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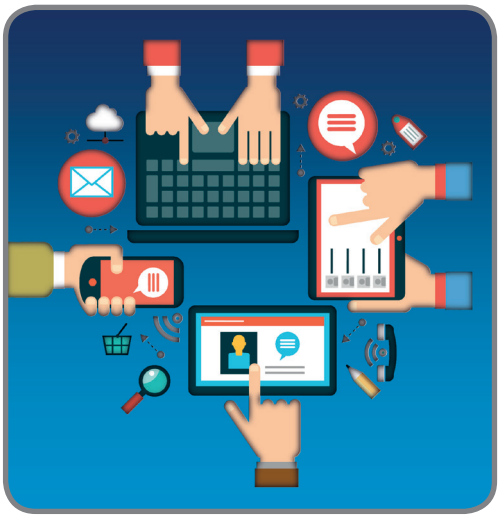

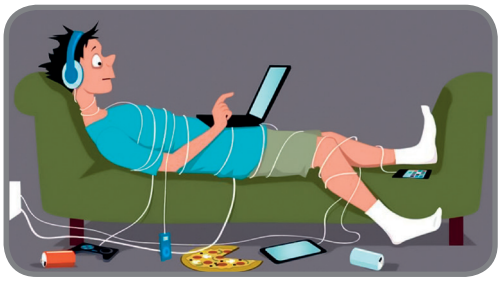

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Cover Story

An approach to management of clinical presentations resulting from digital overdrive

ANNUAL CHILD ART CREATION ORGANISED BY
SRI LANKA MEDICAL ASSOCIATION

THEME: WHAT MAKES ME HAPPY?

SHOULD INCLUDE

Full Name
Age
Grade
School
Home address
Parent Contact Number

Drawings need to be certified by principal or class teacher as original creation of the child. The drawings should not be copied from internet or any other source.

Age : From **Pre-School to Grade 10** (Each Grade is recognised as a category)

Colouring Medium : **any medium** Paper Size : **A4 Paper**

One child can submit up to **maximum of 2** drawings.

All drawings need to be sent **ONLY** by post or hand delivered to
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No. 06, Wijerama Mawatha Colombo 07.

Submission Deadline on 30th April 2023

For more information: 011 269 3324 | office@slma.lk

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SLMA President

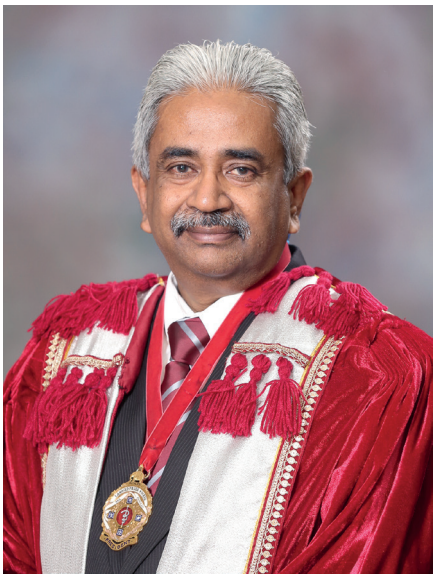
Dr Vinya Ariyaratne
MD, MPH, MSc Com. Med. MD Com, Med., FCCPSL
Specialist in Community Medicine,
Past President of College of Community
Physicians of Sri Lanka,
President of Sarvodaya Movement

President's Message

Dear SLMA Members,

In March this year, the Sri Lanka Medical Association (SLMA) successfully completed the first quarter of the year with a plethora of activities ranging from Monthly Clinical Meetings, Expert Talks, Media Briefings, Public Awareness Campaigns and advocacy on key health issues.

The month of March has been a busy one for the SLMA. As mentioned in the February issue of the Newsletter, action by the SLMA to address the issue of shortages of medicines, reagents and devices, took priority over other interventions. In consultation with the Intercollegiate Committee of the SLMA, we constructively engaged with the Ministry through the weekly meetings chaired by the Director General of Health Services (DGHS) to finalize the list of medicines and the quantities required. Following up on the SLMA Council's decision to initiate public interest litigation on the alleged irregularities that have taken place in the procurement of drugs under the Indian Credit line, the SLMA filed a Complaint with the Human Rights Commission (HRC) as the first step in the public interest litigation process on the issue of shortages of medicines in the country. In the first two hearings convened by the HRC, the two key respondents; the Ministry of Health and the National Medicines Regulatory Authority (NMRA) were not fully represented although summons had been issued to all parties, including the SLMA, to be present at the inquiry. However, on the third occasion, all parties were represented, and the inquiry



is proceeding. The entire process is part of implementing SLMA's mandate to "to serve the profession – serve the Nation". I firmly believe that, in addition to safeguarding public interest, the SLMA has a moral duty to stand by the doctors who continue to provide health services under tremendous resource constraints, particularly at a time when the risk of large numbers of health personnel migrating to other countries has become a serious threat to the smooth functioning of the absolutely essential health services.

We had a successful in-person meeting of the Intercollegiate Committee members and efforts are now underway to develop a common plan for all Colleges, Societies and Associations in the medical profession to address the key issues in the health sector. In this quarter, we were also able to hold Regional Meetings in the Southern and Eastern Provinces. These in-person Regional Meetings took place after a lapse of 3 years. They were well attended, both physically and virtually.

At a national policy level, SLMA continued to engage with the Ministry of Health through various committees including the National Health Development Committee (NHDC) and the National Health Research Council (NHRC). The SLMA Committee on Road Traffic Crashes engaged with the Presidential Secretariat, and Ministries of Transport and Education on the alarming rise of road traffic crashes which continues to be a major public health issue.

An important engagement of SLMA during the month of March has been on the issue of Health Financing. It is very clear that the current economic crisis is affecting the health sector negatively and even disproportionately. Sustaining Universal Health Care (UHC) for the population, particularly the marginalized and vulnerable groups, is a critical challenge with out-of-pocket expenses rising to an alarming level amongst all socio-economic categories. The Ministry of Health, with the technical support of the World Health Organization (WHO), initiated a consultative process on sustainable financing options for Sri Lanka and SLMA was an active participant in the deliberations.

Collectively all these actions are positively contributing to achieving our goals for this year under the theme "Towards Humane Healthcare; Excellence, Equity and Community".

Dr Vinya Ariyaratne
President SLMA.

Activities in Brief
(16th February 2023 - 15th March 2023)

SLMA Saturday Talks

18th February

'Toxidromes for the Junior Doctor' by Dr Shehan Silva, Senior Lecturer in Medicine, University of Sri Jayawardenapura

25th February

'Catatonia: Lessons to Learn' by Dr Amila Isuru, Senior Lecturer in Psychiatry, Rajarata University of Sri Lanka

4th March

'ABC in Lipid Lowering Therapy' by Professor Chamara Dalugama, Professor in Medicine, University of Peradeniya

11th March

'Critical Limb Ischemia: Getting the Basics Right' by Dr Thushan Gooneratne, Senior Lecturer, Department of Surgery, University of Colombo

Other Activities

16th February

The SLMA Expert Committee on Medical Rehabilitation organized a lecture on *'Novel Therapies in Parkinson's Disease Rehabilittaion'*. by Dr HHN Kalyani, Senior Lecturer, Department of Allied Health Sciences, University of Colombo

17th February

A Therapeutic Update Lecture on the topic *'Acute Coronary Syndrome: Cost Effective Management during the Economic Crisis'* by Dr Disna Amaratunge, Consultant Cardiologist Teaching Hospital, Kalutara.

21st February

A clinical meeting was held with the collaboration of the Sri Lanka College of Haemotologists on the theme, *'Paroxysms of Dark Urine: Approach to diagnosis & Management'*.

Dr Neelawathura Bandara, Acting Consultant Clinical Haematologist, GH Gampaha, Dr Omega Wickramasinghe, Acting Consultant Clinical Haematologist, TH Kurunegala & Dr Thamudika P Vithanage, Acting Consultant Clinical Haematologist, BH Panadura were the resource persons.

24th February

The first Expert Talk on *'Latent TB Infection (LTBI)'* was organized by SLMA in collaboration with the NPTCCD, Sri Lanka College of Pulomonologists and Sri Lanka College of Microbiologists.

