Book of Abstracts

PeMSARC'24

PERADENIYA MEDICAL SCHOOL ANNUAL RESEARCH CONFERENCE

FACULTY OF MEDICINE, UNIVERSITY OF PERADENIYA

30/07/2024

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AGENDA

PeMSARC'24
Tuesday, July 30, 2024

07.45 AM	Arrival of Guests		
08.00 AM	Ceremonial Procession		
08.10 AM	Inauguration Ceremony – *Lighting the Oil Lamp, University Anthem,* *& Pooja Dance*		
08.20 AM	Welcome Speech by Dr. Samidi Navaratna *Conference Chairperson, PeMSARC'24*		
08.25 AM	Address by Prof. Vasanthi Pinto *Dean, Faculty of Medicine*		
08.30 AM	Address by Prof. M.D. Lamawansa *Vice Chancellor, University of Peradeniya*		
08.40 AM	Address by the Guest of Honour Emeritus Prof. Neelakanthi Ratnatunga *Emeritus Professor, University of Peradeniya*		
08.50 AM	Address by the Chief Guest Prof. Kemal Deen *Emeritus Professor of Surgery*		
08.55 AM	Faculty Awards Ceremony		
09.25 AM	Address by Mr. Nadarasa Ganashiam *Student Chairperson, PeMSARC'24*		
09.30 AM	Keynote Speech by Prof. Kemal Deen *Emeritus Professor of Surgery*		
10.00 AM	Vote of Thanks by Dr. Manjula Peiris *Conference Secretary, PeMSARC'24*		
10:15 AM	Morning Tea		
10:45 AM	Thematic Research Presentations (15min.*4)		
11.45 AM	Lunch		
12:45 AM	Oral Research Presentations | 1A (7+3min.*5)	Oral Research Presentations | 1B (7+3min.*5)	Oral Research Presentations | 1C (7+3min.*5)
01:45 PM	Oral Research Presentations | 2A (7+3min.*5)	Oral Research Presentations | 2B (7+3min.*5)	Oral Research Presentations | 2C (7+3min.*5)
02:45 PM	Afternoon Tea		
03:15 PM	Oral Research Presentations | 3A (7+3min.*5)	Oral Research Presentations | 3B (7+3min.*5)	Oral Research Presentations | 3C (7+3min.*5)
4.15 PM	Closing Ceremony – *National Anthem*		

Poster Presentations (Community Medicine Tutorial Room)

MESSAGE FROM THE VICE CHANCELLOR

Professor M.D. Lamawansa

It is a great honour and privilege to share a message on the occasion of the Peradeniya Medical School Annual Research Conference (PeMSARC) 2024. This esteemed gathering highlights the remarkable dedication and innovation in health sciences and stands as a testament to our collective commitment to advancing research at the University of Peradeniya. The meticulous efforts of the Dean of the Faculty, alongside the diligent staff deserve our deepest appreciation.

The University of Peradeniya has a rich tradition of excellence in health sciences research, a legacy built by the tireless efforts of our faculty and students over generations. However, we recognize that our potential is far from fully realized. Unlocking this potential is crucial for our university's development as a postgraduate research university, a key part of our centenary development project.

The establishment of a multidisciplinary research laboratory at the Faculty of Medicine and the strong international collaborations being forged with institutions such as the University of Illinois and the Chinese Academy of Sciences will be pivotal in achieving the university's research goal. The newly launched initiatives to promote PhD student scholarships, multidisciplinary research grants, and research endowments will undoubtedly support the Faculty of Medicine in its pursuit of research excellence.

Historically, alumni and well-wishers have primarily supported student activities and welfare rather than research. I hope the Faculty of Medicine alumni will expand its focus beyond welfare, and to assist their faculty to excel in research. Consideration can be given to establish research endowments, either for students or staff.

I wish all participants a fruitful conference, filled with insightful discussions and collaborative opportunities. May this event inspire us all to reach new heights in our research endeavours.
Thank you

Prof M. D. Lamawansa
(MS, FRCS (Edin), PhD)
Chair Professor of Surgery
Vice Chancellor,
University of Peradeniya.

MESSAGE FROM THE DEAN

Professor Vasanthi Pinto

I am pleased to send this message to the 3rd Research Conference of the Peradeniya Medical School Annual Research Congress. This event has a distinguished record of stimulating and invigorating scholarship amongst its erudite community and has become a much sought-after event in the faculty calendar.

Student research is given prominence in our faculty and has attained the status of curriculum recognition. Hence, students often engage in this beneficial dimension of pursuing their research interests. I'm glad that this event fills this void and acts as a catalytic focal point that brings together all interested parties in this arena on one common platform to exhibit their findings to a discerning audience.

Currently, for the third consecutive year, students have been bestowed the opportunity to showcase their research to the entire faculty with the added advantage of their articles appearing in the Book of Proceedings, whilst the Best Research Papers will be selected for awards. This stimulus that keeps positively generating better outcomes each consecutive year provides students with the extra dimension to develop a pioneering interest in research and engage in this pursuit whilst being engaged in their academic endeavours that will give direction and purpose to their future career goals by being independent research-oriented individuals who have the thirst and desire to indulge in discoveries and knowledge that would be of dividends to society.

We are privileged to have Prof. Kemal Dean as the Chief Guest and Keynote Speaker. He is a pioneering researcher whose papers have appeared in prestigious international magazines. We welcome his presence, which will enliven this event and inspire even more forays into this exciting domain.
I'm very happy to welcome Prof. Neelakanthi Ratnatunga as the Guest of Honor at our research sessions this year. She is an alumnus of our faculty and a well-respected and admired professor. Her eminence in the sphere of pathology and the academic stature she has attained will definitely add shine to this event.

Also, it is a great pleasure to have our Vice Chancellor, Prof. MD Lamawansa, grace this occasion. His excellent track record as an able administrator, eminent clinician, and renowned scholar with an actively abiding interest in research will no doubt inspire students to scale the upper echelons of research.

I look forward to a productive conference of productive research that will translate to the success of our faculty as an interactive research forum. I wish the sessions all success! Thank you!

Prof Vasanthi Pinto
(MD, FRCA, FCARCSI)
Dean,
Professor of Anaesthesiology and Critical Care,
Faculty of Medicine,
University of Peradeniya.

MESSAGE FROM THE CHIEF GUEST

Professor Kemal Deen

Today, the heights and standards that have been achieved in western medicine are a result of painstaking and arduous medical research founded on the principles established by the ancient Greek and Arab physicians dating back 3000 years. Of course, the methods, ethics and systems of evaluation in scientific research have changed over the years but the enthusiasm of every individual undertaking scientific enquiry, then and now, has probably remained the same. Engaging in scientific enquiry changes individuals – it brings out the best in a scientist's attention to detail, discipline, determination and the ability to communicate. Good scientists make good Dr.s!
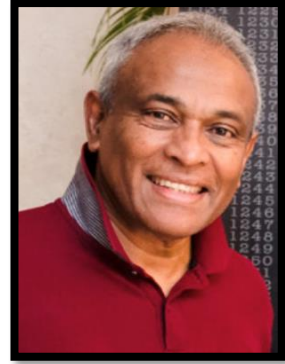
I am honoured to be the chief guest at PeMSARC 2024, and excited to be part of the deliberations. Young researchers emanate energy that is palpable. Congratulations to the Peradeniya Medical School for fuelling and sustaining the fire in these researchers striving to push the boundaries of science and provide meaning to the art of healing.

Prof. Kemal Deen
MBBS (Peradeniya), MD (Birmingham), MS (Colombo), FRCS (Glasgow)
Professor Emeritus,
University of Kelaniya.

MESSAGE FROM THE GUEST OF HONOUR

Professor Neelakanthi Ratnatunga

Research projects have been a significant component of the undergraduate medical curriculum at Peradeniya for many decades. But in the past, only a selected few of these projects were officially presented or documented.

However, in 2022, the Peradeniya Medical School Annual Research Conference, "PEMSARC", was initiated by the faculty, to enable all the students to share their research findings with a discerning audience. This is a great gift to the medical students at Peradeniya as the work of every one of them, will be heard, appreciated, and documented.

Initially, a medical student-centered event for Peradeniya medical students, PEMSARC is now more inclusive enabling the participation of scientists from all levels of academia.

I congratulate the pioneers of this event and those who strive to sustain it. I extend my best wishes to the organizers and participants of the PEMSARC 24.

Prof. Neelakanthi Ratnatunga. MD, PhD
Professor Emerita,
University of Peradeniya.

MESSAGE FROM THE CONFERENCE CHAIR

Dr. Samidi Navaratna

The Peradeniya Medical School Annual Research Conference (PeMSARC) is of utmost importance to our faculty and is being held for the third successive year in 2024. It offers undergraduate and postgraduate students, academics, and the wider medical community a platform to showcase research, exchange ideas, and foster collaborations. Notably, PeMSARC is special because it is collaboratively planned and executed by academic staff and medical students, providing students with invaluable experience in organizing a medical conference while nurturing closer ties with faculty members.

Medical science consistently shows that with adequate resources, groundbreaking advancements in treatment and disease prevention are possible. Undergraduate research, in particular, is vital to this progress, fostering critical thinking, problem-solving skills, and a deep understanding of scientific inquiry in our students. Early engagement in research allows students to explore various facets of medicine, cultivate a passion for discovery, and contribute significantly to medical knowledge. This year, we have 42 undergraduate research presentations, and I have no doubt that the total experience of planning, implementing, and disseminating their research, as well as planning this conference, will not only inspire students to pursue research, think beyond conventional boundaries, and enhance their academic journey but also will prepare them for future roles as medical professionals, researchers, and innovators.

I extend my sincere appreciation to all authors, reviewers, and contributors for their scholarly work and to the Dean, organizing committee, and sponsors for their unwavering support. Your dedication ensures the sustainability of PeMSARC 24, making it a premier platform for research and innovation.

Thank you for being a part of PeMSARC' 24. I hope you find this conference inspiring and enriching.

Dr. Samidi Navaratna
MBBS, DCH, MSc, MD
Consultant Community Physician,
Senior Lecturer,
Head, Department of Community Medicine,
Faculty of Medicine,
University of Peradeniya.
Conference Chair, PeMSARC '24.

MESSAGE FROM THE SECRETARY

Dr. Manjula Peiris

Although the statement that 'research depends on the availability of time and money' is a gross oversimplification, there is some truth within its deeper meaning. Without adequate funding and the availability of infrastructure, many great ideas and innovations never get off the ground, and in a fast-paced world where human endeavour has diversified, time has become ever more precious.

Within the stipulated time frame of the medical curriculum, with severe limitations of resources and financial constraints, if we were to promote research, we need to look for a different incentive altogether. We need to inculcate within us an attitudinal drive, a self-motivation and a sense of perseverance towards research. It is through events like the PeMSARC where students interact with each other towards achieving a common goal, planning out innovative research, inspired by their teachers and working within a stipulated time frame, that research becomes a self-rewarding experience.

It has been said that researchers are born rather than made, and the talent in innovation lies with a few. But events such as the PeMSARC will no doubt provide a multitude of new opportunities where hidden talents will be brought into the limelight. Some will excel as organisers and presenters. Some in art and dance. All, I hope will develop a positive attitude towards research and development.

I convey my best wishes to all those involved.

Dr. Manjula Peiris
MBBS, MD, MRCS, FMAS
Consultant Surgeon
Senior Lecturer,
Head, Department of Surgery,
Faculty of Medicine,
University of Peradeniya.
Conference Secretary, PeMSARC '24.

MESSAGE FROM THE STUDENT CHAIR

Mr. Nadarasa Ganashiam

It is a privilege and honour to share a few thoughts as the Student Chairperson of PeMSARC'24. Since its inception in 2022, PeMSARC has grown into a faculty phenomenon, with a prime focus on "empowering the next generation of researchers."

Reflecting on my personal experience with the past two conferences, I am constantly reminded of Sir Isaac Newton's famous statement: "If I have seen further, it is by standing on the shoulders of giants." The remarkable work done in previous years sets the stage for us to showcase PeMSARC's potential yet again.

PeMSARC's uniqueness lies in the collective effort of all its members from the Faculty of Medicine, University of Peradeniya. Organising an event of this scale would be impossible without the unwavering support and dedication of our entire community.
Although our faculty has withstood the test of time, we continue to face challenges. Yet, as the adage goes, "when the going gets tough, the tough get going," despite the difficulties, we have persevered and are proud to present to you the Peradeniya Medical School Annual Research Conference for the year 2024.

Looking ahead, I wish for PeMSARC to thrive as a beacon of innovation and collaboration, inspiring future researchers to push the boundaries of medical science and uphold our commitment to excellence and growth, ensuring that PeMSARC remains a cornerstone of our faculty's legacy.

सर्वस्य लोचनं शास्त्रम् *(sarvasya locanaṃ śāstram)*
Science is the Eye Unto All

Mr. Nadarasa Ganashiam
President of PeMURC 2023/24
PeMSARC'24 Student Chairperson

PRE-CONGRESS WORKSHOP

PeMSARC'24 Pre-Congress Workshop was held at the Faculty of Medicine, University of Peradeniya as a hybrid event on July 22, 2024, with the participation of more than 400 students. The session was aimed towards expanding the knowledge of students on scientific writing and research publication.

TIME	TOPIC	RESOURCE PERSON
01.30 – 02.00 PM	Igniting a Curiosity for Research	Dr. Inosha Alwis *Lecturer (Probationary)* *Department of Community Medicine,* *Faculty of Medicine,* *University of Peradeniya*
02.00 – 02.30 PM	Optimizing Medical Record keeping for Superior Research	Dr. Manjula Peiris *Senior Lecturer* *Department of Surgery,* *Faculty of Medicine,* *University of Peradeniya*
02.30 – 3.00 PM	Turning Research into Actionable Policy	Prof. Samath Dharmaratne *Senior Professor* *Department of Community Medicine,* *Faculty of Medicine,* *University of Peradeniya*
03.00 – 03.20 PM	**REFRESHMENTS**	
03.20 – 03.50 PM	Introduction to AI and Research	Dr. Supun Manatunge *Lecturer (Probationary)* *Department of Pharmacology,* *Faculty of Medicine,* *University of Peradeniya*
03.50 – 04.20 PM	AI in Medical Diagnostics	Dr. Senani Samarasinghe *Lecturer* *Department of Anaesthesiology and Critical Care,* *Faculty of Medicine,* *University of Peradeniya*

THEMATIC RESEARCH PRESENTATIONS

LOWER LIMB MUSCULATURE: MORPHOLOGY, MORPHOMETRY AND EVOLUTIONARY SIGNIFICANCE

Warunie Kosgallana

Department of Anatomy, Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka

waruni.kosgallana@med.pdn.ac.lk

Bipedalism, the ability to walk upright, is characteristic of human evolution. Although many primates can briefly stand and walk on two legs, only humans use this posture as the primary mode of locomotion. With the upright posture shifting the centre of mass directly above the feet, features such as a mobile lower back, short pelvis, long lower limbs and short feet facilitate bipedal gait. The enlargement of the gluteus maximus to stabilize the trunk and change in the role of anterior gluteals and hamstrings from a propulsive action to a controlling role are major evolutionary changes recognized in humans, with the quadriceps and the plantar flexors being most important in producing the ground reaction during walking.

