlying causes like the consumption of alcohol and medications, especially traditional medications containing alcohol, should be excluded. Since secondary causes for hepatic steatosis are frequently encountered in children they should be carefully evaluated for other causes of fatty infiltration. Patients should be evaluated for the presence of other metabolic risk factors like obesity, type 2 diabetes, impaired glucose tolerance and hyperlipidemia. Other risk factors like excessive calorie intake, consumption of refined sugar, sweetened drinks and fast food should also be carefully elicited. As fructose is considered addictive and especially harmful to the liver, the consumption of food sweetened by fructose should be explored. Additionally, details regarding the lack of physical activity should be inquired, as this has become one of the most crucial factors currently leading to obesity.

The presence of significant fibrosis is the most important risk factor, for the progression of NAFLD to cirrhosis and HCC. Therefore, the detection of patients who are at risk of progression of liver disease is an integral part of the assessment of a patient with NAFLD. Advanced age and the presence of components of metabolic syndrome are the principal risk factors for advanced fibrosis. Fibrosis 4(FIB-4) score is one of the simple calculations available to exclude significant fibrosis at a primary care level. This calculation is reliable and validated and available as an online application free of charge. Age, AST and ALT levels and platelet counts are used in the calculation of the FIB 4 score. If the FIB4 score is more than 1.3 the patient is likely to have significant fibrosis. If FIB4 is suggestive of significant fibrosis, these patients should be further evaluated using the liver stiffness measurement (LSM) with a Fibroscan to confirm and stage the fibrosis. If the LSM is >8Kpa the patient should be further evaluated preferably with a liver biopsy. If significant fibrosis is present the patient will need liver directed therapy. If the LSM is <8 kPa the patient should have a repeat FIB4 score every 3 years usually and yearly in patients with a significant higher risk of developing the progressive form of the disease, like advanced age, obesity and diabetes. These patients should be carefully followed up with the initiation of lifestyle interventions and the careful management of other comorbidities like obesity, diabetes, hypertension and hyperlipidemia.

Most of the guidelines now recommend the primary care physicians, general physicians and endocrinologists to manage these patients with NAFLD, with lifestyle interventions. They should be evaluated periodically with FIB 4 score and if significant fibrosis is present, should be referred to a gastroenterologist.

Management of NAFLD

Non pharmacological Interventions

The management of a patient with NAFLD should be ideally carried out by a multi-disciplinary team including the liver physicians, general physicians, endocrinologists, family physicians and nutritionists.

Weight loss is the mainstay of treatment in progressive NAFLD, but is difficult to achieve and sustain. Significant weight loss (>10%) reverses fibrosis but is not easily achieved (7). Even lesser degrees of weight loss have beneficial effects on the histology. The patient should be under a therapist with the experience of encouraging weight loss, and a diet with a calorie deficit and healthy eating habits should be encouraged, preferably with the help of a nutritionist. Energy rich fast food and food containing added fructose like soft drinks, Colas and deserts should be discouraged. All forms of exercise should be encouraged. Smoking and alcohol should be discouraged. Coffee intake is considered beneficial and should be encouraged.

Pharmacological treatment

Pharmacological interventions are reserved for patients with progressive forms of the illness, and should preferably be initiated by a gastroenterologist. Vitamin E & pioglitazone are useful in patients with inflammation (NASH)

in randomized controlled trials (8). Since pioglitazone is already in use in diabetes, it could be considered in patients with diabetes and NASH. Adverse effects of pioglitazone like pedal swelling and weight gain are encountered in only a minority of patients. SGLT 2 inhibitors like empagliflozin is also shown to be beneficial in recent studies. SGLT2 inhibitors are well recognized for their beneficial effects on the heart and kidney in patients with diabetes. Since SGLT inhibitors are well known to reduce weight, this effect could be contributory to the beneficial effects observed in NAFLD. Therefore, the use of these medications in patients with coexisting DM and progressive NAFLD, could be justified over using diabetic medications without proven benefit in NAFLD, like sulphonylureas.

Obeticholic acid is beneficial in reversing the fibrosis stage in randomized controlled trials, but have not yet been recommended by guidelines. Saroglitazar, a diabetic drug which is licensed for use in India for NASH, is the first drug ever to be approved for this indication in the world.

Furthermore, other metabolic issues like obesity, diabetes, hypertension and hyperlipidaemia should be managed optimally. As mentioned earlier, this will reduce the cardiovascular risk which progressively increases with the degree of liver fibrosis. Use of statins are to be encouraged as per guidelines on hyperlipidemia, as most of these patients have an indication for a statin. This is very important, as cardiovascular causes are a main reason for mortality in patients with NAFLD. Statins also appear to be beneficial across the spectrum of progressive NAFLD, up to the development of portal hypertension and HCC.

Prevention

Clearly, NAFLD is a disease unmasked by changes attributable to the modern lifestyle. Sadly, it is asymptomatic, and difficult to reverse when liver damage is established and patients present with symptoms. The duty of the current generation is to safeguard the future generation from this deadly illness. Public awareness about correct food habits like avoiding fast food and sweets is of paramount importance. The Importance of physical activity should be emphasized at every possible opportunity, while the value of maintaining the ideal body weight from childhood should also be reiterated. Moreover, legislation should be in place to stop the advertisement of such unhealthy food targeting children. Legislation should also be in place to stop offering these unhealthy food items and sweetened drinks to students in school cafeterias.

Conclusion

NAFLD is becoming a very significant health issue worldwide. Unfortunately, it has not received the same attention as other non-communicable diseases like ischemic heart disease or diabetes mellitus. Thus NAFLD is not included in most of the non-communicable disease (NCD) prevention programs worldwide. Currently, clear guidelines are in place on the management of NAFLD by primary care physicians and other care givers. Management strategies include prevention of the illness, lifestyle modifications, practicing healthy eating habits, encouraging physical activity, screening for high-risk patient groups for NAFLD and identifying patients with significant fibrosis and referring them to the liver physician, to consider liver directed therapy. Weight loss is the mainstay in treatment, but is however difficult for a majority. Pharmacological treatment is evolving rapidly and is reserved for patients with significant fibrosis, but is yet to be approved by any major regulatory authorities.

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Feeling Sad, Depression and Antidepressants

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Introduction

Globally, 3.8% of the population is affected with depression, and this includes 5.0% of adults and 5.7% of older adults above the age of 60 years (1). The lifetime prevalence of depression in Sri Lanka is estimated to be 6.6%, which is 11.2% when functional impairment is excluded (2). Even before the COVID-19 pandemic, which has further increased the mental health issues among people, mental health disorders posed a significant burden worldwide. In 2019, depression was the second leading cause of disability globally (3). Approximately a third of medical and surgical outpatients have a psychiatric disorder, with about half of these patients having depressive and anxiety disorders. Anandakumar et al., in their study, observed that 22.4% of patients attending the outpatient department in a tertiary care hospital in Sri Lanka was suffering from depression (4).

Depression is commonly associated with other medical co-morbidities like stroke, myocardial infarction, diabetes, and cancers, which highlights the importance of all medical professionals familiarising themselves with the condition. Although there are known, effective treatments for mental disorders, more than 75% of people in low- and middle-income countries receive no treatment. In countries of all income levels, people who experience depression are often not correctly diagnosed; another category of patients are often misdiagnosed and prescribed antidepressants unnecessarily. As depression is a common psychiatric condition and since these patients might be reluctant to come to psychiatric services, it is essential that non-psychiatrists are familiar with diagnosing and managing depression.