The topics and resource persons were as follows;

'Latent TB: Programmme Implementation in Sri Lanka' by Dr Onali Rajapakshe, Consultant Community Physician, NPTCCD, *'Latent TB Definition, Diagnosis & Treatment'* by Dr Bandu Gunasena, Consultant Respiratory Physician, *'Latent TB infection in patients with CKD and retroviral infection'* by Dr Neranjan Dissanayake, Consultant Respiratory Physician, *'Latent TB Infection in patients taking Immunosuppressive Treatment and silicosis'* by Dr. Bodhika Samarasekara, Consultant Respiratory Physician, *'Latent TB in solid organ and Haemopoetic stem cell transplantation'* by Dr Eshanth Perera, Consultant Respiratory Physician and *'Investigations in LTBI'* by Dr Chintha Karunasekara, Consultant Respiratory Physician.

26th February

Deshabandu Dr CG Uragoda Memorial Oration 2023 on the The History of Medicine was delivered by Dr Kapila Jayaratne, on *'Counting and Reviewing Maternal Deaths: A Journey towards Supremacy'*

27th February

A joint Regional Meeting was held by SLMA in collaboration with RDHS Office Galle & Galle Medical Association

The theme for the regional meeting was *'Managing Common Presentations at Primary Care Level: A Brief Guide for Experts'*

Dr Malik Fernando, Past President, SLMA/ Member Snakebite Committee and Dr Kasun Fernando, Member Snakebite Committee spoke on *'Don't Mess UP with Serpents: Managing Snakebites'*, Dr Nayana Liyanarachchi, Consultant Paediatrician, TH Karapitiya on *'Rising Temperature: Managing a Child with fever and febrile fits & Help them breath free: Management of acute exacerbation of asthma in a child'*, Dr. Sajiv de Silva, Consultant Physician, BH Balapitiya on *'Common is Common: Managing a Patient coming with Chest Pain'* and Professor Lanka Dassanayake, Professor of Obstetrics & Gynaecology, TH Mahamodara on *'It's Hard to be a mom: Managing Hyperemesis Gravidarum & Other common obstetric complaints'*.

1st March

Dr Vinya Ariyaratne President, SLMA attended a discussion on the issues faced in Hospitals due to the severe drug shortages in the country Ada Derana, *'Aluth Parlimenthuwa'*

7th March

Collagen sheets used for patients with burns were handed over to Dr Gayan Ekanayake Consultant Plastic and Reconstructive Surgeon, NHSL by Dr Sajith Edirisinghe, Hon Secretary SLMA. This was a donation through the SLMA Relief Fund.

9th March

The first physical meeting of the SLMA Intercollegiate committee was held at Cinnamon Lakeside Hotel with the participation of representatives of many colleges and associations. The issues discussed were on six key areas;

Major clinical disciplines, sub specialties, Laboratory services and diagnostics, Public health/ administration, Bioinformatics and workforce/ human resource.

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An approach to management of clinical presentations resulting from digital overdrive

BLJ Mendis[1] HL De Silva[2]
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[2]MBBS, DFM, MRCGP[INT], MD(Family Medicine), FRACGP, Department of Family Medicine, University of Sri Jayewardenepura

Digital domination is the most felt effect in all human enterprise. Pixel effect on the retina has potent influence on the brain. The initial section of this article outlines the pathophysiology of digital overuse. This approach will facilitate the understanding of the methods of managing diverse clinical presentations of digital overuse.

Working Hypothesis

Digital addiction works like other addictive conditions. Serotonin and dopamine are neurotransmitters that play important roles in regulating mood, emotion, and behaviour. Serotonin is associated with feelings of happiness and satiety, while dopamine is linked to pleasure and reward.

Salience (know the importance of something), initiation, navigation, and conclusion are normal responses mediated via optimal dopamine levels. Too much or too little dopamine, can cause problems. Continued dopamine drive causes dysregulation in the ability to feel satisfied (satiety). (1)

Optimum serotonin levels in the brain results in satisfaction and contentment. This helps to avoid overeating and seeking unhealthy food after eating. When serotonin spikes excessively, it competes with the dopamine drive for reward, leading to a dysregulation of the satiety mechanism. This contributes to binge-eating, addiction, and other compulsive behaviours overriding natural satiety signals. (1)

Therefore inattention, impulsivity and hyperactivity are only symptoms of this underlying dysregulation. (2) This simulates attention deficit hyperactive disorder (ADHD) because executive empathic pathways starting in the dorsolateral prefrontal cortex have been overiddenì by the repetitive, reflexive, reactive, stress survival pathways of the ventromedial prefrontal cortex (PFC) in response to input from amygdala, hippocampus, and hypothalamus. (1,3)

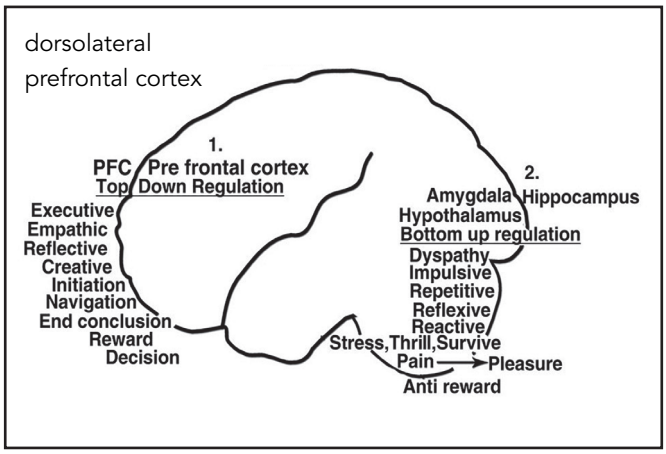

Figure 1: Decision making. Shifting from empathic and executive to stress behaviour. *Copyright: Lalith Mendis. Director, Colombo Empathic Learning Centre, Colombo. Sri Lanka.*

Digital addiction causes a cycle of decreased function of reward pathways and excites anti-reward pathways, resulting in compulsive use of digital games. In the short term excessive digital gaming and cartoons results in improvement of the reward pathways. However, in the long term, the neurochemical dysregulation worsens, leading to hormonal stress responses and dysfunction of the reward pathways. (decreased dopamine and opioids, increased cortisol activity). (2)

Dopamine (D1) receptors are overcharged by screen pixel stimulation causing poor working memory. (Figure 2) D1 receptors function best in a limited middle range of dopamine concentration. Too low causes apathy; too high causes impulsivity. Therefore, increased dopamine, noradrenaline and cortisol in the brain inhibits executive and empathic functions of the PFC resulting in impulsivity, inattention, and hyperactivity. Heavy smart phone use develops the left side of the brain, leaving the right side underdeveloped. Failure to develop the right side of the brain, linked with concentration, results in inattention and poor memory, and in many as 15% could lead to early onset dementia. (4,5).

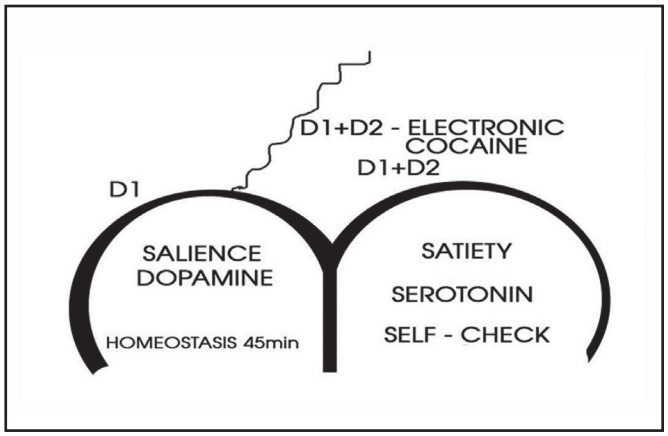

Figure 2: *Salience to satiety - default mode network. Copyright: Lalith Mendis. Director, Colombo Empathic Learning Centre, Colombo. Sri Lanka.*

Clinical presentations

- Inattention – attention span is shortened and shallow. The student does not realize that he/she is not absorbing at the depth he/she should. (6)
- Hyperactivity and impulsivity lead to dangerous experiments, Dare and do. Thrill and peril seeking becomes a way of life. Multitasking is a part of the problem.
- Fatigue (chronic fatigue syndrome) – commoner in girls and is a result of dopamine depletion. Sleepy and disengaged in the classroom.
- Insomnia - Sleep is disturbed with melatonin suppressed with screen use after dusk
- Self-hate – Self-hurt (4)
- Snapchat dysmorphia
- Food fads – anorexia
- Overdriven fight, fright, flight which is pathological due to adrenaline and cortisol excess
- Medical conditions - Obesity – serotonin based appetite abuse, steatosis of liver, childhood migraine, abdominal migraine. Low immunity results in easily catching infections. (7) (8)

A clinical encounter – a narrative

A fifteen year old girl, due to sit for GCE O/L, middle child in the family, was brought by her dad. Intensely loves her future role as a famous writer and reads fantasy fiction, and hates her present role. "She has lost purpose in life", was the unusual presenting "symptom". Perhaps brighter than the other two siblings, with parents well placed in life, hard working in senior management. She appeared non-engaging and head lowered to avoid eye contact and direct speech. Parents had taken her for three previous consultations. At one such consultation, parents were advised to allow her to plan and manage her life.