Peroneus tertius (PT), a muscle found only in humans and a few apes closest in the evolutionary chain is active during the swing phase of walking aiding bipedal gait. It is closely related to the extensor digitorum (EDL) muscle topographically with some texts considering it a part of it rather than a separate muscle.

The cadavers in the Department of Anatomy, Faculty of Medicine, University of Peradeniya have been evaluated for the morphology and morphometry of the PT and EDL muscles. A wide variation in the morphology including notable differences in the two legs of the same cadaver was observed. By studying 54 lower limb specimens, the absence of the PT was noted in the left leg of a male cadaver. This finding aligns with previous studies, where the absence of this muscle is observed in a minority and more frequently on the left side. Although data on the individual's dominant side is not available, this raises the question of this tendency has functional significance. Other morphological variations included an additional slip of the PT to the 5th toe replacing the lateralmost tendon of the EDL and a common muscle belly representing both the EDL and PT displaying the close relationship of the two muscles.

Analysis to find out the association between gender and the morphometric measurements of PT and EDL showed no significant gender difference in any of the measurements except the EDL muscle belly circumference which was larger in males ($p<0.001$). Intertendinous connections between the PT and EDL were observed in 30.77% of the specimens showing a mild negative correlation with the EDL muscle belly circumference ($\rho=-0.227$, $p=0.106$). This implies that an increased number of intertendinous connections may provide

additional support to the EDL as its size decreases. Analysis of the morphometric parameters revealed a moderate positive correlation between the muscle belly circumferences of PT and EDL ($\rho=0.521$, $p=0.008$) suggesting a complementary action between the two muscles rather than the PT being an evolutionary replacement of the EDL. In addition to providing insights into the evolutionary role, knowledge of these muscles' morphological and morphometric characteristics and variations is useful in clinical contexts, such as tendon and muscle replacement surgeries, as landmarks for medical procedures, and in assessing pathological conditions like stress fractures.

Keywords: *Gait, locomotion, posture, skeletal muscle, tendons*
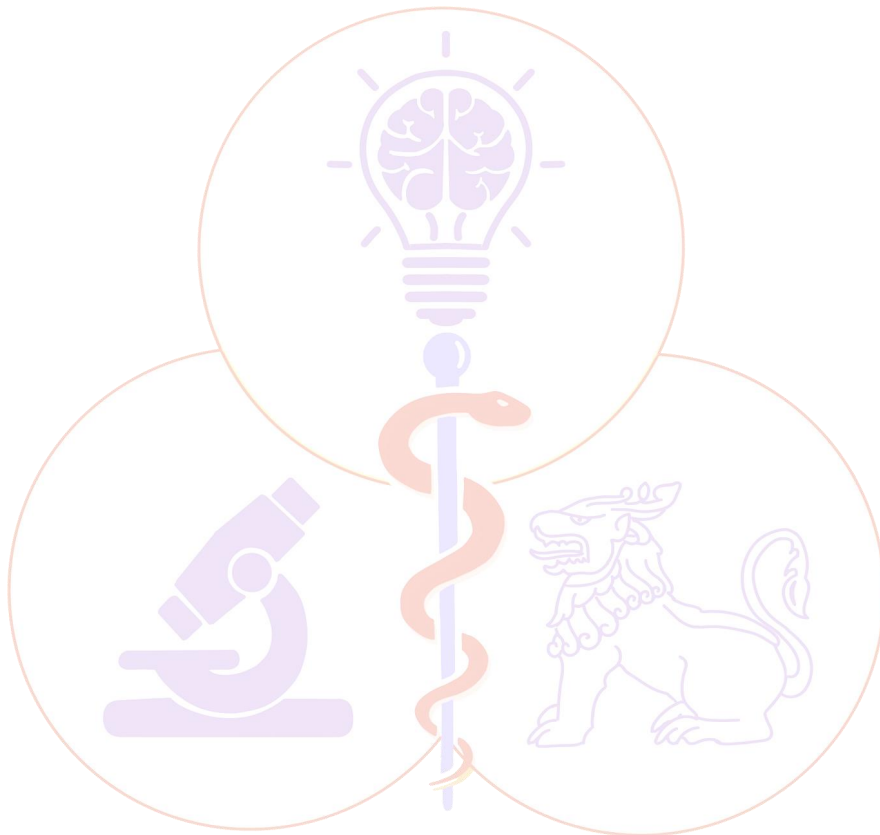
ADDRESSING SEXUAL HEALTH IN SRI LANKA: AWARENESS, STIGMA, AND BARRIERS TO PREVENTION

Samidi Navaratna

Department of Community Medicine, Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka
samidi.navaratna@med.pdn.ac.lk

Sexual health in Sri Lanka is confronted with critical challenges, including gaps in awareness, persistent stigma, and barriers to accessing preventive services. This plenary presents findings from a series of studies investigating these issues across diverse populations. The objective of this series of studies was to evaluate sexual health awareness, stigma towards HIV/AIDS and barriers to accessing sexual health services in Sri Lanka. A variety of research methods were employed to collect data from different groups: the general population, men who have sex with men (MSM), tea estate workers, and healthcare professionals. Data were gathered through questionnaires, interviews, and serological testing.

Research conducted in Kandy, among 869 residents, found high awareness of HIV/AIDS (93.5%), but limited knowledge about effective prevention measures, with only 58.1% recognising condoms as protective. Persistent stigma and misconceptions highlight the need for targeted educational interventions.

An examination of attitudes towards people living with HIV/AIDS (PLWHA) involving 120 participants through a cross-sectional survey using a validated telephone questionnaire, showed that 92% exhibited discriminatory attitudes, influenced by factors such as age, HIV-related knowledge, and fear of AIDS. This calls for urgent public education efforts to reduce stigma.

A study conducted among 114 nursing officers of Teaching Hospital, Peradeniya, found widespread awareness of post-exposure prophylaxis (95%). Still only 8% possessed adequate knowledge, and 40.7% held negative attitudes towards PLWHA, highlighting gaps in training and attitudes within the healthcare sector.

In a study among 404 tea estate workers only 16% were aware of HIV/AIDS and 95% lacked knowledge about mother-to-child transmission and breast milk transmission. Despite the high acceptability of HIV testing (87%), barriers included lack of knowledge, stigma, and confidentiality concerns. and identified barriers such as stigma and concerns about confidentiality. Despite the high acceptability of HIV testing, there is a pressing need for comprehensive awareness programmes. Similarly, A cross-sectional survey of 400 tea estate workers aged 18-24 in Kotagala revealed that while HIV, hepatitis B, and syphilis prevalence was low, there is a critical gap in sexual health education and services. The study found early sexual debut, high rates of same-sex experiences among males, and a lack of awareness about HIV/AIDS and STIs. These findings emphasise the need for integrated sexual health services tailored to this demographic.

A study conducted at the Central STD Clinic, Colombo, of 388 MSM revealed that while 83.8% were aware of condom effectiveness, only 6.6% used condoms consistently. High-risk behaviours and early sexual debut among this group highlight the necessity for enhanced sexual health strategies.

Analysis of 400 MSMs using internet platforms revealed high-risk sexual behaviours, with 69% engaging in unsafe practices. The internet is identified as both a risk environment and a potential platform for targeted health promotion. Finally, a study of 250 MSMs recruited online indicated that 24% identified as bisexual, 69% as gay, and the remainder as sex service providers. Barriers to accessing STD testing and treatment were noted, with a preference for private medical practitioners.

The studies collectively reveal significant gaps in sexual health knowledge, ongoing stigma, and barriers to accessing preventive services in Sri Lanka. Addressing these challenges through comprehensive education, stigma reduction, and improved service access is crucial for advancing sexual health outcomes and equity in care.

Keywords: *Health promotion, sexual and gender minorities, sexual health, sexually transmitted diseases, vertical infectious disease transmission*
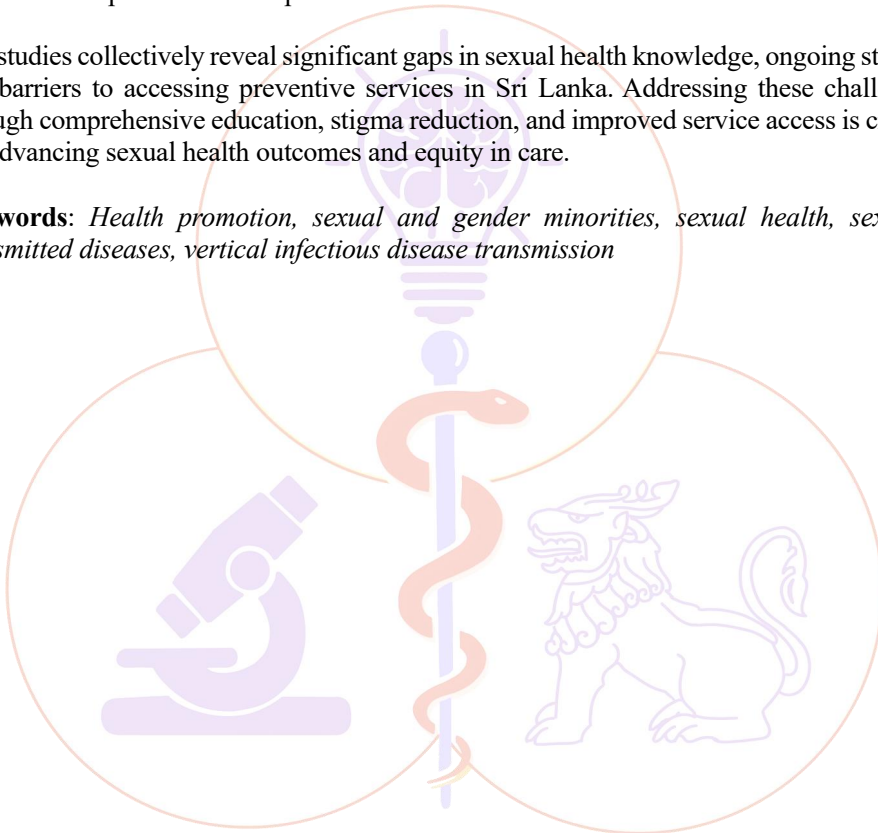
HIDDEN IN PLAIN SIGHT: UNCOMMON PRESENTATIONS OF CHILD ABUSE

Kasun Bandara Ekanayake[*], Amal Nishantha Vadysinghe
Department of Forensic Medicine, Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka
[*]kasun.ekanayake@med.pdn.ac.lk

Child abuse can present in the form of physical, sexual, emotional abuse and neglect, or in combination. Such cases can manifest in subtle and atypical ways that can elude detection unless looked upon carefully by vigilant healthcare professionals. Unfavourable socio-economic background and psychiatric illnesses among the parents and guardians also can lead to children being abused, exploited and neglected, often with long-term physical and psychological consequences. Children presenting with urogenital symptoms or with a history of learning disabilities warrant thorough investigations since such presentations could be red flag signs of child abuse. In Sri Lanka, where child monk ordination is practised, children who are ordained without proper guidance may be subjected to physical violence by fellow monks. Parents of the child monks can also exploit the priesthood status for financial gains. Prescribing long-term family planning methods to underage females who are at risk of getting pregnant may lead to sexual exploitation and other consequences. Furthermore, it should also be noted that there are clinical conditions that may mimic physical abuse, leading to unwanted medico-legal interventions. This communication intends to highlight the importance of early detection of uncommon presentations of child abuse at the hospital setting and the community level for timely interventions.

Keywords: *Child abuse, emotional abuse, mental disorders, neglect, sex offences*
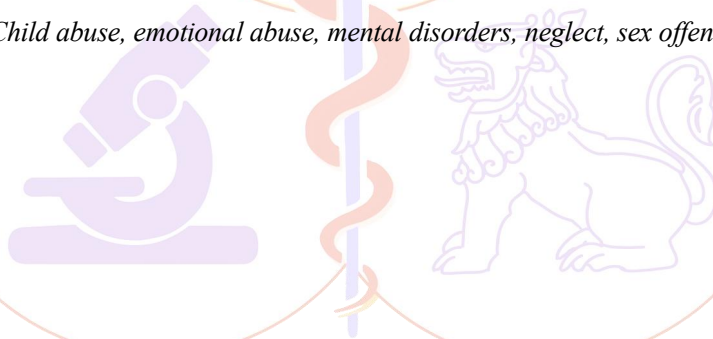
ANATOMICAL VARIATIONS OF THE ABDOMINAL VASCULATURE

Jayamini Sri Jayarathna

Department of Anatomy, Faculty of Medicine, University of Peradeniya, Peradeniya,
Sri Lanka
jayamini.jayarathna@med.pdn.ac.lk

The abdomen's main and centrally placed vessels are the abdominal aorta (AA) and the inferior vena cava (IVC) lying on the posterior abdominal wall with the vein usually on the right side of the artery.

The main branches of the AA supply the gut and its derivatives (via single ventral arteries – coeliac, superior mesenteric, inferior mesenteric), other abdominal viscera (via paired branches – supra renal, renal, gonadal) and abdominal wall (via paired branches – inferior phrenic, lumbar). A small midline posterior branch gives minute branches to the rectum (middle sacral artery). It ends by dividing into two common iliac arteries in front of the body of the L4 vertebra.