Is it depression?

Box 1:
Normal sadness
Grief (normal and abnormal)
Adjustment disorder
Bipolar affective disorder
Schizophrenia/schizoaffective disorder
Post-schizophrenic depression

We all feel sad and have felt sad, and this is not depression. The death of a loved one, loss of a job, or ending a relationship are difficult experiences to face. It is usual for feelings of sadness or grief to develop in response to such situations. Those experiencing loss often might describe themselves as being "depressed." Apart from 'feeling sad' as a part of normal emotions and depressive disorder, depressed mood can be observed in other psychiatric conditions (box 1). The management of some of these conditions differs from depressive disorders, and conditions like normal sadness, grief, and adjustment disorders may not need treatment.

Depressive episodes can be mild, moderate, or severe depending on the number and severity of symptoms and the impact on the individual's functioning. A person may present to a health care professional for the first time (depressive episode) or with a history of depressive symptoms in the past (recurrent depressive disorder) (5). The criteria to diagnose depression is given in box 2. The correct diagnosis must be made as the management will depend on the diagnosis and the severity.

Box 2: Diagnostic criteria
A
Depressed mood
Loss of interest and enjoyment
Reduced energy
B
Reduced concentration and attention
Reduced self-esteem and self-confidence
Ideas of guilt and unworthiness
Bleak and pessimistic views of the future
Ideas or acts of self-harm or suicide
Disturbed sleep
Diminished appetite

Mild: 2 from A and 2 from B
Moderate: 2 from A and 3 from B
Severe: 3 from A and 4 from B
Symptoms should last for more than two weeks.

In the Sri Lankan setting, the exact diagnosis of depression is further complicated by the various socio-cultural and educational factors. Sinhala and Tamil languages do not have specific terms to explain depressive symptomatology, which is a major issue encountered when interviewing patients.

When the three major criteria are considered in this context, some patients might directly come out with the symptom of sadness, while some may express their distress as aches and pains, heaviness in the head, burning of the body or disappointment. It is important to directly inquire about the prevailing mood as often patients misinterpret the question as "whether there is any reason to be sad?" "Anhedonia" or "loss of interest in usually pleasurable activities" may not be noticeable by the patients at all, and some may not have such "enjoyable activities that they can relate to". The patients will complain of various experiences like bodily weakness, generalized aches and pains, feeling faintish, inability to work and neglecting work at home when they are depressed rather than complaining of "I am feeling depressed" as in the Western countries. Reduced energy appears to be a more culturally acceptable symptom. Therefore, it is a common presenting complaint, particularly for those who are not mindful of their low mood or not willing to accept and report the symptom of feeling low. Therefore, in the Sri Lankan setting, common presenting complaints are sleep difficulties, changes in the appetite, tiredness, somatic complaints; commonly headache, aches and pains in the body, worthlessness, following deliberate self-harm and poor attention and concentration.

Important differential diagnoses that should be considered when someone presents with the above symptoms are stated in box 1. Being sad is not the same as having depression. Patients with adjustment disorders may present with feeling sad, worry, anxiety of gradual and prolonged onset. The severity of the response and impairment of functioning distinguish adjustment disorder from normal adaptive reactions (6). The adjustment reaction is related to and is proportionate to a stressful experience like a life-threatening illness diagnosis and job loss. The symptoms occur within three months of the stressor and resolve when removed. Grief is a natural state that shares some features of depression. Both grief and depression may involve intense sadness and withdrawal from usual activities. However, in grief, painful feelings come in waves, often mixed with pleasant memories of the deceased and self-esteem is usually maintained. In depression, feelings of worthlessness and self-loathing are common. In grief, thoughts of death are about "joining" the deceased, whereas, in depression, thoughts are focused on ending the life. Grief and depression can co-occur, and when they do, the grief is more severe and lasts longer than grief without depression. Remembering that a loss event may precipitate depression in predisposed people, it is important to clinically exclude the possibility of depression in a person presenting with grief and adjustment problems. Patients can be offered a follow-up visit to re-assess the symptom severity when in doubt.

When to treat and not to treat

Antidepressants (AD) are not indicated for mild depressive episodes unless the symptoms persist. In other countries, self-help with cognitive behaviour therapy is offered for patients with mild depressive symptoms. Managing bipolar depression can be challenging and requires optimizing the mood stabilizer and adding an AD when the depressive symptoms are severe. The AD can induce switching to mania or hypomania.

Depression can be caused and associated with medical co-morbidities. Hypothyroidism is a common cause for depression where not only correction of hypothyroidism but the treatment of depression is also vital for a good outcome. depression and diabetes have a bi-directional association, and vigorous management of both conditions improve the quality of life of the patient. Post-stroke depression decreases the overall recovery of the patients if not treated effectively with an AD.

The antidepressants

Commonly prescribed antidepressants in Sri Lanka can be categorized into four broad categories. A comparison of these classes of ADs and the side effects profile is given in tables 1 and 2.

1. Selective Serotonin Reuptake Inhibitors (SSRIs)
2. Selective Noradrenaline and Serotonin Reuptake Inhibitors (SNRIs)
3. Tri cyclic antidepressants (TCA)
4. Newer antidepressants

SSRIs are the treatment of choice for moderate depressive episodes. A clinically detectable response is observed in two weeks which the patient should be educated about. The side-effects are observed before the response, usually within a few days. The ADs should be continued for at least six to nine months following remission in the first episode, and the duration increases with subsequent episodes. It is important to observe for the emergence of manic symptoms in follow-up visits as the first episode of a bipolar affective disorder could be a depressive episode.

The common side effects of SSRIs are gastrointestinal disturbances, ejaculatory delay/ anorgasmia, and increased bleeding tendency. Hyponatraemia is a common side effect in the elderly, and the

symptoms may mimic depression. SSRIs are given in the morning as they can lead to insomnia. Most SSRIs are enzyme inducers that lead to drug interactions, and it is advisable to check for interactions before prescribing. If discontinued suddenly, patients can develop discontinuation, which may mimic depression or anxiety. Overdoses are relatively less harmful.

- Fluoxetine (available in the government sector) – Fluoxetine is the most used AD among clinicians. The maximum daily dose of fluoxetine is 20mg daily. The half-life is comparatively longer than other SSRIs, which is 5-7 days, with the half-life of the metabolite norfluoxetine being three weeks. It's the only antidepressant approved for adolescent depression. Fluoxetine can be used in pregnancy and lactation.
- Sertraline (available in some government hospitals) – Allows more flexible dose increments up to a maximum daily dose of 200mg. It's the preferred AD in depression following myocardial infarction, post-stroke depression, epilepsy, pregnancy, and breastfeeding. However, the AD should not be changed if the patient is stable on another AD which has been proven to be safe in pregnancy like fluoxetine or TCA. Sertraline can safely be used in liver and renal failure (7).
- Escitalopram/ citalopram (not available in the government sector) – Escitalopram is the active isomer of citalopram. The maximum daily dose of escitalopram is 20mg, and 40mg for citalopram. QT prolongation is a known adverse effect of both. It induces sleep in the majority. Since the liver enzyme induction is minimal, interactions with medications are sparse. Therefore, escitalopram and citalopram can be used in patients with liver impairment and patients on warfarin.
- Fluvoxamine (not available in the government sector) – The maximum daily dose is 300mg/ day. Gastrointestinal side effects with fluvoxamine are prominent. Emerging evidence supports use in post covid recovery.
- Paroxetine (not available in the government sector) – The maximum daily dose is 40mg/ day. It relieves anxiety symptoms in depression. Discontinuation symptoms, weight gain and sexual dysfunction, can be disturbing. Use in pregnancy should be avoided as it can induce foetal malformations.