The following questions were posed.

Q: What's the subject you like best?
A: I hate all my subjects; I don't like anyone of them.
Q: What do you hope to become?
A: Writer
Q: What do you write?
A: Fiction
Q: Have you published?
A: Yes online
Q: Do you like to publish in a national newspaper?
A: No. I have a better readership online. Father interjects re her digitalised state.
Q: What time do you go to sleep?
A: There's no generalization like that
Q: How much of sleep do you get?
A: Depends. (shows her distaste)

The graphics on the Thrive Success Reward Tract (TSRT) and Survive Stress Antireward Tract (SSAT) were shown. These are names which have been coined to attract the Generation Z and make them aware of their problem.

Generation Z is the first genuinely digital-native generation. They have grown up with smartphones, social media, and on-demand entertainment. They are more diverse, socially aware, and skeptical than any previous generation.

The graphics and the scientific exchange attracted her. She was now willing to engage in the dialog. Then she was introduced to Prof. Howard Jenner's functional brain tracts concept. (4) How excessive stimulation of expressive kinaesthetic, auditory, visual tracts will dumb down her creative empathy was explained. Now she was attentive. After 40 minutes, I was able to work out a forward plan together with her and dad.

Six components of effects of digital stimulation

1. Time length of exposure to LED screen – more than 45 min
2. Pixel per inch (PPI) of smart phone
3. Rate of pixel change in frame
4. Intensity and variability of sound and colour
5. Time of exposure - effect is more after dusk
6. Multitasking

Five Key Laws

1. Reduce screens after dusk (melatonin, memory and sleep is disturbed)
2. Breaks after 45 min of screen. Avoid looking at the

screen continuously. Avoid working with LED lights. 4K screen's simulant effect is high.

3. Keep attention span for 45 mins – Avoid multitasking on social media while studying.
4. No screen use at mealtimes
5. No screen before 3 years (Recommended by the American Paediatric Association)

Reduced Learning

Learning from digital screens rather than black and white prints reduces memory, recall, collation, connection, and application while, dysregulating the dopamine serotonin balance. Learning management and planning becomes inhibited.-

Components of executive control

1. Child learns initiation and hears approval – if not applies to nothing.
2. Child plans the crawl or steps – mentally marking progress plan.
3. Child considers others – empathy (if not there's no regard to another's discomfort or damage)
4. Child avoids risks or distractions (if not takes risks)
5. Child continues with attention (if not gives up easily)
6. Child completes tasks and learns end goal (if not nothing is completed)
7. Child receives joyful reward – Hugs and showing of affection by family allows learning of legitimate joy. (If not busts life early with sex, money and gambling or substance abuse).

Tips for parents and families

- Recognize every child is a star having their own radiance in the sphere of their excellence. Comparison or competition is unnecessary.
- Be aware of unhealthy influences from peers, cartoons, digital games, and social media.
- Spend quality time and build healthy relationships with teenagers rather than replacing affection with gadgets. Avoid harsh correction.
- Clarify their ambitions for children in keeping with personality, character, and spirituality.
- Recognize between what's best for the child vs parent's ambition for child's advancement.
- Stretch the child only to what the child can bear, as they can fatigue or fracture their personality.
- Assess the wear and tear of being pushed in studies, sports, and other extracurricular activities all at the same time.
- Avoid pushing children to become independent prematurely.
- Consider a child's long-term health rather than only focusing on achievements.

Consequences of digital overuse on work life

- Attention span and depth decrease resulting in poor planning
- Boredom, inability to focus or concentrate
- Easily fatigues – dopamine depletion
- Learning becomes uninteresting and regularly is boring. Learning process suffer – attention, memory, connection, collation, recall, application, reproduction – all diminish
- Shallow decision making along with decreased creativity
- Recruits anti-reward systems e.g. pain becomes pleasure

Sleep and learning

People see dreams during deep sleep or REM – usually between 1.00-4.00am. For this to happen one must be in deep sleep around 11.00pm. During dream brain runs a software program much like defragmentation of a computer. Neurons are generated. Dendritic spikes from previous day activity come to normal rhythm. Sleep restores melatonin in retinal cells and prevents macular degeneration caused by too much blue light.

Effects of digital overuse on sleep

- Pixel stimulation suppresses melatonin secretion which worsens with screen use after dusk. Consider preserving screen time to work time only
- REM sleep is disturbed
- Glymphatic system function in the brain is disturbed
- Neuronal recovery and night time brain programs are disrupted

Management of digital overuse

Minimizing digitalisation at work

While working on screen, take down notes in flowing handwriting on a note pad.

- Have a coir carpet at your bare feet and roll your sole on it.
- Small joint activity activates glutamate in the corticospinal tracts and suppresses the digital dopamine. Use tweezers to squeeze clay.
- Munch fruit and nut

- Minimize screens after dusk.
- Work on desktop/laptop rather than iPad, tab, or smart phones
- Avoid increasing digitalization in personal life.
- Minimize 4K or 8K screen exposure at home - blue light in the house increases digitalizing effect.
- Allow adequate light variation with sunrise and sunset to improve melatonin mechanisms.
- Engage in outdoor sports activities.
- Engage in 3D activities.
- Avoid listening to fast paced music while studying.
- Keep shapes visible on your desk around the screen.

Principles of Empathic Learning and Motor Therapy

Digitalised children and kids with ADHD are into Bottom-Up Regulation (reflexive and rapid) and not into Top-Down Regulation (slow and thoughtful) and in digitalised children, kinaesthetic, acoustic, and visual tracts (disco tracts) have recruited over 50% of neuronal tracts into repetitive patterns.

Therapy should be initiated to retrain neuronal tracts from repetitive reflexive patterns into executive creative reflective patterns. (Figure 1). Therefore, spatial navigation, encouraged by swimming, take aim games, rhythmic well-timed dance is foundational in empathic learning therapy. Important aspect of the therapy would also be to reduce kinaesthetic, acoustic, and visual overdosing from music, cartoons, or digital games.

With empathic motor therapy, rapid synchronised use of bare feet and hands in grips and ropes activity, stimulates glutamate in the synapses of the pyramidal tract that coordinates voluntary muscle movement. This inhibits dopaminergic overdrive. (3) E.g., challenge course with grips and ropes

Activities that can be carried out at an Empathic Learning Centre or at home

- Montessori methods of learning E.g., handcrafts, art, scrap work
- Cookery – use of fingers for baking, cutting shaped fruits/vegetables.
- Music therapy e.g., flute, stringed instruments, keyboards help with coordination of fingers, eye, and mouth.
- Crunchy food – vegetables and fruits. Meals together with family
- Age relevant puzzles
- Grips and ropes activity
- Finger activity – eg: rattan weaving, model construction systems (Meccano), clay
- Board games that increase attention span
- Art and craft – painting, sand art, wood work
    - Games and sports – cricket, swimming, draught, take aim games
    - Drama
    - Reading

Conclusion

Digital addiction works like other addictive conditions. Clinical presentations of children and teenagers with digital overuse are varied and may be unusual. Age-appropriate activities based on empathic motor and learning therapy can be used for management of children and adolescents presenting with issues related to digital overuse.

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Rheumatoid arthritis: Transferring current knowledge into everyday practice

Dr. Kalum Deshapriya
MD, FCCP
Consultant Rheumatologist
Teaching Hospital Karapitiya, Galle.

Introduction

Rheumatoid arthritis(RA) is the most prevalent inflammatory arthritis seen in everyday clinical practice. It is an autoimmune, polyarticular arthritis characterised by progressive joint damage leading to deformities. It has a wide spectrum of disease manifestations. Articular manifestations account for the disability and extra-articular manifestations for the mortality. Recent advances lead to a better understanding of the disease, diagnostic criteria, improved serologic testing, the introduction of new drugs, and better guidelines for the management of RA.

New data indicate that significant joint damage leading to permanent disability occurs within the first two years of disease onset. It is believed that optimal management of RA should be the aim during the first three to six months.