The IVC has a longer course in the abdomen and receives many tributaries after commencing at the confluence of common iliac veins behind the right common iliac artery. These tributaries are not identical to the branches of the AA. Instead of three ventral tributaries from the alimentary tract, blood from the gut and its derivatives are collected by the portal venous system and then reach the IVC through the liver via hepatic veins. Other main tributaries are paired tributaries of the 3rd and 4th lumbar, renal, phrenic veins, right gonadal and right supra renal veins.
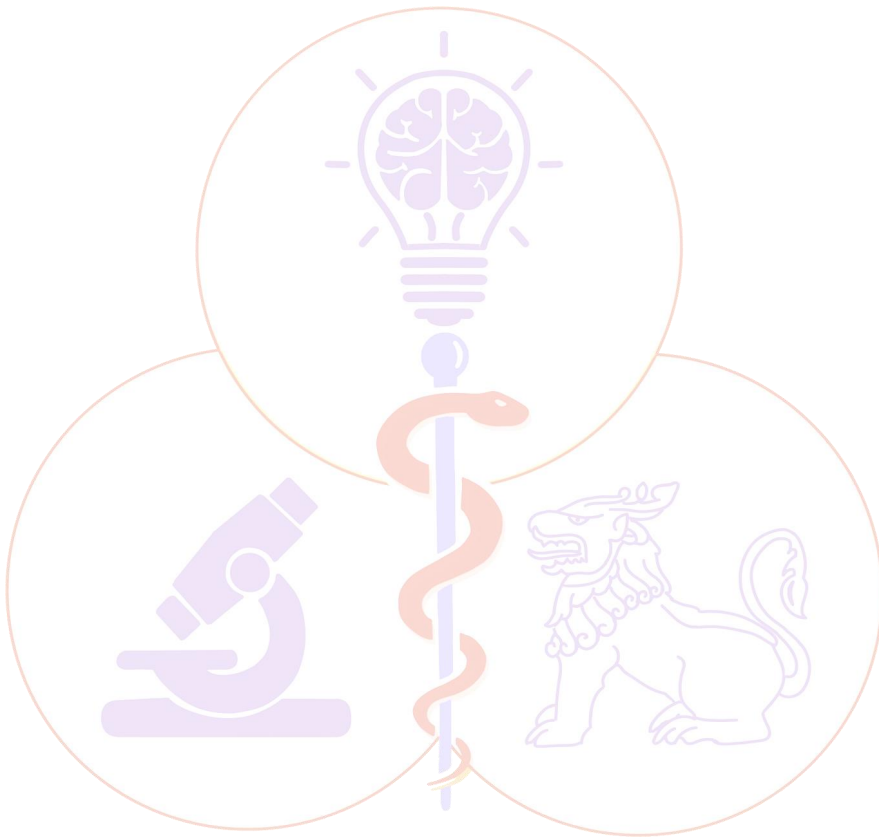
There are several anatomical variations in the vascular systems of the abdomen, whether it is arterial, systemic venous, or portal venous. Here we discuss several descriptive studies done at the Departments of Anatomy, Radiology and Forensic Medicine, Faculty of Medicine, University of Peradeniya to observe and record the anatomical variations of the abdominal vasculature through cadaveric dissections, autopsies and contrast-enhanced computed tomography imaging along with relevant research abstracts and case reports. Under the theme, up to now, we have five studies; 1. The portal vein, its origin and tributaries, 2. Draining patterns of the inferior mesenteric vein, 3. Variations of Henle's gastrocolic trunk, 4. Hepatic artery variations and 5. Cystic artery origin and variations. This theme will evolve to include other main vessels in the region soon.

As per preliminary data, the commonest pattern of portal vein origin is by the combination of the splenic vein and superior mesenteric vein where the inferior mesenteric vein joins the superior mesenteric vein. Its dominant branching pattern divides into right and left portal veins, followed by trifurcation. The commonest inferior mesenteric vein draining pattern is to the superior mesenteric vein followed by the splenic vein. Henley's trunk was present in all the preliminary samples with the right gastroepiploic vein as its commonest tributary followed by the anterior superior pancreaticoduodenal vein. All hepatic arteries originate from the common hepatic artery of the coeliac trunk. More than 90% of cystic arteries arise

from the right hepatic artery and when it is not entirely inside the Calot's triangle, it is commonly posteriorly related to the common hepatic duct.

The knowledge of normal and variant anatomy of abdominal vasculature is crucial in diagnosing and treating the diseases in the abdominal viscera. The data from the Sri Lankan population will aid in determining new surgical approaches suitable for our population as well as new research paths.

Keywords: *Abdominal aorta, autopsy, hepatic artery, inferior vena cava, radiology*

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ORAL PRESENTATION ABSTRACTS

OP – 01
AWARENESS OF BREAST CANCER AND PRACTICES ON SELF-BREAST EXAMINATION AMONG UNDERGRADUATES OF FACULTY OF MEDICINE, UNIVERSITY OF PERADENIYA: A CROSS-SECTIONAL STUDY

Alawatta RSD[1], Alahakoon AMND[1*], Abdullah AA[1], Ahamad MSH[1],
Amarasekara AHK[1], Dahanayake P[2]
[1]*Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka*
[2]*Department of Physiology, Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka*
[*]navodalahakoon@gmail.com

Introduction: Breast cancer is a leading cause of mortality affecting women. Awareness of risk factors, warning signs and practicing breast self-examination (BSE) is vital for early detection. Medical students, as future doctors, should be well-versed about risk factors and BSE to educate patients effectively.

Objectives: To determine awareness of breast cancer and practices on breast self-examination among medical students of University of Peradeniya.

Method: This cross-sectional study was conducted among 406 female and male undergraduates using a pre-tested questionnaire. Data analysis was done by Jamovi software version 2.4.6 and presented using descriptive and inferential statistics. A 95% confidence interval was computed to quantify the association between independent variables and the dependent variables.

Results: Results show 29.56% of participants had good awareness of early warning signs and risk factors of breast cancer 46.55% had good knowledge of BSE technique. Awareness was significantly higher among older, senior, Tamil participants. The most identified risk factor was first-degree relative with breast cancer (91.80%), and the most identified early warning sign was breast lump (93.30%). Internet was the most common source of BSE knowledge (54.40%). BSE was performed at random by most participants (77%). The main barrier to perform regular BSE was the absence of symptoms (62%). There is a significant reduction in participant's ability to recall risk factors or warning signs compared to recognising the same factors.

Conclusions: This study reveals that only one-third of participants have good awareness level of breast cancer which is suboptimal for medical undergraduates. Nearly a half of the participants had a good knowledge level on BSE which is satisfactory. Social media plays a key role in spreading awareness which can be used in future implementations. Addressing barriers to BSE is essential to promote BSE as a self-screening tool.

Keywords: *Awareness, breast cancer, risk factors, warning signs*

OP – 02

STUDY OF CHRONIC WOUNDS AND THEIR RISK FACTORS AMONG PATIENTS ATTENDING THE OPD AND SURGICAL WARD, TEACHING HOSPITAL, PERADENIYA

Hassen MRHRR[1*], Gunawardhana HGM[1], Gunawardhana MMMAH[1],
Gunawardhane IGCH[1], Hapuarachchi HACDB[1], Pethiyagoda K[2]
[1]*Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka*
[2]*Department of Community Medicine, Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka*
*rizwie.hassen.18@med.pdn.ac.lk

Introduction: Chronic wounds are a local as well as a global health burden being a significant contributor to morbidity and mortality in Sri Lanka. The risk factors of chronic wounds are of two groups such as aetiological risk factors and constitutional risk factors such as age, gender, occupation, economic status, and marital status.

Objectives: This study was carried out among patients attending the out-patient department and surgical wards of Teaching Hospital, Peradeniya, to identify the commonly presenting chronic wound types. Risk factors of the chronic wounds were investigated and were associated with the socio-demographic pattern of the study population.

Methods: This study was a descriptive cross-sectional study, conducted using an interviewer-administered questionnaire by trained interviewers. SPSS Statistics version 22.0 software was used to describe sociodemographic factors and find associations between risk factors and sociodemographic factors were obtained by applying chi-square test.

Results: Diabetes was identified as the commonest risk factor (64.2%) which had a significant association with age (χ^2=13.60, df=3, p=0.003) and marital status (χ^2=5.01, df=1, p=0.025). Diabetes did not show any association with gender (χ^2 =0.255, df=1, p= 0.614), ethnicity (χ^2=3.662, df=2, p=0.160), job (χ^2=2.578, df=2, p=0.276), educational level (χ^2=3.036, df=4, p= 0.544)) and monthly income (χ^2=2.150, df=2, p= 0.341). Second most common risk factor was infections (41.4%) which was not significantly associated with any of the socio-demographic factors. Third commonest risk factor was varicose veins (29.3%) and it also did not have any significant association with the socio-demographic factors. Other risk factors identified were, intermittent claudication (13.5%), peripheral vascular disease (6.5%), prolonged bed rest (6.5%) and malignancies (1.4%).

Conclusions: In conclusion, this study has identified some common risk factors of chronic wounds and significant associations with socio-demographic factors of which can be addressed in awareness programs directed towards preventing chronic wound occurrence.

Keywords: *Chronic wounds, demographic factors, diabetic ulcers, infected wounds*

OP – 03

APPLICABILITY OF THE MODIFIED APLS WEIGHT-FOR-AGE CALCULATION FORMULA ON A SELECTED POPULATION OF SRI LANKAN CHILDREN ATTENDING A TERTIARY CARE HOSPITAL

Kariyawasam KHKG[1*], Kannathasan V[1], Karunanayaka RMDT[1],
Karunathilaka KTHH[1], Kaushalya JP[1], Dissanayake PVD[2]
[1]*Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka*
[2]*Department of Paediatrics, Faculty of Medicine, University of Peradeniya,
Peradeniya, Sri Lanka*
*kalanakariyawasam99@gmail.com

Introduction: Therapeutic dosage depends on the weight of a paediatric patient. With the concomitant practical difficulties of measuring weights, various weight estimation methods are used in paediatric emergencies. The modified APLS (Advanced Paediatric Life Support) formula is the method that is currently being used in Sri Lanka, despite the lack of evidence of the formula being applicable in a similar population.

Objectives: This study determined whether the modified APLS formula is compatible to be used in a Sri Lankan population while observing any possible differences in the applicability in the three age groups that the formula is designed for and in male and female children separately.

Methods: This study was a retrospective cross-sectional study conducted using data obtained from children aged 1 month to 12 years, attending Teaching Hospital, Peradeniya. The weights estimated using the formula were compared to the measured weights of the children using the mean percentage error (MPE) and the percentage of weight estimated within 10% (PW10) and 20% (PW20) of the measured weight as primary outcome variables. The Bland-Altman method was used to assess agreement between the estimated and measured weights.

Results: A sample of 387 children was considered for this study. The MPE (95% Confidence Interval), PW10 and PW20 values of 26.9% (23.2% - 30.7%), 23.3% and 43.9% were calculated respectfully. The Bland-Altman analysis demonstrated a bias (95% Limits of Agreement) of 3.21kg ([-8.17kg] – 15.39kg).

Conclusions: The formula's performance was very poor in Sri Lankan children with an overall overestimation of weights with the degree of overestimation increasing in the three age groups as age increased. There was no significant difference in the weight estimation accuracy in boys and girls. Therefore, a direct weight measurement or a more accurate alternative weight estimation method is recommended whenever feasible.

Keywords: *Advanced Paediatric Life Support, emergencies, paediatrics, weight estimation, weight-for-age*

OP – 04

PREVALENCE OF CHRONIC PAIN AMONG ADULTS IN A SELECTED GRAMA NILADARI DIVION IN SRI LANKA

Sandamini WMP[1*], Rishadha MRF[1], Riskana AKS[1]
Samaranayaka MCN[1], Sandaruwan HP[1], Nanayakkara PSK[2]
[1]*Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka*
[2]*Department of Anaesthesiology and Critical Care, Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka*
*malsha.sandamini.18@med.pdn.ac.lk

Introduction: This pilot study investigates the prevalence of chronic pain among adults in Sri Lanka. This aims to give a broader insight into a poorly researched topic in Sri Lanka to identify common pain sites and associated risk factors to benefit chronic pain management.

Objectives: To measure the prevalence of chronic pain among adults (18 years above) in the Embilmeegama Grama Niladhari division in Sri Lanka along with identifying the commonest site of chronic pain, the age group which are mostly affected. To explore the associated demographic factors of chronic pain

Methods: The study was carried out among 337 adults (other than 63 people who did not consent) in Embilmeegama Grama Niladhari division using an interview-based questionnaire. Three main age group categories were considered in analysing results; young adults (18-30 years), middle age (31-45 years) and old age (>46 years). The results were analysed using GraphPad Prism software.

Results: The overall prevalence of chronic pain among adults in the Embilmeegama Grama Niladhari Division was found to be 44% out of the people who were interviewed. A significantly higher percentage of females complained of chronic pain compared to males (50% Vs. 34%). There was a strong correlation between chronic pain and advancing age with the highest prevalence (63.2%) being in the 'older adults' group. (Older adults > 46 years). The analysis identified the most common site of chronic pain as back pain followed by headache. The analysis detected diabetes mellitus and hypertension as comorbidities with a positive relationship to chronic pain.

Conclusions: We conclude of a significant prevalence of chronic pain among adults with a statistical percentage among an advanced age population. Back pain and headache are deduced as the most common sites of chronic pain. We also conclude that comorbidities of diabetes mellitus and hypertension were significant risk factors for the prevalence of chronic pain.

Keywords: *Chronic pain, prevalence, adults*

OP – 05

ASSESSMENT OF KNOWLEDGE AND AWARENESS OF COMMON THYROID DISORDERS AMONG NON-MEDICAL STUDENTS AT THE UNIVERSITY OF PERADENIYA: A CROSS-SECTIONAL STUDY

Dissanayake DMS[1], Ekanayake EMCU[1*], Erathna EWUT[1], Fernando PKN[1], Namgyel D[1], Pathirana LYV[2]

[1]*Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka*
[2]*Department of Anatomy, Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka*
*22uthpala@gmail.com

Introduction: Thyroid disorders are one of the most neglected and underdiagnosed medical conditions. Even though they are commonly encountered in clinics and thyroid cancers are the commonest endocrine malignancies worldwide, a lack of knowledge and awareness is seen among people, resulting in potential consequences such as delayed medical assistance and limited treatment options. The situation among the Sri Lankan population is nearly similar to other studies conducted in certain parts of the world. Therefore, this study emphasizes the importance of understanding common thyroid disorders, among the youth - the university students - with the ultimate goal of introducing interventions to improve knowledge among those.

Objectives: To assess the knowledge and awareness of common thyroid disorders among non-medical students at the University of Peradeniya, Sri Lanka

Methods: This study was an observational descriptive cross-sectional study conducted among 396 participants from five non-medical faculties at the University of Peradeniya. They were recruited using the non-probability consecutive sampling method after obtaining informed written consent. The data was collected using a self-administered questionnaire and the knowledge status was evaluated using a scoring method. The associations between gender, Advanced Level stream and thyroid disease exposure status were assessed using analytical software.

Results: 396 patients were involved in the study of which the majority (59.3%) was females. 10.1% have an exposure status either by themselves or by their family members. Being a female (p=<0.001), following Advanced Level in the biological science stream (p=<0.001), previous exposure to thyroid disorders (p=0.032) was found to be significantly associated with good knowledge regarding common thyroid disorders.

Conclusions: The majority of the population has a good knowledge of the basic anatomy of the thyroid gland, common thyroid disorders, risk factors and investigation modalities. Being a female, following the biology stream in the Advanced Level and having a thyroid disease exposure status have positively affected on knowledge status regarding thyroid disorders.