The commonly prescribed selective noradrenaline and serotonin reuptake inhibitors (SNRIs) are venlafaxine and duloxetine.

- Venlafaxine – Venlafaxine is indicated in severe depression. Vasomotor symptoms and neuropathic pain associated with depression can be treated with venlafaxine. Immediate release formulation of venlafaxine has a half-life of six to eight hours, requiring twice a day administration and a maximum daily dose of 375mg. In contrast, the extended-release preparation has a half-life of 15 hours needing once-daily administration and a maximum dose of 300mg/ day. Doses above 150mg are known to elevate blood pressure and should be avoided in uncontrolled hypertension. Overdoses of venlafaxine can be cardiotoxic and sudden discontinuation can be distressing.
- Duloxetine - Maximum daily dose of duloxetine is 60mg/ day. It is preferred to manage neuropathic pain comorbid with depression (7).

Tri cyclic antidepressants (TCA) are the oldest ADs in current use and are indicated in the treatment of severe depression. They are rapidly absorbed with a high first-pass metabolism and is highly protein-bound. The half-life of TCAs averages around 24 hours. The side effect burden of TCAs is relatively high such as urinary retention, constipation, cardiac arrhythmias, seizures, postural hypotension, and sexual dysfunction. TCAs should not be used in severe hepatic impairment and epilepsy. Efficacy in younger ages is not proven, whereas side effects can be cumbersome in old age.

- Amitriptyline – Maximum dose of amitriptyline is 200 mg, and the sedating properties could alleviate insomnia. Depression in patients with neuropathic pain, migraine, and tension-type headaches will benefit from amitriptyline. Although the sedative properties are seen with lower doses like 25-50mg, higher doses are required for antidepressant action.
- Imipramine - Maximum dose of 300mg /d can be given in divided doses. Sedative effects are comparatively lesser.
- Clomipramine – Maximum dose of 250mg/d can be given. 5HT2C receptor antagonism helps in resolving depression as well as obsessive-compulsive disorder.

Another antidepressant that is commonly used is mirtazapine.

- Mirtazapine is a potent antagonist at several 5- HT2 and 5- HT3 receptors and is also a competitive antagonist at histamine H1 and α_1- and α_2 adrenoceptors. This unique receptor profile is efficacious in alleviating depression (7). A maximum dose of 45 mg/d can be given. Half-life is around 16 hours. Side effect burden

and the drug interactions are minimal with mirtazapine. Therefore, mirtazapine is more suited for elderly patients with hyponatremia, post-myocardial infarction depression, post-stroke depression, and antidepressant-induced sexual dysfunction. Sedation is an additional benefit, but weight gain and impaired glucose tolerance are the undesirable effects of mirtazapine.

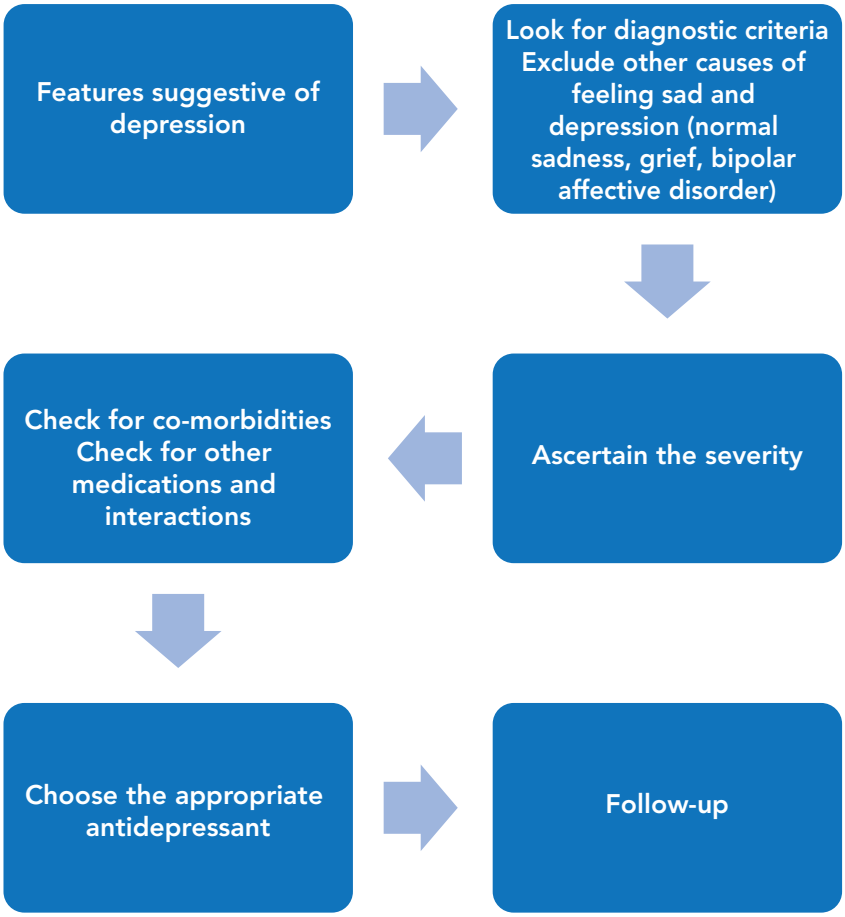
- Bupropion is a noradrenaline dopamine reuptake inhibitor with a maximum dose of 450mg/ Day. Lower doses are effective in smoking cessation, whereas doses above 300mg have antidepressant activity. Sexual dysfunction and weight gain are comparatively less. Bupropion should not be used in patients with epilepsy and eating disorders.

Table 1: Comparison of antidepressants

Antidepressant	Advantages	Disadvantages
Tricyclic antidepressants	Well-studied Efficacy well-proven Useful sedative effect	Cardiotoxic, dangerous in overdose Anticholinergic side effects Cognitive impairment Weight gain during longer-term treatment
SSRIs/ SNRIs	Lack cardiotoxicity, relatively safe in overdose Not anticholinergic No cognitive impairment Relatively easy to give an effective dose	Long-term toxicity not fully evaluated Gastrointestinal disturbance, sexual dysfunction May worsen sleep and anxiety symptoms initially Greater risk of drug interactions
Mirtazapine	Useful sedative effect	Weight gain is common Less well-established efficacy in severe depression

Table 2: Comparison of side effect profiles of antidepressants

Antidepressant	Sedation	Postural hypotension	Cardiac conduction disturbance	Anticholinergic effects	Nausea/ vomiting	Sexual dysfunction
Fluoxetine					++	+++
Sertraline					++	+++
Citalopram			+		++	+++
Escitalopram			+		++	+++
Paroxetine	+			+	++	+++
Fluvoxamine	+				+++	+++
Venlafaxine			+		+++	+++
Duloxetine					++	++
Amitriptyline	+++	+++	+++	+++	+	+++
Imipramine	++	+++	+++	+++	+	+
Clomipramine	++	+++	+++	++	++	+++
Mirtazapine	+++	+		+	+	



Always refer to a psychiatrist or obtain senior opinion when in doubt

The place of other medications

Lithium carbonate and thyroxine can be augmenting agents in treatment-resistant depression (7). ADs should never be used as a single agent in bipolar depression to avoid the risk of switching. ADs can be combined according to the receptor profiles of individual ADs, for example, venlafaxine and mirtazapine (7). However, the routine combination of ADs without evidence is discouraged, as this may lead to more side effects and serotonin syndrome.