Pathogenesis

There is a complex dysregulated autoimmune process leading to chronic synovial inflammation. This is enhanced by environmental factors in genetically predisposed individuals. Cigarette smoking is an important factor in the pathogenesis of RA. Risk of developing RA is twice as high compared to non-smokers. P. gingivalis, a pathogen involved in periodontitis causes the citrullination of proteins leading to the formation of anti–citrullinated protein antibody (ACPA). This is the hallmark autoantibody in RA. Many cells and molecules are involved in the pathogenesis of RA, including, T cells, B cells, Cytokines like TNF alpha, IL 6 and IL 17. Genetic predisposition is thought to be associated with class ll MHC gene.

Early rheumatoid arthritis

Topic of "early rheumatoid arthritis" is gaining a lot of interest at present. There is no globally accepted definition for early RA. Thus it is postulated that earlier the treatment is started, better would be the outcomes. "Preclinical RA" begins years to months prior to the development of clinical polyarthritis. It can be suspected as early as two to four weeks of joint pain.

Features of preclinical RA:

- patients do not meet the Criteria for RA
- presence of arthralgia without synovitis
- seropositive (particularly in those who are positive for ACPA)
- patients who have a first degree relative with RA

Window of opportunity

The concept of a window of opportunity in RA has changed over time. It was previously considered as a treatment period of first 2 years after disease onset in which joint damage could be halted. Currently, this term is applied for a period before the diagnosis of RA is established in which treatment could potentially prevent RA development, which is considered to be about 3 months. However, compared to 'old definition', only few trials available to support 'new definition'. Early suspicion and recognition of RA and early rheumatological referral are vitally important for successful outcomes in RA.

Useful features to suspect early RA (recent literature evidence):

- chronic, additive, symmetric polyarthritis affecting the proximal interphalangeal (PIP), metacarpophalangeal(MCP), wrist, and metatarsophalangeal(MTP) joints
- joint symptoms for greater than 6 weeks
- morning stiffness for 30 minutes or more
- 3 or more swollen joints
- a positive metacarpophalangeal or metatarsophalangeal squeeze test to elicit pain (Fig. 1)
- new onset carpal tunnel syndrome with wrist swelling and inflammation
- first-degree relative of a patient with RA
- abnormal serologic test (RF, CCP) or elevated ESR or CRP

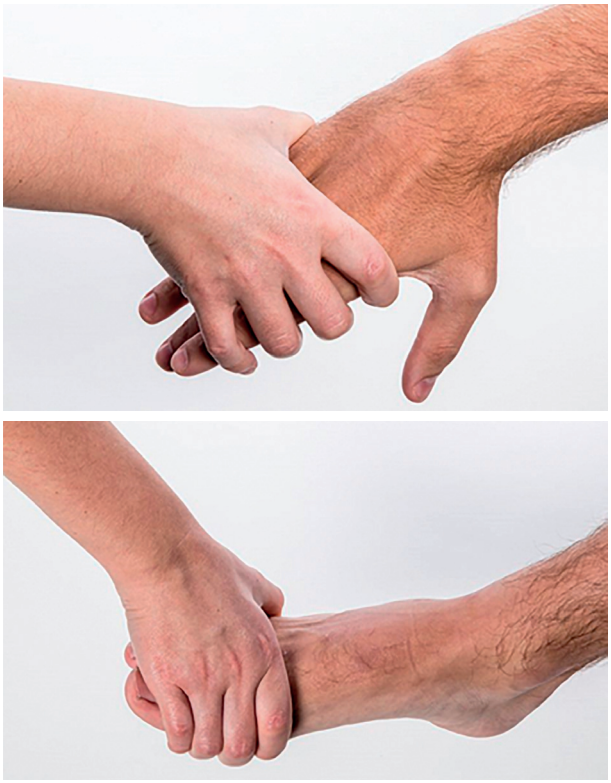

Fig 1: Metacarpophalangeal and metatarsophalangeal squeeze test

Clinical features

The main objective of clinical examination should be to establish the diagnosis, and evaluate the disease activity and severity which in turn will help in managing the disease successfully. The onset is insidious. It is very uncommon to see the disease in men younger than 30 years. The incidence of RA in men rises with advancing age. When a patient presents with joint pain with or without swelling it is important to decide whether the patient has arthritis. Recognizing evidence of acute inflammation with adequate clinical experience is the key to success. This is a skill any medical officer should possess. If there is any doubt about possible arthritis, the patient should be referred appropriately without delay.

Box 1 lists the typical features of RA.

Box 1: Features of a typical presentation of RA

- bilateral
- symmetrical
- small joint involvement (predominantly involved joints are MCP, PIP joints, and fore foot joints)
- joints of the upper limb affected commoner than the lower limb joints
- polyarticular presentation

Extra-articular manifestations of RA:

- Haematological:
  anaemia, thrombocytosis, Felty's syndrome
- Neurological:
  entrapment neuropathy, mononeuritis multiplex, peripheral neuropathy
- Pulmonary:
  pleural effusions, interstitial lung disease, pneumonitis
- Cardiac:
  Pericarditis, coronary vasculitis
- Cutaneous:
  rheumatoid nodules, cutaneous vasculitis, leg ulcers
- Ocular:
  scleritis, episcleritis, xerophthalmia

Certain clinical situations of RA need urgent interventions. These are severe complications of RA and are usually acute in onset.

- atlanto-axial subluxation should be suspected if the patient develops pain around the occiput and vertigo on neck movements.
- scleritis is a sight threatening complication and should be suspected if the patient develops sudden onset eye pain and increased lacrimation.
- mono articular flare can be due to septic arthritis.
- acute presentation with shortness of breath in a pre-existing interstitial lung disease patient should be taken seriously. It can be due to acute exacerbation of lung disease, concurrent infection or pneumonitis.

Diagnosis of rheumatoid arthritis

The diagnosis is made predominantly on clinical grounds. Detailed history and objective clinical assessment generally will lead to the diagnosis. Every effort should be taken to diagnose the disease in its early stages to prevent complications and to achieve early remission or low disease activity.

Acute phase proteins, ESR and CRP are elevated. A full blood count will show thrombocytosis. Rheumatoid factor (RF) and the anti-cyclic citrullinated peptide antibodies (anti-CCP Abs) will be elevated. These investigations should be ordered with the titre. Patients with high titres have a higher possibility of RA. Anti-CCP Abs should be done only if RF is negative. Both RF and ant-CCP tests should not be ordered together.

Box 2: 2010 ACR/EULAR Classification Criteria for RA

- Number and site of involved joints
  - 2 to 10 large joints (shoulders, elbows, hips, knees, and ankles) — 1 point
  - 1 to 3 small joints (metacarpophalangeal joints, proximal interphalangeal joints, second through fifth metatarsophalangeal joints, thumb interphalangeal joints, and wrists) — 2 points
  - 4 to 10 small joints — 3 points
  - Greater than 10 joints (including at least 1 small joint) — 5 points
- Serological testing for rheumatoid factor or anti-citrullinated peptide/protein antibody
  - Low positive — 2 points
  - High positive — 3 points
- Elevated acute phase reactant (ESR or CRP) — 1 point
- Symptom duration at least six weeks — 1 point

To be considered, the patient must have at least 1 joint with definite clinical synovitis (swelling), and synovitis not better explained by another disease. ***A score of > 6 is required to have RA***

Management of RA

Many management guidelines have appeared in the recent past. The widely referred guidelines are the American College of Rheumatology (ACR), the European league Against Rheumatism (European Alliance of Associations for Rheumatology), the National Institute of Health and Care Excellence (NICE) and the Canadian Rheumatology Association (CRA). All guidelines highlight the importance of early initiation of treatment (during the window of opportunity), a Treat to Target (T2T) strategy, careful monitoring of the disease activity and speciality care for a complex disease like RA. Rheumatologists are the specialists who should primarily care for patients with RA.

Treat to Target(T2T) strategy

Recent evidence recommends the T2T strategy for the best outcome of rheumatoid arthritis. it is agreed that remission or low disease activity is the best target to achieve. Remission and low disease activity have been defined in recent guidelines under Boolean definition and index-based definition. Boolean-based definition assesses the tender joint count, the swollen joint count, the patient global assessment of disease activity and C-reactive protein. The index-based definition is based on the simplified disease activity index (SDAI) and clinical disease activity index(CDAI). Disease activity score 28(DAS-28) is commonly used in monitoring the disease activity in routine follow-up of RA patients.