Keywords: *Thyroid disorders, knowledge and awareness, university students*

OP – 06

THE IMPACT OF SOCIAL ANXIETY ON ACADEMIC PERFORMANCE OF MEDICAL UNDERGRADUATES OF THE UNIVERSITY OF PERADENIYA

Sudusinghe SP[1*], Srinath GDP[1], Srirenganathan T[1], Subasinghe MLM[1],
Subasinghe SATM[1], Rajapakse T[2]

[1]*Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka*
[2]*Department of Psychiatry, University of Peradeniya, Peradeniya, Sri Lanka*
*sajitha.sudusinghe.18@med.pdn.ac.lk

Introduction: Social anxiety, characterized by the fear of negative evaluation in social situations, is a common issue among university students, particularly impacting academic performance. There remains a dearth of research examining its effects within local contexts.

Objectives: The primary objective of this study was to describe the impact of social anxiety on the academic performance of medical undergraduates at the University of Peradeniya. Through a descriptive cross-sectional approach, it examined the prevalence of social anxiety among medical students and its association with immediate semester Grade Point Average (GPA), providing insights for interventions.

Methods: A descriptive cross-sectional study was conducted among medical students at the University of Peradeniya. A sample of 274 students was included using stratified random sampling. Social anxiety was assessed using the Liebowitz Social Anxiety Scale, which has been validated for use in Sri Lanka, and academic performance was measured by immediate semester GPA. Data was collected through a self-administered questionnaire. Only students who provided informed consent were included in the study.

Results: Of 274 medical students surveyed, 43.4% screened positive for social anxiety, with the highest prevalence among the 18/19 batch (65.38%). Variations across genders were noted, with higher prevalence among females (47.89%) compared to males (38.64%). A statistically significant association was observed between social anxiety and academic performance ($p= 0.024$).

Conclusions: This study indicates that more than one-third (43.4%) of medical students surveyed were experiencing symptoms of social anxiety, which significantly affects their academic performance. It is crucial to recognize that various factors such as socioeconomic status, cultural aspects, and physical health can contribute to academic decline. Addressing these multifaceted influences is essential for developing effective interventions to enhance students' well-being and academic success. Innovative methods tailored to the local cultural context should be explored, alongside awareness campaigns on mental health, enhanced academic support initiatives, and improving university mental health services.

Keywords: *Academic performance, medical undergraduates, University of Peradeniya, social anxiety, Sri Lanka*

OP – 07

PSYCHOLOGICAL BULLYING AND ITS ASSOCIATED FACTORS AMONG FIRST YEAR UNDERGRADUATES OF THE UNIVERSITY OF PERADENIYA

Weeranayake HSS[1*], Weerasinghe RRDS[1], Weerasinghe WDCK[1],
Weerasinghe WPJLV[1], Ginige P[2]

[1]*Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka*
[2]*Department of Psychiatry, Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka*
*saveen.weeranayake.18@med.pdn.ac.lk

Introduction: Bullying, an interaction between perpetrators and victims in a repeated manner in the forms of physical, verbal, emotional and cyberbullying, can lead to negative consequences ranging from minor forms of embarrassment to suicidal ideation. In Sri Lankan universities, bullying is evident, particularly among first-year students, yet underreported as well as under-researched.

Objectives: This study examined the prevalence of bullying among first-year undergraduates in medicine, dental science, and allied health sciences faculties, as well as related factors, consequences, and the help-seeking actions taken by victims.

Methods: In 2023, a descriptive cross-sectional study was conducted with 293 first-year students using a Google form-based questionnaire covering physical, verbal, emotional, and cyberbullying. Of these, 277 students (91.5%) responded. Associations between bullying factors, outcomes, and help-seeking behaviours were analysed using the chi-square test and Jamovi software.

Results: Approximately 6.85% of students reported being bullied. Verbal and emotional abuse were most common, particularly among students under 22 (52.63%), females (63.15%), and medical undergraduates (42.10%). Bullying was more frequent among Sinhalese students living in boarding houses. Significant associations included scolding of boarding students (p=0.049), inappropriate sexual comments (p=0.003) and name-calling (p=0.007). Bullying locations included canteens, study areas, hostels, and labs (p=0.015). Negative impacts ranged from reduced time for academic work (p=0.039) to suicidal ideation. Help-seeking was noted in 21.05% of victims, particularly those over 22 (p=0.031) and medical students (p=0.018).

Conclusions: Although it is underreported, bullying among first-year students has caused significant psychological impacts, including suicidal ideation. Yet the health-seeking behaviours are not at a satisfactory level that warrants further investigation and prompt interventions to mitigate the educational disruptions

Keywords: - *Bullying, verbal abuse, cyberbullying, Sri Lankan universities, first-year undergraduates, psychological impact, help-seeking behaviour*

OP – 08

ASSOCIATION BETWEEN EMOTIONAL INTELLIGENCE AND COPING SKILLS AMONG FIRST YEAR MEDICAL UNDERGRADUATES IN THE UNIVERSITY OF PERADENIYA

<u>Kularathna NK</u>[1*], Kavinda DTWS[1], Kavinda PVPGD[1],
Kavindi WMPPH[1], Kularathna HK[1], Morel RP[2], Bulathwatta A[3]

[1]*Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka*
[2]*Department of Parasitology, Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka*
[3]*Department of Psychology, Faculty of Arts, University of Peradeniya, Peradeniya, Sri Lanka*
*navodya.kularathna.18@med.pdn.ac.lk

Introduction: Medical students face unique challenges over their academic years. Their training involves rigorous coursework while facing stressful situations. Therefore, development of coping strategies and emotional intelligence (EI) is essential for mental well-being.

Objectives: To describe the EI and coping skills among first-year undergraduates of the Faculty of Medicine, University of Peradeniya, while discussing the association between them.

Methods: Ethical clearance was obtained from the Ethics Review Committee of the Faculty of Medicine, University of Peradeniya. Cross-sectional study design was used. Quantification of EI and coping skills was done using the Trait Emotional Intelligence and Brief COPE questionnaires. Study population consisted of Sri Lankan students of the first-year batch of the Faculty of Medicine, University of Peradeniya. Data analysis was done using SPSS Statistics software. For assessment of statistical correlation, Pearson correlation and Spearman rank correlation were used. For statistical comparison, t-test was used.

Results: Of a batch of 234 students, 208 (88.89%) responded. Response rates of male and female students were 76.0% and 98.5% respectively. EI was highest in well-being (mean=4.35, SD=0.87) while lowest in emotionality (mean=3.58, SD=0.82). Problem-based coping (PBC) (mean=2.99, SD=0.47) was higher than emotion-based coping (EBC) (mean=2.55, SD=0.39) and avoidant coping (AC) (mean=2.10, SD=0.41). AC was significantly higher in male students than female students ($p=0.018$). EI showed a positive correlation with PBC and EBC ($p<0.01$). There was no correlation between EI and AC.

Conclusions: This study shows a positive relationship of EI with PBC and EBC. However, AC showed no relationship with EI. Enhancing EI in medical undergraduates would be beneficial in improving their adaptive coping skills. Developing EI and adaptive coping skills among medical undergraduates could contribute to their academic success and prepare them for compassionate patient care in the future.

Keywords: *Coping skills, emotional intelligence, emotions, medical students*

OP – 09

STRESS AND ANXIETY LEVELS AMONG SECOND YEAR STUDENTS IN THREE FACULTIES OF THE UNIVERSITY OF PERADENIYA

Hettiarachchi HNP[1*], Hettiarachchi TH[1], Hettige SD[1], Hewage NPG[1], Illagolla AI[1], Amaratunga HA[2]

[1]*Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka*
[2]*Department of Anatomy, Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka*
*nuwan.hettiarachchi.18@pdn.ac.lk

Introduction: University students are highly susceptible to stress and anxiety due to academics, family issues, economic and relationship problems and other factors. Interventions require information regarding the prevalence and trigger factors.

Objectives: To assess the stress and anxiety levels and associated factors among second-year students in the Faculties of Arts, Medicine, and Management at the University of Peradeniya.

Methods: This descriptive cross-sectional study recruited second-year-students in 2023, excluding repeaters. Faculty-wise sample sizes were calculated using a formula for finite populations. Hundred and sixty-seven Medical, 130 Management and 316 Arts students were recruited through simple random sampling. Data was collected using an online Google Form in all three languages after obtaining informed consent. The questionnaire included general information, stress and anxiety triggers, and Depression Anxiety Stress Scale 21 (DASS-21, sensitivity 78-89%, specificity 71-76%). Data was analysed using descriptive statistics, while comparisons were made with the Pearson's Chi-square test, using SPSS version 26.0.

Results: Medical students recorded the highest stress (44.44%) and anxiety (67.32%) levels, while Arts students reported the lowest stress (35.44%), and Management students reported lowest anxiety (49.58%) levels. More females were stressed in Arts (35.52%) while more males reported stress and anxiety in other faculties. Assignments (53.85% among Management students), limited resources (24.42% among Arts students), lectures, and exam dissatisfaction (62.74% among medical students), were compounded by inadequate facilities and study challenges. Medical students faced assignment pressure, while Management students experienced disagreements with lecturers (64.96%) and insufficient study time (62.39%). Anxiety arose from poor grades (62-65% among medical students), study environment issues, and study medium challenges. Arts and Management students were stressed by rejections and chronic illnesses (13-22%), with perceived obesity (15.43%) linked to increased anxiety in Arts students.

Conclusions: Varying levels of stress and anxiety were reported among the undergraduates, with medical students being affected more. Exam-related stress and anxiety were high in all faculties while rejections, chronic illnesses and perceived obesity were factors unrelated to academics.

Keywords: *Stress, anxiety, students, medical, universities*

OP – 10

PREVALENCE OF DEPRESSION, ANXIETY, STRESS AND ITS ASSOCIATION WITH SUBSTANCE USE AMONG MEDICAL STUDENTS OF THE UNIVERSITY OF PERADENIYA

Dharmadasa GMHL[1*], Dharmasena DGVSK[1], Dharmasena MH[1],
Dias KMGSM[1], Dilisara PAU[1]

[1]*Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka*
[2]*Department of Psychiatry, Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka*
*hldharmadasa@gmail.com

Introduction: Medical students have higher rates of depression, anxiety and stress compared to the general population. As young adults, it heightens the risk of attracting to substance use. This study evaluates the prevalence of depression, anxiety and stress and their relationship with substance use among medical students at the University of Peradeniya.

Objectives: To assess the correlation between substance use and anxiety, stress and depression levels and their prevalence among undergraduate medical students at the University of Peradeniya.

Methods: A descriptive cross-sectional study was conducted among medical students at the University of Peradeniya from batches 17/18 to 21/22. Sample sizes were calculated using a 95% confidence level and a 5% margin of error. Data were collected through an online English questionnaire covering demographics, substance use and mental health assessment with the Depression Anxiety Stress Scale (DASS-21).

Results: Alcohol and tobacco were the most commonly used substances, with 93 (32.3%) of male students and only 9 (2.9%) of female students using them. Among the male population, 48 (16.7%) used alcohol alone compared to only 3 (1%) among the female population. Other substances were used in combination, including marijuana, cannabis, methamphetamine, and opioids. 82.52% (491) of students reported no substance use, though non-use slightly decreased with seniority. Substance use was higher among male students (33.1%) than female students (2.3%). Among substance users, most had normal levels of stress (54.33%) and depression (40.16%), but 31.4% experienced extremely severe anxiety.

Conclusions: At the University of Peradeniya, alcohol and tobacco are the most used substances among medical students. Most students did not use substances, with male students more likely to do so than female students. Substance users had notably high anxiety levels. These findings highlight the need for targeted mental health and substance use interventions, especially for male students and those with severe anxiety.

Keywords: *Depression, anxiety, stress, substance use, medical students, University of Peradeniya*

OP – 11

SURVEY ON PROPHYLACTIC ANTIBIOTIC USE IN ELECTIVE SURGICAL PROCEDURES AT A TERTIARY CARE CENTER

Tharaka WAPD [1*], Sumathipala HES[1], Sumanarathna WDAJ[1], Tennakoon TMSKK[1],
Thaksharani WM[1], Dissanayaka BN[2], Dharmapala AD[3]
[1]*Faculty of Medicine, University of Peradeniya, Sri Lanka*
[2]*Department of Microbiology, Faculty of Medicine, University of Peradeniya,
Peradeniya, Sri Lanka*
[3]*Department of Surgery, Faculty of Medicine, University of Peradeniya, Peradeniya,
Sri Lanka*
*dinindu.tharaka.18@med.pdn.ac.lk

Introduction: Surgical site infections lead to significant morbidity, mortality, and broad-spectrum antibiotic use. Surgical prophylaxis is highly effective in reducing surgical site infections in clean contaminated and some clean surgeries.

Objectives: To evaluate compliance of surgical prophylactic antibiotics with national antimicrobial guidelines (2016) for the indication, choice, dose, route and timing in clean and clean contaminated routine general surgical procedures at the Teaching Hospital Peradeniya.

Methods: A custom-made questionnaire-based, prospective cross-sectional study with a descriptive component, was conducted in general surgical wards at the Teaching Hospital Peradeniya. Data were collected by researchers by directly observing surgeries and from the patient records from 9th August to 20th August 2023.

Results: A total of 80 surgeries were analysed. Of these, 51 (63.75%) were clean and 29 (36.25%) were clean contaminated. Prophylaxis was recommended in 55 (68.75%) surgeries and administered only in 48. Also, prophylaxis was administered in 9 (11.25%) surgeries while it was not recommended by the guideline. Compliance with the guideline to either administer or not administer antibiotics was seen in 64 (80%) surgeries. Antibiotic choice, route, dose, timing, and duration were analysed in 48 surgeries where prophylactic antibiotics were recommended and given. The choice was correct and adequate in 27 (56.25%) and was adequate in 16 (33.33%) surgeries. The choice was considered inadequate if only one of the recommended antibiotics was given when a combination was recommended. Incorrect choices were observed in 5 (10.42%). The study analysed 47 antibiotics administered as correct choices in 27 surgeries and found 100% adherence with the route, 72.34% (34) with the dose, and only 6.38% (3) adherence with timing. Duration was correct in all, but overall total compliance was only 2.5%.

Conclusions: The high rate of non-compliance seen with timing is a concern and contributed significantly to the very low overall compliance

Keywords: *Surgical site infections, prophylactic antibiotic, compliance, elective surgical procedures*

OP – 12

KNOWLEDGE, ATTITUDES, PRACTICES AND FACTORS RELATED TO ANTIBIOTIC USE DURING PREGNANCY AMONG ANTENATAL CLINIC ATTENDEES IN THE KANDY DISTRICT, SRI LANKA

Udugampola IU[1*], Udayasiri KMRI[1], Udayangani RBDH[1],
Udayashani EKN[1], Rabten T[1], Gihan MC[2], Liyanapathirana LVC[3]

[1]Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka
[2]Department of Obstetrics and Gynaecology, Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka
[3]Department of Microbiology, Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka
*induni.udugaampola.18@med.pdn.ac.lk

Introduction: Identifying patterns and factors behind antibiotic misuse during pregnancy is crucial for effective interventions in combating antibiotic resistance in both mothers and neonates.