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Plastic Waste: Do we do our due role as Doctors?

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How do plastics accumulate in official gatherings?

Plastic is considered as one of the inevitable side-products in many events these days. Despite being doctors, our daily routines and events are not an exception for accumulation of plastic waste. Plastic waste accumulates from various sources. Accumulation of plastic water bottles, plastic beverage bottles, plastic straws, plastic cups, plastic containers for ice cream and yoghurt, plastic lunch sheets, plastic lunch boxes, plastic spoons, plastic bags, plastic banners, plastic decorations and plastic conference bags etc., are mainly by the mismanagement of the plastic waste. Mismanaged plastic waste is defined as "plastic that is either littered or inadequately disposed of. Inadequately disposed waste is not formally managed and includes disposal of plastic waste dumps and disorganised landfills. Mismanaged waste could eventually enter the ocean via local waterways and be transported by wind or tides. Scientists have predicted that East Asia and Pacific regions and South Asia will be the leading regions in mismanaged plastic waste by 2025.

Why do we need to be concerned about plastic waste?

Plastic has been well recognised as one of the leading threats not only to humans but also to all living beings. Most of the people do not have a clear idea as to how plastic is being formed. Simple answer is that plastics originate from fossil fuels. Currently the plastic industry consumes nearly 6% from the global oil consumption and is expected to reach up to 20% by 2050. One of the major disadvantages in the production process of plastic is that it generates large amounts of greenhouse gases which lead to global warming. Use of plastic utensils contributes to ingestion of micro-plastics and lead to many adverse health consequences. The microplastics have now

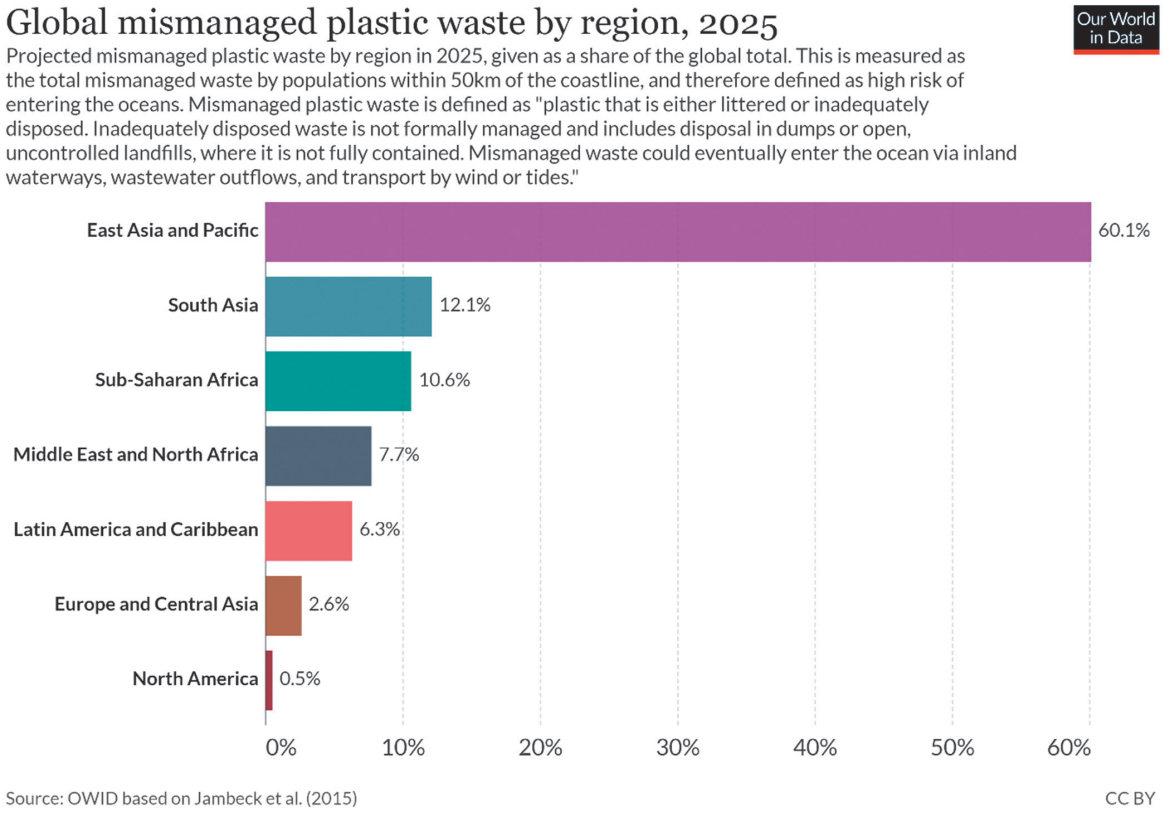

Figure 01: Global mismanaged plastic waste by region, 2025 (1)

already entered into human food chains (2). There is scientific evidence to confirm the entry of microplastics into the human body and even to cross the human placental membranes (3). Plastic accumulation makes waste disposal a greater challenge. Haphazard dumping of plastic waste makes the environment unsightly. Burning of plastic emits harmful substances. Obstruction of drainages by plastic leads to stagnation of water, mosquito breeding and even floods. Water collection in plastic containers increase the mosquito breeding habitats and increase the risk of mosquito borne diseases, especially dengue. When disposing garbage with polyethylene bags the animals are attracted towards the smell and the taste of it. With time the animals get addicted to the taste of the food in the garbage because it's an easy way of finding food without much effort. It's like an open buffet for animals. Therefore, the animals in the surrounding areas have completely changed their lifestyle. When the elephants smell food, it does not matter whether it is covered in plastics. They swallow everything together (Figure 02). The plastic waste is then trapped inside the intestine of the animals. None of the animals, including humans, have the ability to digest plastics. Therefore, the digestive tracts of these animals get blocked and leads to a painful death. Burial of plastic in agricultural land adversely affect cultivation. The buried plastic slowly release microplastics to underground water ways and then with time it joins the human food chain.

As doctors, why do we need to pay special attention in reducing plastic waste?

Although majority of doctors would be aware of the adverse consequences of plastic waste, what proportion of us have favourable attitude towards reduction of plastic waste? How many of us practice reduction of plastic waste in our day to day practice and be role models? How many of us encourage others to reduce plastic waste? As per the Meriam Webster Dictionary, the word doctor originates from the Latin word docere which means 'to teach'. The role of a doctor does not start only after someone falls ill. An ideal doctor will remove the causes that would make a person ill. This is similar to closing a leaky tap rather than keep on mopping a floor made wet by a leaky tap. Therefore, it's high time for all of us to improve our knowledge on minimising plastic waste, develop favourable attitudes and adhere to good practices.

Figure 02: Elephants looking for food in a garbage dump in Oluvil in the Ampara district (Photo credit – Dr Sajith Edirisinghe, April 2021)

As doctors, how can we contribute to reduction of plastic wastes?