NSAIDs

They are useful in symptomatic control of RA and should be used cautiously in the presence of dyspeptic symptoms, and renal and cardiovascular disease (CVD). They have little effect on reducing joint damage or radiological progression.

Corticosteroids

It has potent anti-inflammatory action. Multiple routes of administration have provided multiple therapeutic options. Short-term glucocorticoids (<3 months) should be considered when initiating or changing conventional synthetic disease-modifying anti-rheumatic drugs (csDMARDs).

csDMARDs

Methotrexate (MTX), sulphasalazine (SSZ), hydroxychloroquine (HCQ) and leflunomide are the commonly used csDMARDs. MTX is still the gold standard of treatment. No other therapeutic agent is superior to MTX.

- management should be guided by disease activity levels measured by DAS 28, CDAI or SDAI
- MTX should be the first DMARD in patients with moderate-to-high disease activity
- HCQ or SSZ can be the initial treatment in patients with low disease activity

- titrate the dose of MTX to 15mg/wk within 4-6 weeks
- opinion is split over the use of combination therapy with multiple csDMARDs as the initial treatment option. In the presence of poor prognostic factors and persisting high disease activity, either adding other csDMARDs or adding b/tsDMARDs can be considered.
- in patients not tolerating oral weekly MTX, consider splitting the MTX dose over 24 hours and/or increasing the dose of folic/folinic acid, before switching to alternative DMARD(s)

Biological and targeted synthetic DMARDs

Biologic DMARDs (bDMARDs)

They have highly specific action targeting a specific pathway of the immune system. They are monoclonal antibodies derived from a living organism in a cell culture and targeted against TNF-alpha, IL1, IL6, CD20, CD80 AND CD86.

Apart from the above bio-originators, number of **biosimilar biological DMARDS** are available. They are almost identical copies of original bDMARDs. The advantage is that their price is significantly lower than the bio-originator but with comparable efficacy.

Targeted synthetic DMARDs (tsDMARDs)

tsDMARDs are synthesized like csDMARDs, but differ because they are small molecules and block precise pathways inside immune cells (Janus kinase inhibitors (JAKi or JAK inhibitors). Baricitinib, tofacitinib and upadacitinib are the currently available drugs and are given orally. (bDMARDs are manufactured in living systems such as cells or microorganisms and are large, complex molecules).

Tapering of DMARDs

This should be considered in persistent remission in the form of dose reduction (csDMARDs) or spacing out of doses (bDMARDs). However, it should be noted that RA is regarded usually as an incurable disease. Therefore, if the drug is effective and well tolerated by the patient it should not be stopped.

Difficult-to-treat rheumatoid arthritis (D2T RA)

A patient is considered to be having D2T RA if, there is a failure of ≥two b/tsDMARDs after failing csDMARD therapy, signs suggestive of active/progressive disease or management of signs and/or symptoms is perceived as problematic by the rheumatologist and/or the patient.

Important points to consider in D2T RA

- Consider the possibility of misdiagnosis or coexistent mimicking disease or presence of comorbidities
- Ultrasound may be considered to evaluate the inflammatory activity
- Treatment adherence should be evaluated carefully
- Use non-pharmacological methods to optimize treatment
- Patient education and other supportive care should be considered

Emerging management options

EULAR has recently published "2022 EULAR points to consider for remote care in rheumatic and musculoskeletal diseases". Digital technologies ('telehealth' interventions) can be used in all aspects of patient care, including communication with patients/ caregivers, disease screening or disease activity. Machine learning (ML) based algorithms and applications in the field of rheumatology and personalized medicine are growing. A "precision medicine model" for RA is still in progress.

Theranostics is a combination of the terms of therapeutics and diagnostics. It has been developed as a new diagnostic and therapeutic tool with the advancement of nanotechnology. The advantage is the targeted delivery of therapy at the time of diagnosis with the help of nanoparticles thereby shortening the delay in initiating treatment. A new era of theranostics seems to provide tremendous future prospects.

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136th Anniversary International Medical Congress

'Towards Humane healthcare: Excellence, Equity, Community'
25th - 28th July, 2023, BMICH, Colombo

Programme at a Glance

PRE CONGRESS		
Workshop No	Date	Topic
Workshop 1	31st May	Interventional Research in Sri Lanka
Workshop 2	7th June	All about Research: from Design to Presentation
Workshop 3	14th June	Postgraduate Training in Sri Lanka
Workshop 4	28th June	Sleep and Health
Workshop 1	14th July	Discard Myths & Enjoy Sex

Day 1: Tuesday, 25th July 2023	
06.00 pm	Inauguration & SLMA Oration

Day 2: Wednesday, 26th July 2023			
08.00 am	Registration		
08.30 am	**Keynote** *Clinical Excellence*		
09.00 am	**Professor NDW Lionel Memorial Oration**		
09.45 am	Morning Tea		
10.00 am	**Panel Discussion 1** *Pathways to Excellence in Healthcare*		
11.00 am	**Symposium 1** *Health Financing*	**Symposium 2** *Quality use of Medicines*	
12.15 pm	**Guest Lecture 1** *Achieving Excellence in Critical Care*	**Guest Lecture 2** *In the Doctor's Bag*	
12.45 pm	Lunch Break & Poster Viewing		
01.45 pm	Free Paper Session 1	Free Paper Session 2	Free Paper Session 3
02.45 pm	**Guest Lecture 3** *Excellence in Disaster Research & Collaboration*	**Guest Lecture 4** *Management of Common Thyroid Problems in Primary Care*	
03.15 pm	**Symposium 3** *Towards Achieving Excellence in Medical Education*	**Symposium 4** *Winning the Metabolic Battle*	
04.30 pm	**Symposium 5** *Improving Renal Care in Sri Lanka*	**Symposium 6** *Adhering to Clinical Guidelines in Resource Poor Settings*	
05.45 pm	Evening Tea & End of Day 2		

Day 3: Thursday, 27th July 2023			
08.30 am	**Plenary 2** *Social Justice & Health Equity*		
09.00 am	**Dr S Ramachandran Memorial Oration**		
09.45 am	Morning Tea		
10.00 am	**Panel Discussion 2** *Equity & Health*		
11.00 am	**Symposium 7** *Smart Hospital – A Paradigm Shift*	**Symposium 8** *Sports & Exercise Medicine*	
12.15 pm	Lunch Break & Poster Viewing		
01.15 pm	Free Paper Session 4	Free Paper Session 5	Free Paper Session 6
02.15 pm	**Symposium 9** Arts & Humanities in Promoting Humane Health Care	**Symposium 10** Air Pollution: The Invisible Enemy	
03.30 pm	**Symposium 11** *Women's Health*	**Symposium 12** *Everyday Dermatology for Primary Care*	
04.45 pm	**Dr SC Paul Memorial Oration**		
05.30 pm	Evening Tea & End of Day 3		

Day 4: Friday, 28th July 2023		
08.30 am	**Plenary 3** *Community Engagement*	
09.00 am	**Panel Discussion 3** *Community Engagement*	
10.00 am	Morning Tea	
10.15 am	**Symposium 13** *Cascading Impacts of Multi-Hazard Scenarios Amidst Public Health Crises*	**Symposium 14** *Diagnosis & Management of Back Pain in Everyday Practice*
11.30 am	**Symposium 15** *Role of Community-based Organizations in Health promotion during*	**Symposium 16** *Community Geriatrics*
12.45 pm	Debate	
01.30 pm	Closing Ceremony	
01.45 pm	Lunch	
07.00 pm	Doctors Concert	

Demystifying Ovarian Cysts: A perspective for Clinicians in Primary Care

Dr. Chaminda Mathota
MBBS, MD (O&G), MRCOG, DRCOG, DOWH, MRCPI
Consultant Obstetrician and Gynaecologist,

Nishadi, a 24-year-old university student, had an abdominal ultrasound scan due to abdominal pain one week ago. The scan showed a 4 cm ovarian cyst in her right ovary. She is now worried about the cyst and wants to know more about it. As a healthcare practitioner, it is essential to provide adequate information to Nishadi about her condition.

The ovary produces ova and sex hormones oestrogen and progesterone. In addition, the ovary is the primary source of androgen in the female. As an active organ, during the reproductive age, cyst formation in the ovary is prevalent. Ovarian cysts are fluid-filled sacs that develop in the ovary. They can be functional, benign or malignant. About one in five women develop at least one ovarian cyst in their lifetime. Clinicians may encounter women with ovarian cysts diagnosed on routine ultrasound scans in their practice.

The objectives of this article are to discuss what ovarian cysts are, their clinical features, investigations and their management.