Objectives: To describe knowledge, attitudes, and practices, along with associated factors, regarding antibiotic use during pregnancy among antenatal clinic attendees of a tertiary care hospital in the Kandy district.

Methods: This cross-sectional study was conducted among antenatal clinic attendees at the Teaching Hospital Peradeniya, using a validated, self-administered questionnaire, between June and July of 2023. Knowledge (K-score), attitude (A-score) and practice (P-score) scores were calculated and compared with socio-demographic factors.

Results: Of the 383 participants, the majority were below 30 years; 98 (25.6%) had received higher education and 116 (30.3%) were employed. The common sources of information were doctors (200, 52.2%) and midwives (132,34.5%). Knowledge regarding the effectiveness and action of antibiotics was identified to be poor, with the common cold (65, 51.6%) being the commonest condition for taking antibiotics. The majority (163, 42.6%) misidentified paracetamol as an antibiotic. However, most of them (347, 90.6%) agreed that pregnant women should consult a doctor before taking antibiotics. The median K-score was 5.00 (IQR 2.00 – 8.00) out of seventeen. The median A-score was 4.00 (IQR 3.00 – 4.00) out of six and the median P-score was 6.00 (IQR 5.00 – 6.00) out of seven. The K and A-scores were higher among those with higher education and those who were employed or had a higher monthly household income. The P-score did not differ across the groups. However, individual practices differed among different socioeconomic groups.

Conclusions: Although the overall knowledge regarding antibiotic use during pregnancy was not satisfactory, participants have favourable attitudes and practices toward antibiotic use during pregnancy.

Keywords: *Antibiotics, pregnancy, knowledge*

OP – 13

SURVEILLANCE OF URINE SAMPLES RECEIVED FOR CULTURE AND RELATED URINARY PATHOGENS AT A TERTIARY CARE HOSPITAL IN SRI LANKA

Hewage TN[1], Weerasooriya BWMSB[1], Dayarathne RMKM[2], Kudagammana HDWS[3*]
[1]Department of Medical Laboratory Science, Faculty of Allied Health Sciences, University of Peradeniya, Peradeniya, Sri Lanka
[2]Microbiology Laboratory, Teaching Hospital, Peradeniya, Sri Lanka
[3]Department of Microbiology, Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka
[*]wasanakudagammana@yahoo.co.uk

Introduction: Urinary Tract Infections (UTIs) are a significant issue, affecting patient care, antibiotic stewardship, and healthcare costs. Confirming UTI is crucial for avoiding unnecessary tests and improving empiric antibiotic selections.

Objective(s): To evaluate the type and quality of urine samples, impact of urine culture results on patients and antimicrobial resistance in uropathogens at a tertiary care institute in Sri Lanka.

Methods: A descriptive cross-sectional study of urine samples received for urine culture over three months at Teaching Hospital Peradeniya (THP). Information on the type of samples and timing of sampling were obtained by patient interviews and from BHTs.

Results: Total 1017 urine samples were included from 1st of June to 31st of August 2023. Of those 1008 request forms were assessed and 369 patients interviews were conducted while 250 bed-head-tickets (BHTs) were screened for further information. Only 3.17% of 1008 request forms included time and date of sample collection. Most (97.72%) did not specify the sample type. Direct patient interviews revealed 26.83% (99/369) of samples were catheter urine samples, which was not mentioned that in request form. Of BHTs evaluated, 95/250 (39.58%) samples were obtained before antibiotics. Pure and significant ($\geq 10^5$/ml) was seen in 18.58% (n=189/1017). Uropathogen distribution was *Escherichia coli* (41.27%, n=78), *Klebsiella pneumoniae* (21.16%, n=40), other coliforms (14.29%,n=27), *Candida* (10.05%,n=19), *Pseudomonas* spp.(3.70%,n=7), *Enterococcus* (2.65%,n=5), *Staphylococcus aureus* (2.65%,n=5), and Coagulase negative Staphylococcus (2.65%,n=5). Majority of *Escherichia coli* (65.38%) were resistant to Nalidicsic acid and of the tested 20 isolates, 85.0% were resistant to Cefotaxime. Of all *K.pneumoniae* 50.0% were resistant to Nitrofurantoin and of tested 15 isolates, 46.67% were resistant to Meropenem and 53.33% were resistant to Piperacillin-tazobactam. Of isolated coliforms, 81.48%(n=22) were resistant to Nalidicsic acid 59.26%(n=16) were sensitive to Nitrofurantoin. Of the tested 12 isolates, 75.0% were resistant to Cefotaxime while 83.33% were sensitive to Meropenem. Out of 14 Meropenem-resistant isolates, only 28.57% were Serine-Carbapenemase producers, and 14.29% were Metallo-ß-lactamase producers.

Conclusions: The study indicated suboptimal utilization of urine culture facilities as clinical application and interpretation of catheter and clean catch urine culture results are significantly different. This necessitates further evaluation, to improve awareness of collecting urine samples before starting antibiotics, proper labeling on time and type of urine samples, to minimize delays in collecting and transporting to the lab, which will help to streamline the diagnosis of UTIs of community-acquired, hospital or catheter-related and its management.

Keywords: *UTI, Surveillance, Uropathogens*

OP – 14

EVALUATING KNOWLEDGE AND PRACTICES OF PREVENTING CATHETER-ASSOCIATED URINARY TRACT INFECTIONS AMONG DOCTORS IN TEACHING HOSPITAL PERADENIYA AND MEDICAL STUDENTS IN THE UNIVERSITY OF PERADENIYA

Saumya IPS[1*], Sandaruwani HMD[1], Sandeepa GD[1], Sanduranga WMG[1],
Bandara HML[1], Dahal P[1], Kudagammana HDWS[2]
[1]Faculty of Medicine, University of Peradeniya, Sri Lanka
[2]Department of Microbiology, Faculty of Medicine, University of Peradeniya, Sri Lanka
[*]Saumya1901abey@gmail.com

Introduction: Catheter-associated urinary tract infections (CAUTIs) represent the most common type of nosocomial infection and a major health concern due to the complications and frequent recurrence.

Objectives: To assess knowledge and practices related to the prevention of catheter-associated urinary tract infections (CAUTIs) among the doctors in Teaching Hospital Peradeniya (THP) and to assess the knowledge among the medical students in the batch 16/17,17/18 and 18/19 in University of Peradeniya.

Methods: This cross-sectional study used paper-based and Google questionnaires from June to August 2023.

Results: A total of 360 medical students participated. The 2017 batch had the highest mean knowledge score (48.2), while the 2016 batch had the lowest (46.6), but it was not significant. The study involved 102 doctors, with 18 internees, 51 senior house officers (SHOs) and medical officers (MOs) and 33 PG trainees and trainers. Knowledge of doctors was 90% with all scoring above 50%. Male doctors had a higher mean knowledge score compared to females but was not significant (P value(p)=0.33). Doctors with more than 10 years of experience had the highest knowledge mean, while those with less than 5 years had the lowest (p=0.002). Those who got post-graduate degrees or similar training had the highest knowledge mean and showed statistically significant differences with internees and MOs (p=0.004). Doctors demonstrated overall positive practices regarding CAUTI prevention, with 93% scoring above 50%. SHOs and MOs showed the highest practice mean and significant differences in practices were observed among the 3 groups (p=0.026). Considering knowledge-practice correlation, surprisingly, there was no statistically significant correlation between knowledge scores and practice scores among doctors (p=0.402).
In the batch-based analysis, there was no statistically significant difference in knowledge among the 3 batches (p= 0.603).

Conclusions: The research conducted has given an emphasis on the importance of continuous education and training, particularly for newly appointed doctors, and highlights the need for targeted interventions to strengthen the practices based on knowledge gathered over years of experience and designation.

Keywords: *Catheter-associated urinary tract infections – CAUTIs, knowledge, practices*

OP – 15

KNOWLEDGE, ATTITUDES, AND PRACTICES ON RATIONAL ANTIBIOTIC USE AMONG A SELECTED SAMPLE OF UNDERGRADUATES AT THE UNIVERSITY OF PERADENIYA

Mansoor MMMA[1], Manawaduge SC[1*], Madubashana WW[1], Madusara NPP[1], Manamendra HD[1], Navaratna WMSNK[2]

[1]Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka.
[2]Department of Community Medicine, Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka.
[*]scm2737@gmail.com

Introduction: Antibiotic resistance is a significant global issue, largely driven by the irrational use of antibiotics.

Objectives: This study aims to assess the knowledge, attitudes, and practices (KAP) regarding antibiotic usage among a sample of undergraduates at the University of Peradeniya.

Methods: A cross-sectional study was conducted among 396 undergraduates selected through multistage random sampling from the Medicine, Science, Allied Health Sciences, and Engineering faculties using self-administered questionnaires. Data were analyzed using Jamovi, and associations between independent variables and each aspect of knowledge, attitudes, and practices were assessed using Chi-square tests and Fisher's exact tests separately.

Results: Approximately equal gender distribution (48.1% male, 51.9% female) and faculty backgrounds (50.1% health-related, 49.9% non-health-related) were observed. The majority knew that antibiotics are for bacterial (93.6%) and not viral infections (62.3%). Most were aware of antibiotic resistance (91.6%) and its concept (75.3%). Females and health-related undergraduates had higher scores in most aspects of knowledge. The majority had correct attitudes, believing antibiotic resistance is a problem in Sri Lanka (73.5%), not sharing antibiotics (72.0%), not taking antibiotics based on a pharmacy seller's suggestion (76.1%), expecting antibiotics from a physician (90.1%), and completing the full antibiotic course (67.7%). Females displayed more favourable attitudes in most aspects. However, the majority had incorrect practices in taking over-the-counter antibiotics for the common cold (66.5%) and fever (57.5%), completing the full antibiotic course (72.1%), sharing antibiotics (62.4%), and storing antibiotics (77.7%). Around 52% took antibiotics when feeling unwell before exams. Health-related undergraduates were comparatively better in most practices.

Conclusions: While knowledge and attitudes towards antibiotic use are fairly good, significant gaps in practice remain, highlighting the need for better education on rational antibiotic use.

Keywords: *Antibiotic misuse, antibiotic resistance, KAP*

OP – 16

PARENTAL KNOWLEDGE ON ALLERGY AND ANAPHYLAXIS: A MULTI-CENTRE STUDY

Senanayaka BPD[1*], Senarath HMPC[1], Senarathna ITU[1], Shama MSK[1], Shamalka RN[1], Dissanayaka DRKC[2]

[1]*Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka*
[2]*Department of Anatomy, Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka*
[*]pasindudilshan12269@gmail.com

Introduction: Allergies are type-1 hypersensitive immune reactions triggered by allergens like food proteins, pollen, dust, medications, and insect bites, affecting all ages. These reactions are primarily IgE-mediated, involving mast cell activation and the release of inflammatory mediators. Anaphylaxis, the most severe allergic reaction, can be life-threatening and triggered by food, drugs, or insect venom. Effective management of allergies in children requires substantial parental knowledge.

Objectives: To assess parental knowledge of allergy and anaphylactic reactions among children and to assess its association with socio-demographic factors such as age, gender and educational status.

Methods: A descriptive cross-sectional study was conducted in three tertiary care hospitals in Kandy District, which are Sirimavo Bandaranaike Specialized Children's Hospital, Peradeniya, paediatric units of National Hospital Kandy and Teaching Hospital Peradeniya, involving 384 parents. A self-administered questionnaire was used with systematic sampling method. Analysis involved descriptive statistics and chi-square tests.

Results: The majority of the participating parents were females (80.5%) aged 36-40 (29.4%), with 45.3% having completed up to GCE Advanced Level. Among the parents, 9.4% reported that their children had allergies. While 70% were unaware of drug allergies, 38% couldn't name an insect sting venom. Understanding of specific allergens and symptoms, especially cardiovascular and gastrointestinal, was limited. Though home remedies were common, 75% recognized the need for medical attention. Only one parent had heard of adrenaline auto injectors. When a 50% cutoff was used, only 15% of participants had satisfactory knowledge.

Conclusions: This study highlights a significant knowledge gap among parents regarding allergies and anaphylaxis in children. Comprehensive awareness programs and education on AAIs are essential to improve prevention, early recognition, and management, ultimately reducing morbidity and mortality. Further research and national initiatives are needed to address this knowledge gap and enhance child safety.

Keywords: *Allergy, anaphylaxis, children, immune reactions, parents*

OP – 17

PARENTAL AWARENESS ON DIABETIC KETOACIDOSIS AND HYPOGLYCAEMIA IN CHILDREN WITH TYPE 1 DIABETES MELLITUS ATTENDING A CHILDREN'S HOSPITAL

Gunasekara MVGSP[1*], Gimhani AJ[1], Gunathilake ARPM[1], Gunarathne S[1], Gunawardhana MG[1], Kiridana DV[2]

[1]*Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka*
[2]*Department of Paediatrics, Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka*
*sajinipgunasekara@gmail.com

Introduction: Type 1 diabetes mellitus (T1DM) is an autoimmune disorder leading to absolute insulin deficiency. Suboptimal management of T1DM can result in short-term and long-term complications, with diabetic ketoacidosis (DKA) and hypoglycaemia being the most common. Parental awareness is a crucial determining factor in the prevention and timely management of these complications.

Objectives: To assess the level of parental awareness on DKA and hypoglycaemia in children with T1DM attending a children's hospital.

Methods: Parents/guardians of children below 15 years of age, diagnosed with T1DM were included in the study. Parental awareness was assessed through a self-administered, standard questionnaire during their clinic visits to the Sirimavo Bandaranaike Specialized Children's Hospital, Peradeniya. A validated questionnaire used in a previous study and standard modified Gold and Clark questionnaire were used as DKA and hypoglycaemia questionnaires, respectively.

Results: A total of 210 parents completed the questionnaires (52.38% females, 47.62% males). The mean awareness score for DKA was 2.167 (SD=4.727) out of a possible 14 points and the awareness levels were categorized as poor (82.38%, n=173), moderate (4.28%, n=9), and good (13.33%, n=28). For the knowledge assessment on hypoglycaemia, 93.8% (n=197) scored 50% or more out of a total of 11 points, while 6.19% (n=13) scored less than 50%.

Conclusions: Our study revealed satisfactory awareness of caregivers on hypoglycaemia with unsatisfactory knowledge on DKA, which unravels the timely requirement in upgrading parental awareness of this important childhood chronic disease.