There are many options available for us to reduce the plastic waste. Although it is impossible to provide an exhaustive list, we can discuss some easy to carry out approaches. Whenever possible take your own non-plastic bottle of water when you leave home. Avoid reusing the plastic bottles as this will harm you. Try to use glass or food quality stainless steel bottles. This will reduce a lot of plastic water bottles being added to the daily waste. Try to provide a water dispenser for those who do not bring water bottle with them rather than selling plastic water bottles. Use of glass or stainless steel or porcelain cups will be ideal. If it is not feasible to provide washing facility, use paper cups instead of single use plastic

cups.

In the last two decades, a conference head table have been perceived incomplete if plastic water bottles are not placed on the head table. These plastic water bottles should be replaced with either glass water bottles or glasses with water in a glass jar. As professionals, we should not act as unpaid ambassadors of plastic water bottle companies. If you have to serve packed beverages, prefer to use decomposable packs rather than polythene packs.

Similarly, if you are bringing a meal from home, try to pack your meal in plates or stainless steel or glass lunch boxes wrapped with cloth serviettes. If you happen to get food from a caterer, you can bring your own utensil to pack the food. Even if you happen to get food from a caterer, there are nice leak proof containers which would totally remove the need to use polythene or plastic wrappings. If the caterers are using plastic single use lunch boxes, encourage them to use paper boxes. Being a highly reputed professional in society, you have an important role in educating those who use plastic boxes. Nowadays, attractive cloth bags are available to carry your meal pack.

In recent years, use of single use plastic containers to serve snacks, fruit salad and other refreshments is becoming popular. Always, you can recommend replacing these with environment-friendly alternatives.

Which environment-friendly alternatives are available to replace plastic?

We have already discussed the use of glass or stainless steel or paper cups or packs to replace plastic. There are also many other environment-friendly alternatives available for you. Lotus leaf or banana leaf can replace polythene sheets. Utensils made of areca or kitul leaf can replace many single use food packings or plates or plastic spoons. Plastic straws can be replaced with bamboo stem or other plant products. One of the greater additions of plastic containers is from large ice cream containers and some companies serve ice cream in paper containers.

It's common for most of us to go to super markets without taking bags with us and to leave the supermarket with dozens of polythene bags. Reusable bags are available for as low as 50 rupees in almost all the supermarkets. Better to keep a couple of reusable bags in your vehicle to reduce or avoid the use of polythene bags. Instead of wrapping all vegetables and fruits in polythene bags, you can avoid using polythene in many instances by requesting the sales assistant to paste the weight tag directly on the fruits, say, in watermelon or pineapple. Encourage the supermarket staff to wrap vegetables using leaves rather than polythene.

If you wish to offer any gift to someone, rather than carrying the gift in a plastic bag, try to carry it in thick paper bag or in a reusable bag. We do not think spending an additional 50 rupees to get reusable bag would be difficult for a doctor. Such use of plastic alternative by a doctor will act as a form of strong motivation for many others.

Another common avenue for polythene bags to enter our homes would be when buying fresh fish from the fish market. If you bring buckets you can buy fish without use of any polythene bags.

How can we deal with polythene and plastic wrappers and containers that are part of the usual packing? You can try to buy a product that is wrapped in environment-friendly packings. If it is not possible, collect all such plastic and polythene and hand it over for recycling.

How can you contribute to reducing plastic waste in your workplace?

You can contribute to develop 'No plastic' or 'Green initiative' policies in your institutions and to form action groups. All the staff should be sensitised towards this initiative. As part of the standard operating procedure for functions, there should be guidelines in relation to reducing plastics. This should start from specifications for tenders and strict adherence during procurement. Use of polythene lunch sheets can be banned in the canteen. Facilities to get washed plates can be provided. Waste segregation facilities should be there to separate plastic waste. A Kaizen approach should be adhered to, in order to incorporate continuous development as and when needs arise. The head of the institutions or the designated officer should act proactively in ensuring adherence to these guidelines from the planning stage until completion of events.

Many of us believe that an event is impossible in the absence of a PVC banner. We are fond of printing PVC banners to publicise events, to create brand image, to convey appreciations or condolences, etc. Most of us fail to understand that these PVC banners are believed to take hundreds of years to decompose. How can we get rid of these PVC banners? Try to use alternatives. You can opt to use electronic promotion such as via social media and the web. You can use electronic screen servers instead of PVC banners. You can use cloth banners instead of PVC banners. If conference bags are to be given, replace the plastic bags with decomposable bags.

If you are working in a medical faculty, you can encourage medical

students to take up plastic reduction as one of their field health projects or community engagement projects. One of such groups of medical students facilitated production of plastic alternatives by the low income community to which they were allocated and liaised with the supermarkets in purchasing these products.

There are many more opportunities for you to reduce the use of plastic.

As medical professionals, we need to develop plastic recycling strategies in our institutions. There are many private sector plastic polythene collectors and recyclers registered at the Central Environmental Authority (https://www.cea.lk/web/?option=com_content&view=article&layout=edit&id=818). These organisations provide collection bins and it will bring a small income for the institute by selling the collected plastics. More than the income, it's a great service and contribution to the mother nation.

What's the way forward for you?

In summary the solutions can be elaborated as a "Six R" initiative. The Six R's are:-

Reduce - Reduce the use of plastic

Reuse - Reuse the plastic. Do not throw away

Recycle - Send whatever the plastic waste accumulated for recycling, even though it does not belong to you

Rethink - Rethink whether you really need that plastic before you buy

Refuse - Refuse plastics if you don't need them or if you have an alternative

Redesign - Think and redesign alternatives for plastics and take steps to recycle

Please consider how many of these approaches you adopt at your individual, family and institutional levels. Try your best to be a role model in reducing plastic waste at your own institution.

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Figure 03: One of the PET plastic bottles collection bin at Faculty of Medical Sciences, University of Sri Jayewardenepura

Dermatology Quiz

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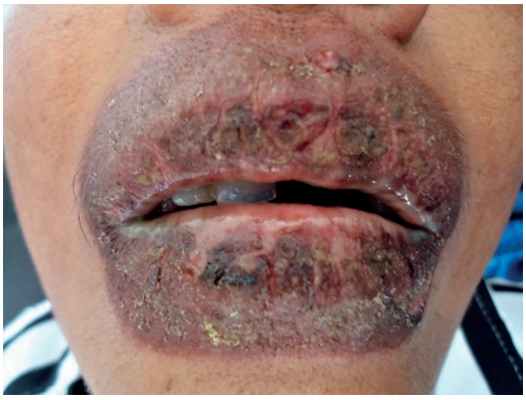
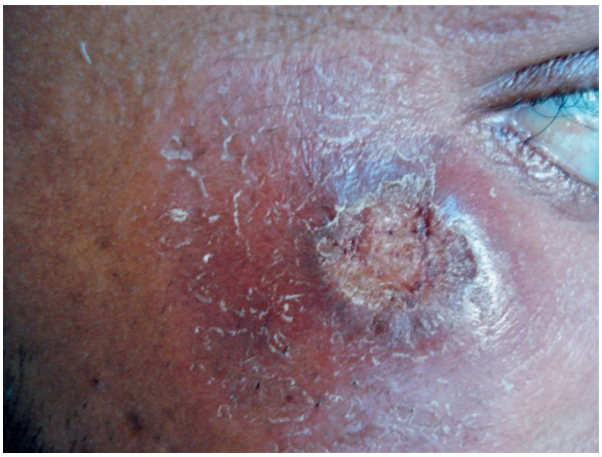


Case 1

A 33-year-old female presented with mildly itchy pigmented lesion around her lips one week after taking treatment for a cough and cold. There are no other skin lesions or involvement of other mucosal surfaces.