Most ovarian cysts that you may encounter are asymptomatic. Many women do not need any interventions for ovarian cysts during routine ultrasound scans. However, as a medical practitioner, It is your responsibility to identify the women who need further evaluation and refer them appropriately.

What causes ovarian cysts, and what role do hormones play in their development?

The common causes are:

- Ovulation: Functional cysts are common, and they can form as part of the normal menstrual cycle. These functional cysts go unnoticed unless the woman undergoes an ultrasound scan during the time when the cyst is large enough to be noticed. Two main types of functional ovarian cysts are follicular cysts and luteal cysts. An unruptured ovarian follicle can grow as a follicular cyst, and the corpus luteum can sometimes grow large and become a luteal cyst. These functional cysts usually disappear within 2-3 menstrual cycles.
- Endometriosis: In this condition, endometrial tissue grows outside the endometrium, causing cysts on the ovary and endometriotic deposits in the pelvis and remote sites. Endometriotic cysts can grow large and cause pelvic adhesions. Endometriosis is a major cause of chronic pelvic pain and infertility in women.
- Ovarian Tumors: Ovarian cysts can also develop from benign and malignant ovarian tumours. Suspected ovarian tumours need further evaluation and appropriate referral.
- Other conditions: Polycystic ovary syndrome (PCOS), hormonal imbalance, and pelvic infections can also lead to cysts in the ovaries.
- Fimbrial cysts are cysts arising from the fimbrial end of the fallopian tube. Fimbrial cysts are usually benign and asymptomatic. It may not be easy to differentiate fimbrial cysts from benign ovarian cysts on an ultrasound scan.

What are the common clinical features of ovarian cysts, and how are they diagnosed?

Symptoms

Common symptoms of an ovarian cyst include:

- Pelvic pain: usually unilateral, may be aggravated with physical activity.
- Abdominal distension.
- Dysmenorrhoea.
- Bloating
- Pressure or lower abdominal discomfort.
- Irregular periods or changes in menstrual flow.
- Dyspareunia.
- Urinary frequency or urgency.
- Nausea, vomiting or loss of appetite.

It is important to note that many women with ovarian cysts are asymptomatic.

Signs

Clinical signs of an ovarian cyst include:

- Abdominal distension.
- A palpable pelvic mass or lump in the abdomen.

- Tenderness or pain in the lower abdomen.
- Pelvic tenderness on bimanual examination.

Investigations

Diagnosis of an ovarian cyst may need the following investigations:

- An ultrasound scan can help confirm the presence of a cyst and determine its size, shape, and characteristics of the ovarian cyst. Transvaginal ultrasound scans are more accurate in diagnosing and differentiating the type of smaller ovarian cysts. However abdominal scan is essential for the evaluation of large ovarian cysts.
- Blood investigations may be done to check for elevated levels of sex hormones/androgens and tumour markers, such as CA-125, which can be elevated in epithelial ovarian malignancy. However, Elevated CA-125 levels are not specific to ovarian malignancy, and CA-125 can only be used as a tool to assess the risk of malignancy and to monitor the response to treatment of ovarian cancer.
- A CT or MRI scan may provide more detailed information about the cyst and the involvement of the adjacent organs and lymph nodes in a case of suspected ovarian malignancy.
- A laparoscopy may be done as a diagnostic tool to achieve a histological diagnosis of an inoperable ovarian malignancy.

The type of investigation done depends on the symptoms, and the size and type of the cyst.

Treatment Options for Ovarian Cysts

Most benign and functional ovarian cysts do not need any medical interventions. Many of them can be managed conservatively if the cysts are small, benign, and asymptomatic. Some functional cysts, such as follicular and luteal cysts, can resolve spontaneously within a few menstrual cycles. In such cases, the recommended management is to repeat the ultrasound scan to evaluate the size of the cyst.

However, some ovarian cysts, such as endometriomas or cystadenomas, may not resolve spontaneously and require further evaluation and treatment. Especially if the appearance of the cyst suggests endometriosis or malignancy or the cyst is larger than 5 cm in diameter, further assessment by a consultant gynaecologist is advisable.

Medical treatment of ovarian cysts is possible in selected cases. These inclue the following:

- Combined oral contraceptive pills can regulate the menstrual cycle, shrink functional cysts, and reduce the risk of new cyst formation.
- Non-steroidal anti-inflammatory drugs (NSAIDs) like Mefenamic acid can help relieve the pain associated with ovarian cysts.
- Gonadotropin-releasing hormone (GnRH) agonists can shrink functional cysts and stop ovulation, which may reduce the risk of new cyst formation. GnRH analogues can be used to treat endometriosis in some selected patients.
- Other medications, like Tricyclic antidepressants and anticonvulsants, can be used to treat chronic pelvic pain caused by endometriosis.
- Ovarian malignancy can be treated first with chemotherapy to shrink the tumour before interval debulking surgery.

Although the majority of diagnosed patients with ovarian cysts do not need surgery, surgery may be necessary for the following types of ovarian cysts:

- Large cysts: If a cyst is larger than 5 cm or causing significant symptoms, it is recommended to perform an ovarian cystectomy.
- Suspicious or complex cysts: Ovarian cysts that have an irregular shape or solid components on ultrasound, multilocular, associated with ascites, may need surgery for further evaluation and histological diagnosis.
- Ovarian torsion: Ovarian torsion occurs when a heavy ovarian cyst causes the ovary to twist, obstructing its blood supply. Surgery is necessary to untwist and for cystectomy. If the ovary is not viable, oophorectomy may be required in the cases of torsion.
- Endometrioma: Endometriomas are pseudocysts formed by a collection of chocolate-like material inside a sac lined by tissue similar to the endometrium. They can cause significant pelvic pain and subfertility. Laparoscopic ovarian cystectomy and adhesiolysis is the recommended treatment for women with symptomatic endometriosis with fertility wishes.
- Ovarian malignancy: Ovarian cysts that are suspected or confirmed to be malignant will require surgery to debulk and determine the stage of the cancer. The recommended surgery is open laparotomy for total abdominal hysterectomy, bilateral salpingo-oophorectomy, debulking with omentectomy, and excision of other visible tumour deposits.

The best surgical treatment for ovarian cysts will depend on the type, size, and symptoms and the risk of malignancy.

Laparoscopic surgery is especially recommended for women with endometriosis and young women with possible benign ovarian cysts to conserve fertility and prevent pelvic adhesion formation. Laparoscopic ovarian cystectomy is possible even for large ovarian cysts, although it requires an experienced operator and proper equipment.

The main advantages of laparoscopic surgery for ovarian cysts are as follows.

- Smaller incisions, resulting in less postoperative pain and scarring
- Shorter hospital stay and faster recovery
- Reduced risk of wound infection
- Minimal blood loss and reduced need for blood transfusions
- Better visualization of the surgical area.
- Minimum damage to the normal ovarian tissue.
- Reduced risk of pelvic adhesion formation and tubal factor infertility.
- The potential for a quicker return to normal activities.

Laparotomy is a more invasive surgical procedure in which a larger incision is necessary, and the postoperative recovery takes longer than laparoscopy. It may be required in larger cysts or for those suspected to be malignant.

Surgical management of ovarian cysts depends on the type of cyst and the size of the cyst. Most benign ovarian cysts can be managed with ovarian cystectomy. Oophorectomy is indicated when the size of the ovarian cyst is large, and the risk of malignancy is high.

What are the potential complications and risks associated with ovarian cysts, and how can they be prevented or managed?

Ovarian cyst accidents refer to sudden and unexpected events related to ovarian cysts, such as rupture, torsion, or bleeding. These events can cause severe abdominal pain and other symptoms and may require immediate hospital admission.

Ovarian cyst rupture:

A cyst may rupture if it becomes too large, releasing fluid into the peritoneal cavity. This can cause severe pain and inflammation.

Ovarian torsion:

Ovarian torsion occurs when a cyst causes the ovary to twist, obstructing its blood supply, leading to ischaemia and necrosis of the affected ovary. This can lead to acute severe abdominal pain. Ovarian torsion can cause ischaemic necrosis of the ovary if not treated promptly. Early diagnosis is essential to save the ovary and fertility.

Bleeding into an ovarian cyst:

This is a rare complication of an ovarian cyst. The cyst may bleed if it becomes large or if its walls are fragile, leading to the release of blood into the cyst. This can present with acute abdominal pain.

Some ovarian cysts can interfere with ovulation and may cause subfertility if not treated promptly.