Keywords: *Autoimmune diseases, caregivers, diabetes mellitus, type1, diabetic ketoacidosis, hypoglycaemia*

OP – 18

SOCIAL, PSYCHOLOGICAL, AND FINANCIAL BURDEN ON CAREGIVERS OF CHILDREN WITH CKD: A CROSS-SECTIONAL STUDY

Jinujaan S[1*], Jayathissa BGSSR[1], Kaluarachchi KHS[1],
Kaluarachchi KABV[1], Kamsika K[1], Thalgahagoda RS[2]
[1]*Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka*
[2]*Department of Paediatrics, Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka*
*jinujaan1999@gmail.com

Introduction: Chronic Kidney Disease (CKD) in children places a significant burden on caregivers, impacting their psychological well-being, social interactions, and financial stability. This study aims to evaluate these burdens among caregivers of children with CKD.

Objectives: This study aimed to assess depression and anxiety in caregivers using PHQ-9 and GAD-7 questionnaires and evaluate the financial, social, and routine disruptions experienced by caregivers using a modified Family Burden Interview Schedule (FBIS).

Methods: Parents of children at the professorial paediatrics unit at Teaching Hospital Peradeniya who had children with CKD stages III, IV, and V, or who were receiving dialysis were the subjects of a descriptive cross-sectional study. There were 97 caregivers in the study. Psychological burden was examined with PHQ-9 and GAD-7, while social and economic burdens were measured with a semi-structured questionnaire. Chi-square tests analyzed responses to GAD-7 and PHQ-9, and ANOVA with post hoc tests examined differences in financial and social burdens.

Results: 97 caregivers participated. PHQ-9 depression scores did not significantly correlate with CKD stage, gender, treatment modality, or educational attainment. On the other hand, anxiety was substantially higher in carers of CKD stage 5 ($p<0.05$) than in stages 2, 3, and 4 according to the GAD-7. The FBIS examined social burden, which increased in individuals with stage 5 and dialysis, and it was found to be substantially correlated with both CKD stage and treatment type. After diagnosis, the financial burden increased dramatically, especially in the dialysis and stage 5 groups, and was unrelated to gender or educational level.

Conclusions: The levels of anxiety, social burden, and financial burden are higher among caregivers of children with stage 5 CKD. Dialysis also exacerbates social and financial burdens. Understanding these burdens can guide the development of targeted support programs.

Keywords: Chronic kidney disease, caregivers, psychological burden, social burden, financial burden, PHQ-9, GAD-7, dialysis, children

OP – 19

KNOWLEDGE AND ATTITUDE REGARDING CHILDHOOD VACCINATION IN A SAMPLE OF MOTHERS IN KANDY DISTRICT

Kularatne WTD[1*], Kumarasinghe DR[1], Kumarasinghe PKPG[1],
Kumaranathunga PND[1], Kularatne BLPE[1], Noordeen F[2]

[1]*Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka*
[2]*Department of Microbiology, Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka*
*tharani.kularatne.18@med.pdn.ac.lk

Introduction: Immunization is a cornerstone of primary health care for children and a highly effective method of preventing infectious diseases. Mothers are considered to be the primary caregivers of their children. Thus, mothers play a crucial role in maintaining the optimum vaccine coverage in Sri Lanka. Hence, analysing their knowledge and attitude about the Extended Programme of Immunization is vital for public health initiatives.

Objectives: This descriptive cross-sectional study was conducted to assess the knowledge and attitude of mothers in the Kandy District of Sri Lanka regarding the childhood vaccination programme. Additionally, we aimed to find the associations between knowledge and attitudes and certain socio-demographic characteristics of the study participants.

Methods: Data was collected via a researcher-administered questionnaire from 200 mothers in Paediatric and Gynaecology and Obstetrics wards in tertiary care hospitals in Kandy and Peradeniya (calculated minimum sample size was 172). The data was entered into a Microsoft Excel spreadsheet and analysed using SPSS Statistics version 26. Statistical associations were examined using Pearson Chi-Square and Fisher's exact tests.

Results: The mean knowledge score was 68.58% with 56% of the mothers showing average knowledge. While the specific knowledge regarding diseases preventable by vaccines and the required doses of each were poor, nearly all participants (99%) had a positive attitude towards vaccination. Associations between knowledge on childhood vaccination and mothers' educational level, ethnicity and income, were statistically significant. A statistically significant association was noted between the monthly income and positive attitude towards childhood vaccination among the mothers.

Conclusions: Overall knowledge of the study sample was satisfactory; however, the knowledge on vaccine-preventable infectious diseases was poor and needs to be improved through appropriate interventions. The overwhelmingly positive attitude towards childhood vaccination is promising for maintaining and improving vaccine uptake in Sri Lanka.

Keywords: *Attitudes, knowledge, public health, Sri Lanka, vaccination*

OP – 20

ASSESSING ASTHMA CONTROL AND ASSOCIATED RISK FACTORS AMONG CHILDREN WITH ASTHMA PRESENTING TO TERTIARY CARE HOSPITALS IN KANDY DISTRICT

Nishoban G[1*], Nethsara SJH[1], Nissanka WAKS[1], Pathirana KSR[1],
Pathirana LSS[1], Seneviratne HMTW[2]
[1]*Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka*
[2]*Department of Pharmacology, Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka*
*nishoban2606@gmail.com

Introduction: Asthma is a chronic disease which has considerable adverse effects on the paediatric population. Well-controlled asthma improves the quality of life of these children. Asthma control depends on the regulation of its associated risk factors. Optimal regulation of these factors should lead to good asthma control.

Objectives: To evaluate the level of asthma control and the associated risk factors among children with asthma.

Methods: The study was done in three tertiary care hospitals in Kandy, Sri Lanka. Patients in the 4 – 11year age group in both in-ward and clinic setups during the period of May to August 2023 were included in the study. Childhood Asthma Control Test (c-ACT) was used to assess the level of asthma control. The children were categorized as "poorly-controlled" and "well-controlled" accordingly. The demographic, socio-economic, environmental and treatment-associated risk factors connected with asthma were evaluated using a modified questionnaire based on Asthma Call Back Survey (CDC-2019). Then the association between each of these risk factors and the level of asthma control was evaluated using chi square test. Data for the study were collected via an interviewer-administered questionnaire.

Results: 363 patients were involved in the study of which 30.03% (109) had poorly-controlled asthma. Allergic rhinitis (p=0.037), letting pets enter into the child's bedroom (p=0.001), inability to meet a doctor (p=0.015) or buy medications for asthma due to economic barriers (p=0.008), poor treatment compliance (p=0.001) and unsatisfactory inhaler technique (p=0.001) were found to be significantly associated with poor asthma control.

Conclusions: Nearly one third of the patients had poor control of asthma. Identifying and targeting the modifiable risk factors associated with asthma such as avoiding exposure to allergens (pets), treating allergic rhinitis, alleviating economic barriers for obtaining necessary treatment, improving treatment compliance and inhaler technique may lead to improvement in asthma control.

Keywords: *Asthma, paediatric asthma, asthma control, asthma risk factors, Kandy*

OP – 21

KNOWLEDGE AND ATTITUDE TOWARDS POLYCYSTIC OVARIAN SYNDROME AMONG FEMALE STUDENTS FROM FACULTY ARTS, UNIVERSITY OF PERADENIYA

Thevarasa T[1*], Tharushika KGD[1], Thilakarathna PKGIP[1], Udayanga HRA[1],
Udayanga PHS[1], Jayantha Padmini SM[2]
[1]Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka
*[2]Department of Community Medicine, Faculty of Medicine, University of Peradeniya,
Peradeniya, Sri Lanka*
*thuvaraka.thevarasa.18@med.pdn.ac.lk

Introduction: Polycystic ovarian syndrome (PCOS) is the most common endocrine disorder among women of reproductive age which is associated with various symptoms and complications. Knowledge and attitude towards PCOS play an important role in early diagnosis and better outcomes.

Objective: To assess the knowledge and attitude towards PCOS among female students from the Faculty of Arts, University of Peradeniya.

Methods: A descriptive cross-sectional study was conducted among female students of the Faculty of Arts, University of Peradeniya using an online, self-administered questionnaire which included questions related to demographic characteristics, knowledge and attitude towards PCOS. Data analysis was done using Jamovi software and the chi-square test.

Results: A majority of the 318 participants who were involved in this study were within the age range 22-24 years (67%). Among the participants, 44% were aware of menstrual irregularities, 32.4% were knowledgeable about hirsutism, 27.7% were knowledgeable regarding acne in PCOS and 29.9% knew about the importance of lifestyle modifications. Less than one-fourth of participants were knowledgeable about the complications such as endometrial cancer, infertility and metabolic syndrome. Approximately 83% agreed to consult a doctor and 75% expected a negative impact on their studies and self-confidence. Knowledge regarding PCOS was significantly associated with prior PCOS diagnosis, family history, and educational status of mothers. Attitude towards PCOS was associated with a family history of PCOS but not associated with prior PCOS diagnosis or age.

Conclusions: The majority of the participants did not know the common symptoms, complications, and mainstay treatment for PCOS. The majority of the participants have a negative attitude towards PCOS. Thus, awareness programmes are necessary to improve knowledge and attitude regarding PCOS.

Keywords: *Attitudes, females, knowledge, polycystic ovarian syndrome*

OP – 22

KNOWLEDGE, ATTITUDE AND PRACTICES REGARDING FOLIC ACID SUPPLEMENTATION AMONG PREGNANT WOMEN PRESENTING TO THE ANTENATAL CLINICS AT NATIONAL HOSPITAL KANDY AND TEACHING HOSPITAL PERADENIYA

Dissanayake DMNDT[1*], Dissanayaka DSMSR[1], Dilshani VDC[1], Dinelka HHI[1], Dissanayaka DMHU[1], Gnanarathne ST[2]
[1]Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka
[2]Department of Obstetrics and Gynaecology, Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka
*nelushi.dissanayake.18@med.pdn.ac.lk

Introduction: Folic acid, essential for preventing neural tube defects, is recommended during pre-conception and pregnancy. Hence, assessing pregnant women's knowledge, attitudes, and practices regarding folic acid supplementation is necessary.

Objectives: To assess the knowledge, attitude, and practice regarding folic acid supplementation among pregnant women presenting to antenatal clinics at Teaching Hospital Peradeniya and National Hospital Kandy.

Methods: This descriptive cross-sectional study involved 275 pregnant women, utilizing a self-administered questionnaire. Data collection took place over a two-week period at Teaching Hospital Peradeniya and National Hospital Kandy.

Results: Among 275 pregnant women, 40.7% recognized folic acid's role in preventing congenital defects. Common misconceptions included associations with a healthy pregnancy (57.5%) and a stronger baby (47.6%). Only 17.1% knew the recommended dose, and 47.0% were aware of the correct frequency. Even though 97.1% knew that it should be taken preconceptionally, only 75.5% knew that it should be taken at least three months before pregnancy. Positive attitudes towards folic acid supplementation were prevalent (99.6%). Preconceptional folic acid use was at 76.4%, with 51.7% lacking healthcare prior to conception. Education level correlated with better practices, and planned pregnancies showed higher folic acid use (94.6%). Most participants (88.0%) were compliant, although 11.2% occasionally forgot to take folic acid daily. Statistically significant associations were found between healthcare prior to conception and folic acid supplementation (p<0,001) and among knowledge, attitude, and practice regarding folic acid supplementation. Public health midwives were identified as the primary source of knowledge (87.3%).

Conclusions: The study highlights a positive correlation between knowledge, attitudes, and practices regarding folic acid supplementation in pregnant women. Higher knowledge correlates with better adherence. Prioritizing health education, especially for low-income families, and combining awareness programmes with pre-pregnancy counselling by public health midwives can enhance maternal and foetal health outcomes.

Keywords: *Folic acid supplementation, pregnant women, knowledge, attitude, practice asthma risk factors, Kandy*

OP – 23

PREVALENCE OF MENSTRUAL DISORDERS AND ITS ASSOCIATION WITH QUALITY OF LIFE AMONG WORKERS IN A SELECTED GARMENT FACTORY IN KANDY, SRI LANKA.

Perera KGD[1*], Perera KSD[1], Perera MVC[1], Pinsara GP[1], Piyadasa JDDH[1], Tennakoon TMSUB[2]

[1]*Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka*
[2]*Department of Community Medicine, Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka*
*gaveendyadevindi@gmail.com

Introduction: Menstrual disorders affect physical, psychological, and social aspects and also the quality of a woman's life. However, there is a lack of research that assesses all those aspects in a single study. Therefore, this study aimed to assess the prevalence and effects of 3 common menstrual disorders on quality of life among female workers in Sri Lanka. We hope this underscores the importance of understanding and addressing menstrual disorders.

Objectives: This study aimed to determine the prevalence of dysmenorrhoea, heavy menstrual bleeding (HMB), and irregular menstrual bleeding (IMB), the distribution of those disorders among age groups, and their impact on the quality of life of the working population in 18-49 age group in a selected garment factory situated in Kandy.

Methods: In 2023, an observational analytical cross-sectional study was conducted in a sample of 272 collected from a total female workforce of 800 in a selected garment factory in Kandy District, Sri Lanka. The data of the study were collected by the self-administered printed questionnaires. Of these 252 responses were selected according to study criteria. The association between above mentioned menstrual disorders and quality of life was analysed by independent t-test, chi-square test using SPSS Statistics software.

Results: Prevalence of dysmenorrhea, HMB, and IMB were 13.5%, 23%, and 17%, respectively. Among them, only dysmenorrhea was found to depend on age, more common in younger age groups. HMB or IMB were not dependent on age. Quality of life was not significantly impaired due to those mentioned menstrual disorders.

Conclusions: Based on study results on among menstrual disorders, only the prevalence of dysmenorrhoea was associated with age. Quality of life was only associated with age, not with marital status, co-morbidities, monthly income, HMB, IMB, or dysmenorrhoea.

Keywords: *Female workers, menstrual disorders, menstrual health, prevalence, quality of life*

OP – 24

KNOWLEDGE ABOUT MISCARRIAGES AMONG PATIENTS ADMITTED WITH A SPORADIC MISCARRIAGE TO TEACHING HOSPITAL PERADENIYA

Bandara MRAP[1*], Bandara WLSSL[1], Bandara YMNPY[1], Basnayake BMSK[1], Beddewela IRNH[1], Gihan MC[2]

[1]*Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka*
[2]*Department of Obstetrics and Gynaecology, Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka*
*ashen.bandara.18@med.pdn.ac.lk

Introduction: Even though miscarriages are common, late presentations cause increased complications. This study was done to understand the knowledge gaps about miscarriages which may be helpful in reducing late presentations.

Objectives: To assess knowledge about symptoms, risk factors, complications of miscarriages, planning next pregnancy and its association with the sociodemographic characteristics of the patients admitted with sporadic miscarriage to Teaching Hospital Peradeniya.