What is the most likely diagnosis?

1. Erythema multiforme major
2. Stevens-Johnson syndrome
3. Fixed drug eruption
4. Allergic contact dermatitis to lipstick
5. Herpes simplex virus infection

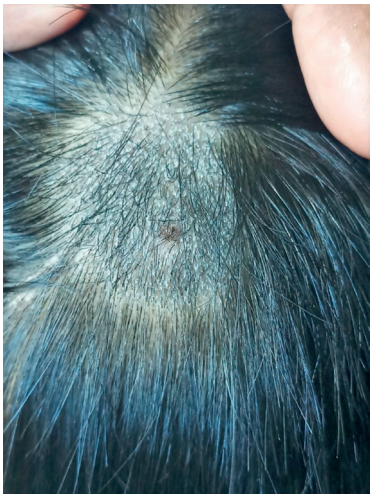


Case 2

A 27-year-old male from Meerigama presented with this painless nodule in the right temporal region for nine months duration. The lesion has started as a painless papule and gradually enlarged with scaling and crusting in the centre. Examination revealed an ill-defined, indurated nodule with central crust formation. There was no regional lymphadenopathy.

What is the most likely diagnosis?

1. Basal cell carcinoma
2. Cutaneous leishmaniasis
3. Cutaneous tuberculosis
4. Squamous cell carcinoma
5. Deep fungal infection

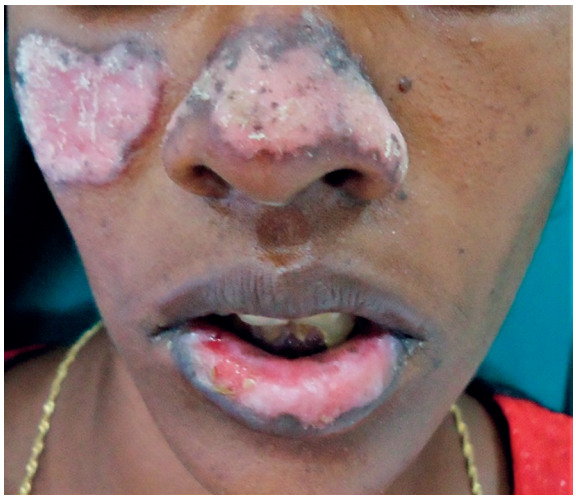


Case 3

An 8-year-old male presented with this itchy lesion on the scalp for 3 weeks. He had been prescribed Cetrimide shampoo with no effect. On direct questioning his mother admitted that the son was very fond of animals and kept a variety of pets at home.

What is the most likely diagnosis?

1. Tinea capitis
2. Seborrhoeic dermatitis
3. Kerion
4. Scalp psoriasis
5. Naevus sebaceous

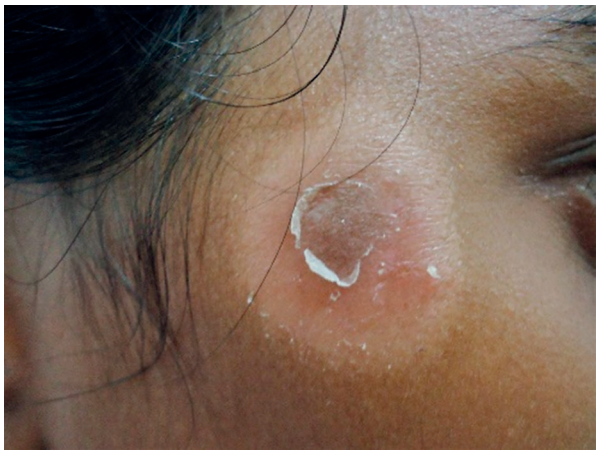


Case 4

This 32-year-old female has been suffering from these lesions for the past 18 months. She has noticed similar lesions in the forehead and the front of the chest. She admits that the lesions become worse following sun exposure. There is no history of joint pain, recurrent fever or oral mucosal involvement.

What is the most likely diagnosis?

1. Acute Systemic Lupus Erythematosus
2. Subacute lupus
3. Discoid lupus erythematosus
4. Photodermatitis
5. Squamous cell carcinoma

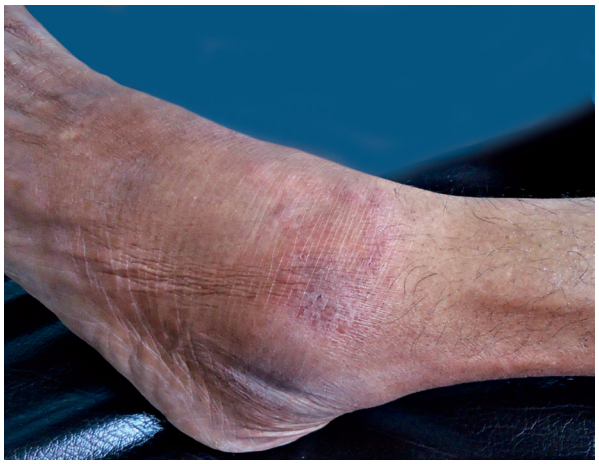


Case 5

This 13-year-old girl presented with mildly itchy, scaly lesions over both temples of one month's duration. She denies using any face creams, except for occasional use of baby cream. Her father is an asthmatic. Examination revealed ichthyosis vulgaris of both legs.

What is the most likely diagnosis?

1. Pityriasis versicolor
2. Leprosy
3. Photodermatitis
4. Cosmetic allergy
5. Vitiligo



Case 6

A 47-year-old lady presented with this dry patch of skin in the left ankle and lower leg for more than one year. The lesion is not itchy and there is no history of atopy. On direct questioning she admitted that she feels an abnormal sensation within the lesion. She also claims that she feels a severe pain when the left ankle hits against any firm surface.

What is the most likely diagnosis?

1. Eczema
2. Tinea infection
3. Footwear contact dermatitis
4. Leprosy
5. Psoriasis

Answers to Dermatology Quiz - Page 28 ⟶

BEYOND MEDICINE: Doctors as Entrepreneurs

Dr. Dayan Rajapakse

MBBS, MBA, MBCS, MCS, Fellow of Kingston University
Founder, Chairman & Managing Director - ESOFT Group

1. With a background in medicine, what inspired you to choose the IT and education field?

As a qualified medical doctor, this switch was not a planned one. However, I already had an early exposure to the Information Communication Technology (ICT) field with an international diploma (NCC-UK) and a degree equivalent qualification too (BCS) even before pursuing my MBBS. Though I got through medical college with an MBBS as my father wished, I was always good in mathematics and very passionate about ICT, teaching and the education sector. Ultimately, these reasons led to my career switch and the start of a new journey in the education field.

2. How supportive has your family been to your time consuming venture? How was the reaction of your father, who is a medical doctor himself, to your career change?

My wife Manuja gave up part of her profession as a practicing lawyer and took care of the family. She gave me the positive energy to face failures and challenges. My Father was very disappointed at the early stages of the business, but gave all the support that I expected from him, when I needed it most.

3. What was your vision, objectives and plans for establishing an Educational Institute?

When the institution was established back in 2000, there were no plans to become a large educational body in Sri Lanka - as it is today. I set it up with the key objective of introducing ICT education to the masses across the island and providing equal learning opportunities to all students - including those in rural areas. This connects with me because as a student I had to come from Kurunegala to Colombo for higher education. Hence, I decided to bring a positive change for everyone in the country with equal learning opportunities.