Ovarian cysts can increase the risk of ovarian malignancy, especially in women over the age of 50 or in those with a family history of ovarian malignancy.

The risk of malignancy in an ovarian cyst depends on several factors. These include the following.

- Age: The risk of ovarian malignancy increases, especially in postmenopausal women over 50 years of age.
- Family history: Having a first-degree relative with ovarian, breast, or colon cancer increases the risk of developing ovarian cancer.
- Type of cyst: Some ovarian cysts, such as endometrioid and clear cell cysts, have a higher risk of malignant transformation.
- Size and ultrasound appearance of the cyst: Ovarian cysts that are larger than 5 centimetres, have irregular borders, or contain solid areas, are more likely to be malignant.
- Symptoms: Ovarian cysts accompanied by bloating, abdominal pain, weight loss and loss of appetite may have a higher risk of ovarian cancer.

The Risk of Malignancy Index is a scoring system used to assess the likelihood of ovarian malignancy in a patient with an ovarian cyst. It considers several factors, including the size of the cyst, the woman's age/ Menopausal status, the presence of certain features seen on an ultrasound and serum CA 125 level. The Risk of Malignancy Index (RMI) score of 200 or more is considered high-risk.

In conclusion, most ovarian cysts you may encounter are functional or benign. They may resolve on their own and may not need any active treatment. It is essential to identify the ovarian cysts which need further

evaluation and treatment to preserve a woman's fertility. Laparoscopic surgery is the best surgical management option for benign ovarian cysts and endometriosis. Risk of malignancy of an ovarian cyst can be evaluated using women's age, ultrasound scan features and the serum CA 125 level.

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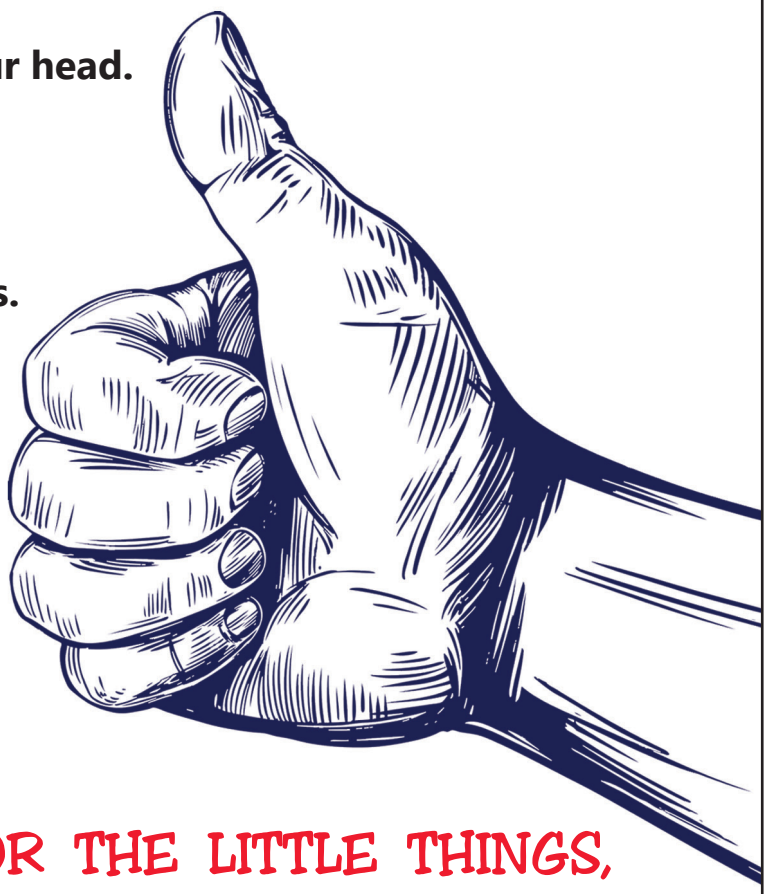
10 SIGNS YOU'RE DOING WELL IN LIFE

1. **You have a roof over your head.**
2. **You ate today.**
3. **You have a good heart.**
4. **You wish good for others.**
5. **You have clean water.**
6. **Someone cares for you.**
7. **You strive to be better.**
8. **You have clean clothes.**
9. **You have a dream.**
10. **You're breathing.**



BE THANKFUL FOR THE LITTLE THINGS, FOR THEY ARE THE MOST IMPORTANT.

An update on current economic crisis and Health Sector

Prof Dileep De Silva
BDS(Pera), MD -Com Dent (Col), MBA (Col),
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Specialist in Health Finance and Health Management
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Sri Lanka had achieved excellent Health Indicators for what it spends on Health. In Sri Lanka Health services are mainly provided by the Government which is free at the point of delivery and by the Private sector for a fee for service basis. However even before the current crisis what was spent on health was a meager amount. It was around 3.2% of GDP, and the Government contribution was around 2% of GDP since year 2000.

For many years Sri Lanka economic trajectory was not in the correct direction. It was further deteriorated as the COVID-19 pandemic and the 2019 Easter Sunday bombings devastated tourism, which is a key source of foreign exchange. To add more insult in 2019 the former government introduced the largest ever tax cuts in Sri Lankan history. Tax cuts led to the loss of approximately one million tax payers between 2020 and 2022 a massive challenge for an economy that was already suffering from widespread tax evasion. Further the ban of importation of chemical fertilizer overnight led to a reduction of rice and vegetable crop by more than 50%.

Sri Lanka's foreign reserves dwindled to around $1.5 billion and the country has no sufficient foreign exchange to import key essentials. The country's total foreign debt exceeds $51 billion, of which $28 billion has to be repaid by 2027. Sri Lanka suspended repayment of foreign debt pending the outcome of talks with the International Monetary Fund on a rescue package.

Sri Lanka's revenue has declined significantly to 8.3 percent of the GDP by 2021, which was one of the lowest in the world. Therefore, Sri Lanka more than doubled the country's tax revenue as the island nation struggles to come out from its worst economic crisis. It is expected that these tax reforms will help increase revenue in 2023 and beyond, enabling the country to move away from costly monetary financing (money printing) to cover government expenditure in the future. The government expects to increase revenue from taxes to SL Rs 3.1 trillion ($8.5 billion) from SL Rs 1.3 trillion rupees in 2021. Income tax would go up three times from 302 billion rupees ($824 million) to 912 billion rupees ($2.5 billion).

The country's economic crisis will affect the health sector from different perspectives.

According to the World Health Organization " Sri Lanka's economic crisis is rapidly turning into a health crisis amid growing shortages of basic drugs and medical supplies. It is more so as most of drugs and almost all the medical supplies including equipment are imported. The annual budget estimate for importing medicines and surgical consumables is USD 300 million ; so far only USD 80 million is available for 2023 through donors. As of January 2023, Sri Lanka faced a funding gap of USD 220 million to import essential medicines and supplies"

As reported in Lancet- Regional Health South Asia the economic crisis mainly affected the mental health of Sri Lankan people. Schools were closed for long durations and regular power disruptions had made even the rudimentary online teaching and learning difficult. According to the Save the Children Fund in Sri Lanka, closure of schools had led to change in behaviours in children.. Economic crisis has already negatively affected the nutrition status of our children. Moreover, the reduced education attainment and poor nutrition status, would also impact future employment and the nation's economy in the long term.

A key component of indirect taxes, Value Added Tax (VAT), on healthcare services was exempt in Sri Lanka until 1st May 2016.Most countries have a zero rate or a reduced VAT rate on essential commodities considered socially desirable such as basic food, healthcare services energy and water. Recently, VAT on Health services in Sri Lanka was increased up to 15%. In a country where the health insurance penetration is less than 7%; imposition of 15% VAT on Health services is unjustifiable. This is more so as 55% of the outdoor treatment in Sri Lanka is catered to by the Private Health Sector. As a result, the lower middle-income group which sought Health care services in the private sector, will now move into the already overburdened government healthcare services.

Furthermore, Sri Lanka has one of the fastest aging populations in Asia. The imposition of a 15% VAT on healthcare services even on senior citizens who are living with a fixed income is an unbearable burden. As far as the author is aware, hardly any insurance company in Sri Lanka provides medical insurance cover for those who are over 65 years.

As of any other category of employees the health sector employees too are badly affected by the recent income tax rise. Higher income taxes are being introduced nine months after the government declared bankruptcy and announced sovereign debt default and 10 months after the Sri Lankan Rupee collapsed from 200 to 370 to the US dollar, almost halving the real income of the people.