Methods: This descriptive cross-sectional study involved 106 patients who were admitted to the Teaching Hospital Peradeniya. Data collection was done using a self-administered questionnaire. Pearson chi-square test and Fischer's exact test were used to analyse the data.

Results: Only 25.5% of the women knew that having had an intrauterine device before the pregnancy is not leading to a miscarriage and 17% knew that stressful events are not causing miscarriages. Only 12.3% knew that lifting heavy objects during pregnancy cannot lead to miscarriage. Association between age and overall knowledge about miscarriages had a p-value of 0.076. Association between educational level and overall knowledge about miscarriages got a p-value of 0.000.

Conclusions: The study sample had an overall good knowledge about miscarriage, but many were accepting false beliefs and myths about miscarriages. Although there was a significant association between educational level and knowledge about miscarriages, there was no association between age and knowledge about miscarriages.

Keywords: *Sporadic miscarriage, knowledge, cross sectional study, Teaching Hospital Peradeniya*

OP – 25

STUDYING THE KNOWLEDGE AND THE FACTORS AFFECTING THE KNOWLEDGE OF PREGNANT WOMEN ON PREECLAMPSIA AND ITS SIGNS AND SYMPTOMS IN TEACHING HOSPITAL, PERADENIYA

Wattuhewa SS [1*], Waidyatilleke SR [1], Weeraman DR [1], Warakakanda PGNS [1],
Kandauda IC[2]

[1]*Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka*
[2]*Department of Obstetrics and Gynaecology, Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka*
*iamsandeepstcb@gmail.com

Introduction: Preeclampsia affects a significant percentage of pregnant women worldwide. It is a leading cause of maternal and foetal mortality and morbidity. Knowledge of preeclampsia and its symptoms among pregnant mothers is crucial for early detection, complication prevention, and appropriate management.

Objectives: To evaluate the knowledge of preeclampsia and the factors that affect the knowledge of pregnant women of preeclampsia in antenatal clinics and wards at Teaching Hospital, Peradeniya.

Methods: This study was conducted as a cross-sectional study. Data was collected using a self-administered questionnaire distributed among pregnant women above 18 years of age who attended the professorial obstetrics clinic and had been admitted to professorial obstetrics wards of Teaching Hospital, Peradeniya.

Results: Out of 254 participants, 62 (24.4%) had heard of preeclampsia, while 192 (75.6%) had not. Inadequate knowledge of preeclampsia was observed in 96.1% of the participants (mean score = 14.19±17.39%), whereas only 3.9% had adequate knowledge (mean score = 65.52±5.86%). Factors significantly associated with better knowledge included higher education, higher household income, and being a healthcare employee. No significant association was found between knowledge levels and age, ethnicity, employment status, parity, Body Mass Index, multiple pregnancies, past preeclampsia, recurrent miscarriages, family history, or pregnancy trimester. The main sources of information were healthcare workers (62.5%), educational institutes (34.9%), social media (28.1%), electronic media (20.3%), and family (12.5%). Commonly identified correct knowledge included unhealthy lifestyle and high blood pressure as risk factors, and maternal and foetal deaths as complications. Misconceptions included previous miscarriage, nausea and vomiting as signs, and maternal and neonatal infection as complications.

Conclusions: The awareness of preeclampsia among pregnant women at Teaching Hospital Peradeniya is low. While higher education, household income, and employment in healthcare are linked to better knowledge, other demographic and clinical factors do not show significant associations.

Keywords: *Hypertensive disorder; maternal and foetal mortality; preeclampsia; pregnant women*

IMPACT OF SOCIAL MEDIA ON ACADEMIC PERFORMANCE AMONG MEDICAL UNDERGRADUATES OF UNIVERSITY OF PERADENIYA

Pushpakumara AWM[1*], Priyanjala NGMI[1], Priyanka C[1], Priyasanka WVNN[1], Rajakaruna UATD[1], Fonseka HFS[2]

[1]*Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka*
[2]*Department of Pharmacology, Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka*
[*]pushpakumaramadhawa@gmail.com

Introduction: Medical students in Sri Lanka are selected to universities through an extremely competitive examination but their academic performance varies drastically once they enter into universities and the reasons can be multifactorial. Use of the social media could be a one of the reasons. Social media can be used for academic activities as well as for recreational activities. WhatsApp, Facebook, YouTube, Instagram and Twitter are the popular social media platforms. Through our study, we planned to find the impact of social media on academic performance.

Objectives: To identify the impact of social media on academic performance among medical undergraduates of University of Peradeniya.

Methods: A descriptive cross-sectional study was carried out by distributing a self-administered questionnaire (Google Form) via emails and WhatsApp among medical undergraduates of 18/19 and 19/20 batches. We aimed to find the devices used to access the social media, type of platforms, time spent on social media, reason of using social media and compare those with the academic performance using Grade Point Average (GPA).

Results: In this study, 211 students were examined, predominantly females (56%), Sinhalese (79%), aged 22–24 (77%). Smartphone use for internet access was prevalent (95%), with top platforms being WhatsApp (92%) and Facebook (74%). While no significant associations were found between Facebook, WhatsApp, YouTube, Instagram, or other platforms and academic performance, Twitter use showed a significant positive association. Patterns of social media use during exams did not impact academic performance, and neither did the time spent on social media nor its educational use.

Conclusions: This study, revealed that there was no significant association between time spent on social media, time spent on social media for educational purposes, reason/ purpose of using social media, type of social media platforms and medical undergraduates' academic performance. But Twitter showed a positive association, requiring further investigation.

OP – 27

SLEEP AND ACADEMIC PERFORMANCE OF MEDICAL UNDERGRADUATES OF FACULTY OF MEDICINE, UNIVERSITY OF PERADENIYA

Marasinghe MMVK[1*], Mayantha IADR[1], Minal WMR[1], Muthumali YGRA[1], Nayanajith GC[1], Navaratna WMSNK[2]

[1]*Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka*
[2]*Department of Community Medicine, Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka*
*viraj.marasinghe.18@med.pdn.ac.lk

Introduction: Around the world, medical students frequently suffer from severe sleep deprivation and poor-quality sleep as a result of their demanding and heavy curriculum. Low-quality sleep deteriorates cognition, which impairs academic achievement. This study evaluates the components of sleep and how they relate to academic achievement.
Objective: The purpose of this study was to asses students' sleep quality and how it related to their academic achievement. In addition, chronotype of the students was evaluated and contrasted with their academic achievement.

Method: A descriptive cross-sectional study based on observations and a questionnaire was carried out on four batches enrolled at the University of Peradeniya. Utilising a self-administered questionnaire, data was collected. Descriptive statistics were utilised to analyse data related to sleep dimensions and socio-demographic characteristics. The mean Grade Point Average (GPA) from the most recent exam results was used to evaluate academic success. Sleep quality was evaluated using a validated Portuguese sleep-wake questionnaire. The composite version of morningness-eveningness questionnaire (cMEQ) was used to evaluate chronotype. The Chi-square test was used to determine relationships between sleep quality, chronotype and academic performance.

Results: The majority of the sample (58.0%) slept with 'very good' quality, followed by 'good' quality (36.4%) and poor quality (5.6%). Statistical analysis by Pearson's chi-square test revealed that students who slept well had mean GPAs that were higher than those who did not (χ^2=7.486, p=0.024). According to the chronotype assessment, 'evening' chronotypes accounted for 70.5% of the sample. Individuals with the 'morning' type outperformed those with the 'evening-type' type in academics; this was also statistically proven by Pearson's chi-square test (χ^2=4.094, p=0.043).

Conclusions: The findings supported the idea that getting enough sleep improves academic performance by demonstrating a positive correlation between higher sleep quality and improved academic performance. 'Morning' type individuals performed better academically than 'evening' types, potentially influenced by morning teaching sessions favouring 'morning' students. This component requires further research due to insufficient existing literature.

Keywords: *Academic success, chronotype, circadian rhythm, sleep deprivation, university students*

OP – 28

CO-DESIGNED KNOWLEDGE TRANSFER STRATEGIES IN PREPARATION FOR FUTURE LEARNING: A MULTI-ARM PARALLEL GROUP RANDOMIZED CONTROLLED STUDY

Ganashiam N[1*], Gamlath GRSV[1], Ganegoda GRDNB[1], Gayani SP[1], Gamage GGTM[1], Atapattu DN[2], Dharmaratne TMSH[3]

[1]*Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka*
[2]*Department of Parasitology, Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka*
[3]*Translational Health Research Institute, Western Sydney University, Australia*
*nadarasa.ganashiam.18@med.pdn.ac.lk

Introduction: The limitations of didactic lectures, as a mode of instruction to achieve higher order learning objectives, gives rise to the need for supplementary guided self-learning activities to facilitate students' achievement of higher order learning outcomes of those lectures.

Objectives: This study aimed to evaluate the short-term effects of two different co-designed self-learning tasks, designed to prepare third-year medical students for future learning, and their subsequent achievement of higher-order thinking skills following lecture-based instructions.

Methods: A simple equal [1:1:1] randomization, double blinded, untreated controlled, three-arm parallel-group study was conducted on third-year medical students of the Faculty of Medicine, Peradeniya with a total sample size of 71 ($\alpha = 0.05$, $1-\beta = 80\%$, d $= 0.4$). Study participants were divided into three groups. Two groups underwent specific co-designed self-learning activities [that is, group 1– contrasting cases (CC); group 2– mind map (CF)] prior to the formal lecture, while group 3 (CTRL) had no intervention. Immediately after the lecture, a knowledge transfer test (KTT) that tested learning at Bloom's cognitive domain levels of 'apply', 'analyse' and 'evaluate' was administered to all groups. Scoring was done by Moodle™ and participants were divided based on a completely randomized design on Jamovi™. KTT scores as well as feedback from participants were analysed using both descriptive and inferential statistical tools.

Results: A one-way ANOVA revealed significant group differences in KTT scores ($F_{(2,68)} = 3.47$, $p = .04$). Tukey's post-hoc tests indicated that the CC group scored less (MD$= -2.78$, $p = .03$) than the CTRL group, and the CF group (MD$= 1.90$, $p = .19$) scored similar to the CTRL group. The CC group (MD$= -0.89$, $p = .69$) once again scored less than the CF group, however, this difference was not statistically significant. Furthermore, participant feedback showed varying perceptions of test difficulty and value of interventions across groups.

Conclusions: These findings underscore a negative impact of CC activity on knowledge transfer. Intermediate effect in medical training may explain this finding.

Keywords: *Preparation for future learning, knowledge transfer, productive failure, contrasting cases, conceptual framework, higher order learning outcomes, near-peers, multi-arm randomised controlled study.*

OP – 29

IMPACT OF INTIMATE RELATIONSHIPS ON ACADEMIC PERFORMANCES AMONG MEDICAL UNDERGRADUATES AT THE UNIVERSITY OF PERADENIYA

De Silva PBPMN[1*], De Silva BKM[1], Deshapriya NDSC[1], Dewagiri DMSN[1], Dhammadinna NBU[1], Ekanayake EMKB[2], Vadysinghe AN[2]

[1]*Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka*
[2]*Department of Forensic Medicine, Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka*
*prabodha.desilva.18@med.pdn.ac.lk

Introduction: University students, aged from early to mid-twenties, are more commonly involved in intimate relationships (IRs), as well as extracurricular activities (EA). The variables that may have the ability at altering the academic performance (AP) and EA are discussed at length.

Objectives: This study analyses the impact of IRs and EA on AP of medical undergraduates at the University of Peradeniya.

Methods: The study sample included 2nd, 3rd and 4th year medical undergraduates of the University of Peradeniya, Sri Lanka. Participants were recruited by random sampling with equal participation from each batch. An online self-administered questionnaire was distributed to collect data including relationship, academic and demographic data. Respondents' exposure to intimate partner violence (IPV) was assessed through direct questions. Participants' results of the last semester's examination were used to calculate the cumulative grade point average (cGPA) which was used to evaluate AP using chi-square tests.

Results: This study compared the AP of 253 participants with 110 (43.5%) involved in IR and 143 (56.5%) being currently single. The sample consisted of 56.9% females. Over 44.5% of romantic partners of the participants were enrolled in the same faculty. However, there was no significant association between involving in an IR and AP (p=0.651) regardless of the presence of other variables impacting AP & EA. Based on the opinions of respondents, the majority believed there was no impact of EA on AP. The economic status of participants was positively associated with their AP (p=0.015). The prevalence of IPV in IR was 11.8% with psychological type being the most prominent (5.9%). Males were subjected to IPV twice as much (69.2%) as females (30.8%). However, there was no significant association between experiencing IPV and AP (p=0.534).

Conclusions: There was no significant association between AP and IR. Better economic status showed a positive impact on AP while no significant association was observed between IPV and AP which leads to the conclusion that the prioritization of academic activities over IR as the cause. Males were more likely to experience IPV than females.

Keywords: *Academic performance, demographic data, intimate relationships, extracurricular activities, medical undergraduates*

OP – 30

VISUOSPATIAL MEMORY IN INTERNATIONAL CHESS FEDERATION-RATED CHESS PLAYERS: A CONTROLLED STUDY

Liyanage VDP[1*], Kumarasiri OKDT[1], Madhumali WAS[1], Lakshitha KH[1],
Lakshitha RAP[1], Dassanayake TL[2, 3]
[1]*Faculty of Medicine, University of Peradeniya, Sri Lanka*
[2] *Department of Physiology, Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka*
[3]*School of Psychological Sciences, University of Newcastle, Australia*
*veneesha.liyanage.18@med.pdn.ac.lk

Introduction: The board game of chess encompasses multiple cognitive domains. It is thought to be predominantly a visuospatial endeavour, demanding adept analysis of the arrangement of pieces. The FIDE rating, a dynamic evaluation system, assesses players' performance and competitiveness, reflecting their overall standing in competitive chess.

Objectives: To compare memory profiles between FIDE-rated chess players and non-chess players.

Methods: Using a counterbalanced cross-sectional design, we evaluated visuospatial and verbal memory in 64 FIDE-rated chess players, individually matched with 64 controls by age, sex and education. Participants (15-45 years, native Sinhala speakers) underwent a standard neuropsychological assessment of visuospatial memory (Rey-Osterrieth Complex Figure, ROCF), verbal memory (Rey Auditory Verbal Learning Test, RAVLT) and general intelligence (Raven's Progressive Matrices). The performance was compared using independent sample t-tests.

Results: Except for RAVLT trial A3 and the learning rate, all the outcome measures favoured better performance in chess players. However, significant differences were observed only in RAVLT trial A6 – memory retention (p=0.028), A7 – delayed recall (p=0.031) and retroactive interference (p=0.005). In a subsidiary analysis, ROCF delayed recall negatively correlated with the FIDE rating (B=-0.37, p=0.023).