4. Your Education Institute continues to have a remarkable journey since its inception with extraordinary milestones. How has this journey been for you?

It has been a very enjoyable and interesting journey

with many challenges. However, the challenges did not limit us, but kept us going. We started branching out with the first branch in Kurunegala in 2005, then in Kandy followed by the Northern and Eastern provinces after the war. As a passionate entrepreneur, I enjoyed travelling around the country to meet and work with different people and communities to share my knowledge and experience with them. The entire journey has been a great and empowering one for me.

5. As an experienced and exemplary business leader, what is your view of entrepreneurship and today's business world?

The present business world is challenging for an entrepreneur due to established and competitive big names in each market and industry. However, with the right attitude, perseverance, passion and patience to find solutions despite failures – you can become successful. Entrepreneurship is not an overnight success and not giving up makes all the difference! This is how I captured the company's short-term vocational

market after failing for 5-6 years continuously. I never gave up and waited for my time to shine - and it happened! This entrepreneurial character is needed to succeed in business.

6. Tell us something about your medical career. Did you work as a doctor?

Yes, I worked as a doctor but not for long. I graduated from the Colombo Medical Faculty in 1999, completed my internship and got my appointment in 2001. I served as a doctor attached to the ICU of Polonnaruwa General Hospital till 2006. During this period, it was overwhelming to handle two very responsible career paths and a hectic lifestyle. I had to make a career choice and hence I gave up medicine and chose to pursue my true passion and see my brainchild grow into a successful educational body serving the country.

7. The unforeseen COVID-19 pandemic has created a new normal worldwide. How did your company handle this challenge?

Though our operation came to a complete standstill, within 2-3 weeks our institution was equipped with the required distance learning technologies and tools with remote staff training. The pandemic was a blessing in disguise for us to explore new opportunities with improved systems and technology. A digital learning platform and a Digital Campus mobile app for flexible learning from anywhere, anytime were introduced. Overall, we became a stronger market player with accelerated growth across all courses.

8. What was your take from medical training and work experience for your entrepreneurial journey?

Medical training is one of the most prolonged programmes in the country. It is beyond textbooks and exams. As medical students, we visit hospitals, interact with patients, hospital staff and treat patients with compassion. Each lecturer and consultant has inspired me to build ethical and professional values like integrity, responsibility, taking rational decisions, handling stress and managing time. The overall experience from the training as a doctor has helped me set up and grow my company. I am grateful that I was able to apply that experience in the corporate business world.

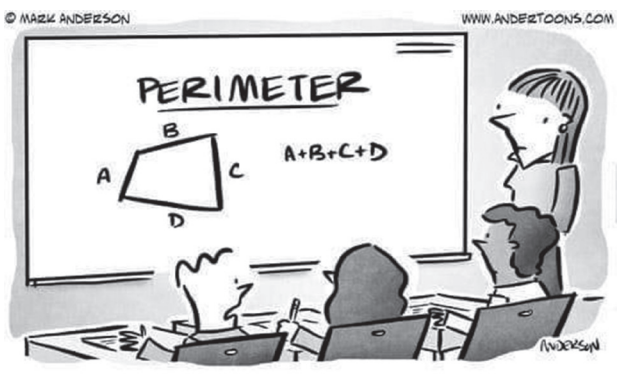
9. In a nutshell, what are your future plans?

As a leader in the higher education market and being gazetted as a non-state university in 2019, We as an educational institute have a big responsibility, with this recognition, I aim to explore the opportunity both locally and internationally to build infrastructure, introduce new qualifications and partner with many other reputed international brands to provide a new and meaningful learning experience for local and international students. I'm certain that Sri Lanka can become a knowledge hub for international students in the future. I am also considering offering MBBS programmes in the years to come.

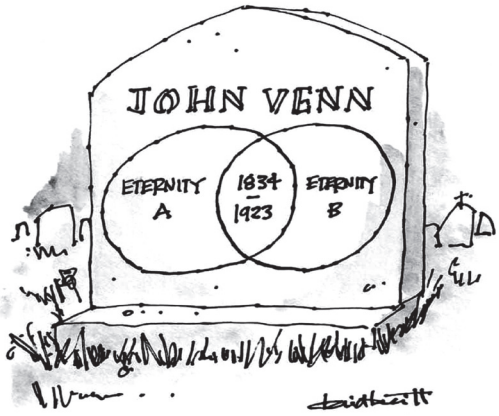
My future ambition and hope is to bring a change to my country.

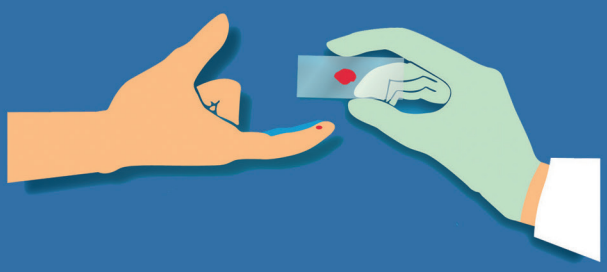
10. What is your advice to medical students / doctors who wish to make a career switch and become successful entrepreneurs?

Firstly, if you have a strong interest in a business idea, be very clear about what you want to do. You can be an entrepreneur in the medical field or can practice medicine whilst following a hobby in the form of a side-business. I developed the company with my medical knowledge and training whilst applying common sense when needed. Hence, I'm confident that any aspiring medical student or doctor has the needed knowledge, intelligence and capability to become a successful entrepreneur. I warmly welcome and encourage doctors to enter the business world.



"Or you could just walk around the edge and let your fitness tracker tell you the distance."





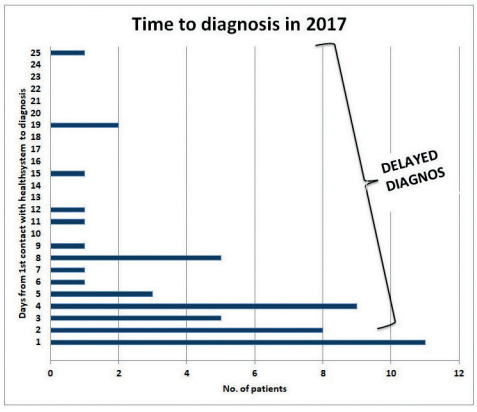
Reduce the Delay in diagnosing imported Malaria

Every single day that a malaria patient is left untreated,

* **His/her chances of survival decreases, &**

* **He/she can transmit the disease to others & re-introduce malaria to Sri Lanka**

Therefore malaria should be diagnosed within 24 hours of onset of fever



Your role:

For all fever patients, always check **travel history** at first interview. If patient has travelled to a malaria endemic country recently, **test for malaria.**

Anti Malaria Campaign Headquarters
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Elvitigala Mawatha, Colombo 05
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Email : antimalariacampaignsl@gmail.com

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Answers to the Dermatology Quiz

Case 1:

Answer: 3 fixed drug eruption

Fixed drug eruption is characterised by the appearance of darkly pigmented/ black lesions following the ingestion of certain drugs including paracetamol and some antibiotics. The lesions are fixed in site, recurring in the same site after subsequent exposure. The lesions are well defined, darkly pigmented and may be bullous, especially after repeated exposures. Mucosal areas like lips and genitalia are areas of predilection. The pigmentation may take a long time to fade.

The absence of involvement of other mucosal surfaces or rest of the skin help to exclude erythema multiforme and Stevens-Johnson syndrome.