With the recent tax reforms, a person whose annual income is Rs 6 million (Rs 500,000 per month) will have to pay an income tax of Rs 1,308,000 per annum or Rs109,000 per month. A person whose annual income is Rs 10 million (Rs 833,333 per month) will have to pay an annual income tax of Rs 2,748,000 or a monthly income tax of Rs 229,000. Expressed in another way a person who earns Rs 150,000 monthly will have to pay only 2.3 percent of the total income, but the rate jumps to 28.7 percent to a person who earns 1 million rupees a month.

Unlike in the past, the new tax system considers all the allowances including fuel, phone, and even food as an income and taxed. This means the monthly income does not have to be in cash alone. The majority of the taxpayers, including doctors believe that the tax system is unfair because, while wage earners in the formal sector is caught in the net, other categories of potential tax payers may not be similarly paying taxes.

Given the current economic crisis of the country, professionals including medical specialists, doctors and nurses tend to seek greener pastures now more than ever. Though there are different reports indicating different numbers of doctors who have already "migrated" , the author is of the view that our main "loss" comes from Post Graduate Trainees who were already abroad in 2021/2022, undergoing their post MD training. Normally per year around 270-280 specialist trainees go abroad and around 250- 260 return. However, in the year 2022 only little more than 100 had returned. A very reliable report from the Ministry of Health indicated that 304 medical officers had taken long term leave in 2022. Further 136 medical specialists have taken long term leave or served vacation of post notices between 2017 and 2022. However these figures may be grossly underreported as many doctors and specialists go abroad after taking short term leave or few without obtaining official leave at all. In the current system serving of "vacation of post- VOP" takes a considerable time to be implemented. Loss of highly trained medical workforce will be detrimental to the already resource limited healthcare system of Sri Lanka.

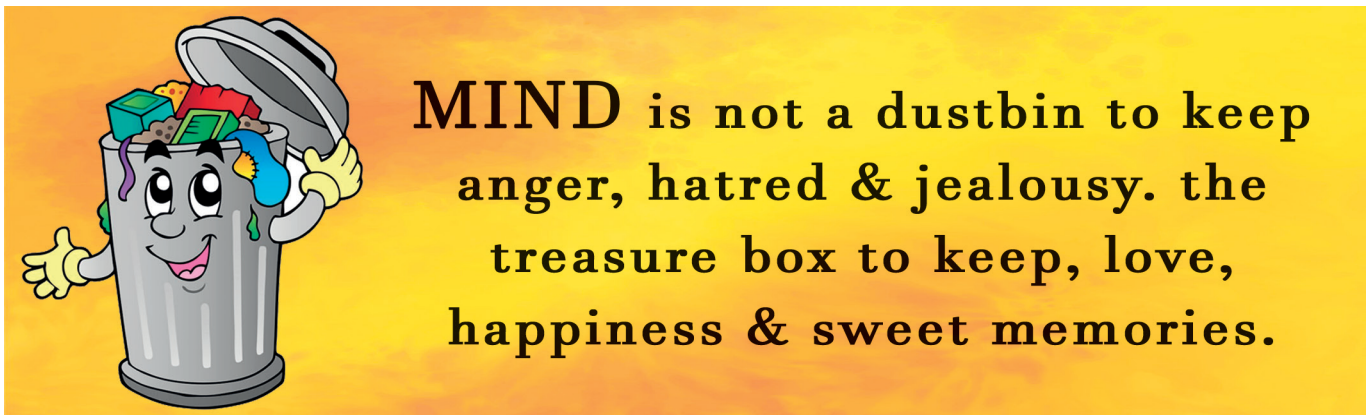
Health service is categorized as a 24/7 essential service. Therefore recent 66% increase in electricity tariffs will hurt the health sector disproportionately. The Fuel prices also had been increased substantially over the last 8 months. With meager Health budget of SL Rs 330 billion, whether the health sector can afford these increases in electricity and fuel prices needs to considered very seriously.

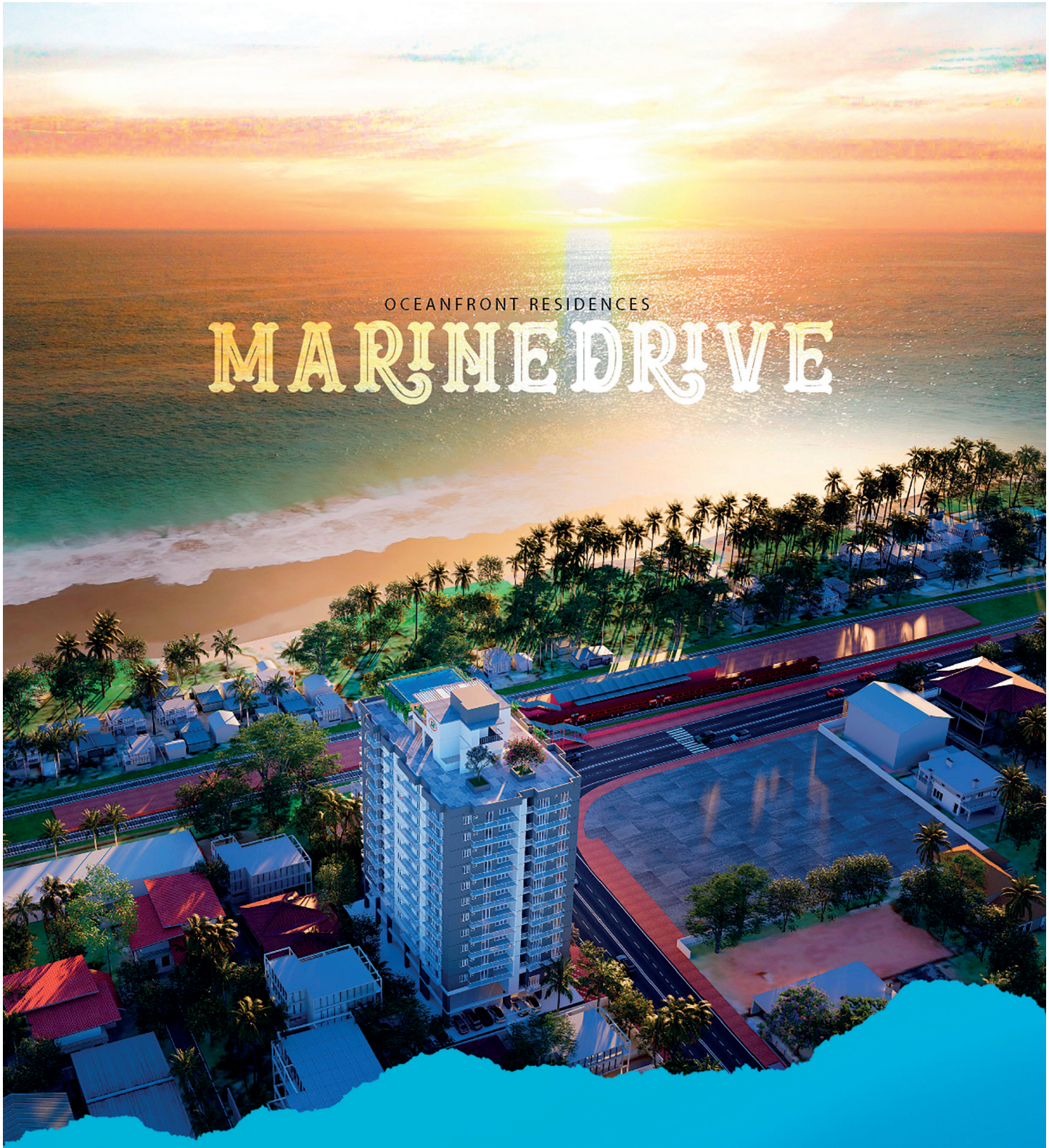
The very high rate of inflation seen in the economy may eventually translate to higher prices for medical care, potentially leading to higher health spending and steeper rise in already high Out of Pocket health expenditure, which may even lead to catastrophic health expenditure.

An elastic demand is one in which the change in quantity demanded due to a change in price is large. An inelastic demand is one in which the change in quantity demanded due to a change in price is small. Generally medical care is considered as belonging to the latter category. However few medical services, for an example certain aspects of plastic surgery, dental surgery and dermatology have elastic demand. Therefore, in an economic downturn, above medical disciplines will be affected harder than the other medical disciplines, especially in the private sector.

Sri Lanka's total economy was around USD 88 billion in 2018 and it has declined to 73 USD billion by 2022;with further negative growth expected in 2023.

Considering above facts the future of the country's health sector looks gloomy at least in the next few years.





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