Case 2:

Answer: 2 cutaneous leishmaniasis

The features favouring a diagnosis of cutaneous leishmaniasis are

- The residence of the patient (there are new endemic pockets being identified within the Western Province)
- Lesion in an exposed location
- Initial appearance of an acneiform lesion
- Slow, gradual progression
- Asymptomatic nature of the lesion
- Surface scaling and central crust formation
- Induration of the entire area of the lesion

Even though the location of the lesion and the edges may suggest the possibility of basal cell carcinoma the young age and the relatively short duration of the large lesion are against a diagnosis of BCC.

It is important to consider leishmaniasis in the differential diagnosis of skin nodules as the incidence of leishmaniasis in Sri Lanka is increasing and more areas of the country are becoming endemic areas.

Case 3

Answer: 1 tinea capitis

Tinea infections of the scalp are commonly seen among young children, accounting to about 20% of superficial fungal infections in children. Microsporum gypseum and Microsporum canis are the commonest organisms causing tinea capitis.

This picture shows a typical Gray-patch ringworm, an ectothrix infection of hairs of the scalp. Gray patch refers to the scaling with lack of inflammation. Hairs in the involved areas assume a characteristic dull, greyish, discoloured appearance. Infected hairs are broken and shorter.

In comparison kerion will show pustular infections of contiguous hair follicles with severe inflammation forming soft boggy masses which may be mistaken for bacterial abscess formation.

It is important to diagnose tinea capitis early and start treatment with oral antifungal agents as delay in treatment may result in scarring alopecia.

Case 4:

Answer: 3 discoid lupus erythematosus

Discoid lupus is the chronic form of cutaneous lupus. There is a female preponderance and only about 1 to 6% will progress into overt SLE.

Lesions typically occur in sun exposed areas as nodules or plaques. The scalp (vertex and area just above the ears) and mucosal surfaces like lips and eyelids may be involved. The typical features of a well-established lesion would include pink/ erythematous centre with scarring, follicular plugging and scaling. The edges would be black or darkly pigmented.

Lesions in the scalp and lips may show transformation into squamous cell carcinoma if left untreated.

Case 5:

Answer: 3 photodermatitis

The features favouring a diagnosis of photodermatitis include: the involvement of the upper face, hypopigmented scaly, dry lesion with central hyperpigmentation and the association with dry skin and atopy. Pityriasis alba, another form of UV induced dermatosis occurring in younger children will show less scaling and the lesions will be less well defined.

Case 6

Answer 4: leprosy

This is a long standing non-itchy lesion which is well defined. Dryness of the lesion and the areas of redness within the lesion are clearly seen. In hair bearing areas loss of hair within the lesion may be apparent. Testing for sensation within the lesion will show that sensation is lost or impaired, sometimes a thickened sural or superficial peroneal nerve may be palpated. The "tap sign", deep pain when tapping on a leprosy patch overlying a bony prominence, is usually positive.

Checking for sensation in any hypopigmented or dry lesion is extremely important. You may use a toothpick, ballpoint pen or a piece of paper folded twice to form a point as the instrument. Explain to the patient about the need to concentrate on what they can feel. Use the tool on apparently normal skin to ensure that the patient understands how the tool is felt. Ask the patient to close the eyes and to point out or count when he/she feels the tool. If the patient can point out when you are touching the area involved ask to compare how it is felt within and outside the lesion.

Loss of or reduced sensation within a hypopigmented lesion is considered a cardinal clinical sign in leprosy and is a criterion for the diagnosis of leprosy.

Sri Lanka Medical Association
Call for Applications

Deshabandu Dr C. G. Uragoda Memorial Oration on the History of Medicine - 2023

This Lecture was established in the year 2012, the 125th Anniversary Year of the Sri Lanka Medical Association (SLMA), to mark the meeting attended by a group of doctors at the Colonial Medical Library in Colombo on 26th February 1887 to discuss the formation of the Ceylon Branch of the British Medical Association. The Ceylon Branch later became the Sri Lanka Medical Association.

The lecture was renamed the Dr. C. G. Uragoda Lecture on the History of Medicine in the year 2017 to honour the lasting contribution made by Dr. C. G. Uragoda to document the History of Medicine in Sri Lanka. In 2020, on the demise of Dr. Uragoda, the Council decided to elevate the lecture to that of a Memorial Oration and also to add his national titular honour Deshabandu to the title of the Oration.

The event takes place on the 26th day of February every year.

Applications are called for the oration to be delivered on 26th February 2023. Applicants should submit a short abstract of the proposed lecture (no more than 500 words, font size 12 in Times New Roman with single spacing and margins set at 0.6 inches right round) and a brief curriculum vitae (no more than 3 pages of identical settings as above).

The applicant should have been significantly associated with and contributed to the field of medicine in his/her chosen topic.

The SLMA wishes to encourage orations in areas of medicine that have not been covered in previous years. A list of past lectures can be found on the SLMA website - http://www.slma.lk. Applicants should bear in mind that they must make themselves available to deliver the lecture on 26 February 2023 at the SLMA Auditorium as this is an oration scheduled to mark the founding of the SLMA.

Applications should be submitted to the Honorary Secretary, SLMA, on or before 31st May 2022.

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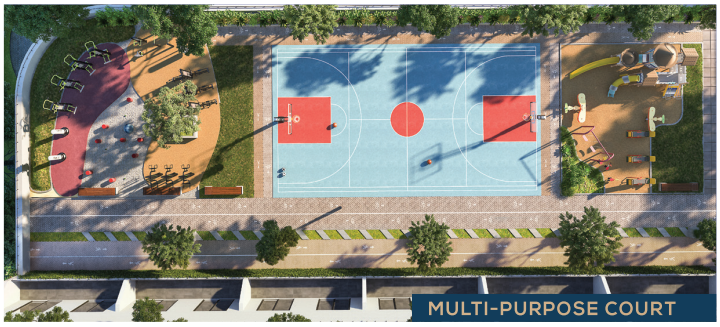
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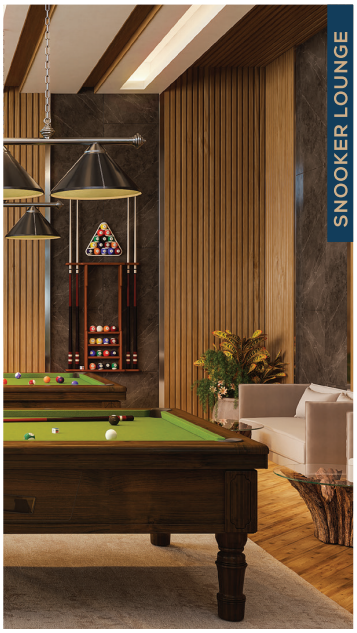
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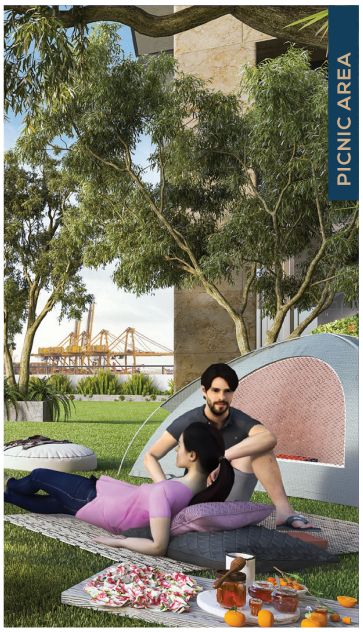

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