Conclusions: Despite the hypothesis that chess predominantly engages visuospatial elements, our findings suggest that chess players have better memory in general (where verbal memory was significantly better, whereas any advantage in visuospatial memory was not significant). As evident in some previous studies, this could be attributed to chess improving visuospatial memory primarily in game-related scenarios, rather than leading to a general improvement in visuospatial memory. Additionally, it is also possible that visuospatial memory of chess positions is not the most critical factor for chess players. Simultaneously evaluating various other cognitive functions, particularly executive functions, alongside memory in future studies, will provide further evidence for the association between chess and cognitive functions.

Keywords: *Chess, FIDE, Visuospatial, Verbal, Memory*

OP – 31

KNOWLEDGE, ATTITUDES AND ASSOCIATED FACTORS OF FAMILY PLANNING METHODS AMONG POST-PARTUM MOTHERS IN POST-NATAL WARDS AT TEACHING HOSPITAL PERADENIYA AND NATIONAL HOSPITAL KANDY

Dasun GMT[1]*, Danthanarayana DPL[1], Chamali PAG[1], Dayananda SPTN[1], de Silva BKCAG[1], Tennakoon TMAH[2]

[1]*Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka*
[2]*Department of Pathology, Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka*
*thathsaraceo26@gmail.com

Introduction: Family planning is becoming an important topic in modern world with the increasing population. This study acknowledges the importance of family planning in Sri Lanka, where the population is increasing, and such studies are limited.

Objectives: To describe the knowledge, attitudes, and associated factors of family planning methods among post-partum mothers in post-natal wards of Teaching Hospital Peradeniya and National Hospital Kandy.

Methods: A descriptive cross-sectional study was conducted among 203 participants using convenience sampling. Data were collected using structured questionnaires and analysed using Fisher's exact test to identify key associations.

Results: The majority were aged 26–30 (43.8%), mostly married (98.5%), Sinhalese (78.1%), Buddhist (75.2%), had one child other than the new-born (43.1%), educated up to G.C.E. A/L (41.6%). Additionally, 15.8% of mothers had three or more children. The purpose of family planning was to prevent unwanted pregnancies and for birth spacing. Association of the purpose of family planning with age (p=0.441) and the level of education (p=0.467) was not statistically significant. Percentages of participants ever heard of oral contraceptive pills (OCP), emergency contraceptive pills and ligation and resection of tubes (LRT) were 91.0%, 88.8% and 89.9% respectively. A significant association was found between age and the participants who had heard of OCP (p=0.001) and emergency contraceptive pills (p=0.020). Furthermore, a statistically significant association (p=0.023) was observed between the number of children and knowledge of LRT surgery as a family planning method. The majority (76.1%) believed that all couples should follow family planning methods. There was no statistically significant association between participants' attitudes toward the decision to use family planning methods and their educational level or age.

Conclusions: Age influenced the knowledge of oral and emergency contraceptive pills, number of children impacted the knowledge of LRT. Other demographics considered in the study showed no such association with family planning knowledge or attitudes. These findings highlight targeted areas for educational interventions.

Keywords: *Family planning, post-partum mothers, oral contraceptive pills, LRT surgery*

OP – 32

KNOWLEDGE AND PRACTICES AMONG PARENTS REGARDING NUTRITIONAL
INFORMATION LABELS ON FOOD ITEMS AND ITS ASSOCIATION WITH NUTRITIONAL STATUS OF THEIR CHILDREN

Shenika NLD[1], <u>Sifras MNM</u>[1], Sipsala GAL[1*], Siriyananda AMTN[1],
Sivasubramaniam D[1], Gawarammana IB[2]

[1]*Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka*
[2]*Department of Medicine, Faculty of Medicine,University of Peradeniya,Sri Lanka*
*lasini.sipsala.18@med.pdn.ac.lk

Introduction: Parents play a significant role in meeting their children's nutritional requirements. This study investigates parents' knowledge and practices regarding nutrition, particularly their utilization of food labels, and its impact on their children's nutritional status.

Objectives: This study aims to describe parents' knowledge on nutrition, their practices regarding nutritional information on food labels when purchasing food for their children and its association with the nutritional status of children below five years of age at Sirimavo Bandaranayke Specialized Children's Hospital, Peradeniya.

Methods: A cross-sectional study with 294 parents of children under five years was conducted at Sirimavo Bandaranayake Specialized Children's Hospital, Peradeniya. An interviewer-administered questionnaire assessed socio-demographic information, nutrition knowledge, and practices regarding nutritional information label usage. Anthropometric measurements evaluated children's nutritional status, with statistical analysis conducted using Jamovi version 2.3.

Results: The majority of parents of the sample were aged 30-40 years, educated beyond G.C.E. A/L, and had a monthly income above 50,000 rupees. Majority of the sample (64.7%) were using nutritional information labels. 52.4% of the sample was having a good overall knowledge on nutrition. However, specifically on healthy food choices 59.9% was having a poor knowledge. In parallel, 55.1% of the sample displayed good practices in using nutritional information labels. Furthermore, the association between overall practices of parents regarding nutritional information labels on food items and nutritional status of their children was significant at $p < 0.05$ with $p = 0.014$.

Conclusions: While many parents exhibited good nutrition knowledge and label usage practices, significant proportions displayed gaps, emphasizing the need for tailored educational interventions. Most importantly, the observed significant association between good practices and children's healthy BMI emphasizes the real-world impact of improving parental practices on children's nutritional outcomes.

Keywords: *Child malnutrition, nutritional knowledge, food label use, nutritional information, parents, children under five*

OP – 33

EXPLORING THE USAGE, PRACTICES, AND PERCEPTIONS IN RELATION TO SOCIAL MEDIA AMONG THE FIRST AND THE FOURTH YEAR MEDICAL STUDENTS AT THE UNIVERSITY OF PERADENIYA

Ariyarathne WGAM[1], Balasooriya BMYM[1*], Bandara HMAI[1],
<u>Bandara HMDNR</u>[1], Monisha B[1], Marambe KN[2]
[1]*Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka*
[2]*Department of Medical Education, Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka*
*miurangabalasooriya1999@gmail.com

Introduction: Social media is integral to university students' lives, including medical students. However, research on this topic among Sri Lankan medical students is sparse.

Objectives: This study examined social media usage patterns and attitudes among first- and fourth-year medical students at the Faculty of Medicine, University of Peradeniya, Sri Lanka.

Methods: A cross-sectional survey using a Google form-based questionnaire, developed through focused group discussions and incorporating quantitative and qualitative components. The questionnaire was administered to 405 students (235 first-year and 205 fourth-year). Quantitative data were analyzed with descriptive statistics, correlation analysis, and factor analysis using SPSS version 24. Qualitative data underwent coding, subtheme creation, and thematic analysis.

Results: Response rates were 90% (212/235) for first-year and 94% (193/205) for fourth-year students. WhatsApp was universally adopted (100%), followed by YouTube, Facebook, Instagram, TikTok, Snapchat, and Viber. YouTube and WhatsApp were most used for academic purposes (91% and 89%). For entertainment, YouTube, Facebook, and WhatsApp predominated. WhatsApp was the main communication medium (90%), while YouTube was preferred for employment and business purposes (53%) and spiritual engagement (33%). A weak positive correlation existed between academic year and time spent on social media for academic purposes, indicating evolving usage as students progress.

Conclusions: Social media serves multiple functions for medical students, supporting academic pursuits, entertainment, communication, professional activities, and spiritual engagement. The findings suggest that educators, administrators, and policymakers could strategically use social media to enhance student engagement and effective learning. Future research should expand sample sizes, utilize qualitative analysis, explore social media's impact on performance, and assess its influence on mental well-being.

Keywords: *Social media, medical students, Sri Lanka, usage patterns, academic engagement, qualitative analysis, quantitative analysis*

OP – 34

SLEEP QUALITY, PERCEIVED STRESS AND FACTORS ASSOCIATED WITH THEM AMONG PRE-CLINICAL STUDENTS OF THE FACULTY OF MEDICINE, UNIVERSITY OF PERADENIYA

Jayarathna WAPH[1*], Jayaratne BM[1], Jayasekara PARH[1], Jayasena NP[1], Jayathilaka IKMSS [1], Gunawardane DA[2]

[1]*Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka*
[2]*Department of Community Medicine, University of Peradeniya, Peradeniya, Sri Lanka*
*praveen.jayarathna.18@med.pdn.ac.lk

Introduction: Poor sleep quality and high perceived stress have been recognized as prevalent challenges among medical undergraduates. While various local and international studies have explored these and identified contributing factors, there is a lack of research focused on pre-clinical medical undergraduates at the University of Peradeniya.

Objectives: To describe the sleep quality, perceived stress and factors associated with them among pre-clinical students of the Faculty of Medicine, University of Peradeniya.

Methods: A cross-sectional-analytic study was conducted among 496 pre-clinical students of the Faculty of Medicine, University of Peradeniya. A self-administered questionnaire encompassing demographic information, the Pittsburgh Sleep Quality Index (PSQI) and the Perceived Stress Scale (PSS) was analysed to describe the participants' sleep quality and perceived stress.

Results: Among 336 eligible responses, the mean age of the sample was 22.8 years (SD=1.20), of which 58.6% were female (n=197) and 41.1% male (n=139) students. Responses from second-year (50.9%) and third-year (49.1%) students were almost equal. The mean PSQI score was 4.90 (SD=2.66), with 64.9% (n=218) experiencing good sleep quality. The mean PSS score was 18.7 (SD=5.43)with 6.8% (n=23) experiencing high perceived stress, 80.1% (n=269) reporting moderate perceived stress. A significant association between sleep quality and perceived stress was identified with a positive correlation (rs-0.368, p< 0.001). Significant associations were observed between body mass index (BMI) and sleep quality ($x2$– 8.68, p=0.034) as well as perceived stress ($x2$– 20.6, p=0.002). Academic year ($x2$– 6.26, p=0.044) and academic performance (rs- (-0.13), p=0.020) also displayed significant associations with perceived stress.

Conclusions: This study revealed that nearly one-third of pre-clinical medical undergraduates experienced poor sleep quality, with almost nine out of ten having high or moderate perceived stress. Furthermore, an association between sleep quality and perceived stress was established. BMI was associated with sleep quality, while academic year and BMI were associated with perceived stress.

Keywords: *Perceived stress, sleep, sleep quality, stress, university students*

OP – 35

SOCIODEMOGRAPHIC VARIATION OF THE KNOWLEDGE ON ARTIFICIAL INTELLIGENCE AMONG DENTAL UNDERGRADUATES AT THE UNIVERSITY OF PERADENIYA, SRI LANKA – A CROSS-SECTIONAL ANALYSIS

Jayawardhana HASY[1], Ekanayaka EMAA[1], Shehani NA[1], Bandaranayake BMP[1], Hettiarachchi SM[1], Ranasinghe WGKI[1], Samarakoon SMKGH[1], Hettiarachchi HAAUS[1], Gunathilake GRYA[1], Angammana HMRW[1*], Priyarathne NS[1], Banneheka BMHSK[1]

[1]*Department of Basic Sciences, Faculty of Dental Sciences, University of Peradeniya, Peradeniya, Sri Lanka.*
[*]angammanar@dental.pdn.ac.lk

Introduction: Artificial intelligence (AI) is revolutionizing all the societal domains; knowledge on AI and its applications in healthcare and dentistry will be essential for dental undergraduates.

Objectives: To assess the associations between the knowledge on AI and sex, ethnicity, study year and residence area among undergraduates at the Faculty of Dental Sciences, University of Peradeniya.

Methods: A random sample of 392 dental undergraduates were recruited for the study. The knowledge on AI was assessed with 10 questions with binary responses (yes/no) using a Google Form. A knowledge score was generated using the number of 'yes' responses. The knowledge scores deviated from the normal distribution; therefore, analysis was done under non-parametric assumptions using IBM SPSS Statistics software. Association with sex was analyzed using Mann-Whitney U test and for study year, ethnicity and residence district, Kruskal-Wallis test was used.

Results: From the total cohort 26.8% were males and 73.2% were females. Regarding the ethnicity 80.6% were Sinhalese, 11.5% were Tamils and 7.7% were Muslims. Regarding the area of residence, the cohort represented 25 districts and 17.9% were from Colombo followed by Matara 11.2% and Gampaha 8.9%. Of the respondents 26.0% were from 2021/22 batch; followed by 2022/23 (19.6%), 2019/20 (16.1%), 2020/21 (13.0%), 2016/17 (11.2%), 2017/18 (8.9%), 2018/19 (5.1%) batches. The knowledge scores of the cohort varied from 0-10. The median scores for the males (7.0, IQR 6.0-8.0) was higher than females (6.0, IQR 4.0-7.0), the difference was statistically significant (p<0.01). There was no significant variation in knowledge score according to the study year (p=0.115), district of residence (p=0.359) or ethnicity (p=0.449).

Conclusions: This cross-sectional analysis revealed that there was no statistically significant variation of the knowledge on AI and the study year, ethnicity and residence district. However, the male students demonstrated a significantly higher knowledge on AI compared to females.

Keywords: Artificial intelligence, dental education, undergraduate students

OP – 36

ASSESSING THE EFFECT OF DELAYED INITIATION OF DISEASE-MODIFYING ANTI-RHEUMATIC DRUG THERAPY ON THE QUALITY OF LIFE OF PATIENTS WITH RHEUMATOID ARTHRITIS

Amarasinghe SU[1], Amarasooriya WMDHV[1], Ananda LKHOC[1], Angara AKHS[*1],
Anupama UAN[1], Dandeniya CL[2]

[1]*Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka*
[2]*Department of Medicine, University of Peradeniya, Peradeniya, Sri Lanka*
[*]hansini.angara.18@med.pdn.ac.lk

Introduction: Rheumatoid Arthritis is a chronic debilitating disease which mainly affects joints. Early diagnosis and prompt intervention are known to improve the disease progression, but the effect; early interventions have on patients' quality of life, stays not been appraised in Sri Lanka.

Objectives: To assess the relationship between the time to initiation of treatment with disease-modifying anti-rheumatic drug (DMARD) therapy and subsequent health-related quality of life in patients with rheumatoid arthritis in Sri Lanka.

Methods: This retrospective cross-sectional study was conducted in the Rheumatology and Rehabilitation Clinic at Teaching Hospital, Peradeniya. Data was collected through an interviewer-administered questionnaire. Data was analysed via Jamovi software version 2.4.5.0 using Spearman's correlation.

Results: Data was collected from 87 participants. The mean value for the delay of the initiation of the treatment is 2.96 years with a standard deviation of 5.55 years. Information obtained through the standard SF-36 questionnaire was calculated using standard tools into a physical component score (PCS) and a mental component score (MCS). PCS showed a positive correlation of a p-value of 0.402 (Spearman's rank correlation coefficient of 0.091; values below 0.05 were considered significant). MCS showed a p-value of 0.060 and a Spearman's rank correlation coefficient of -0.203, which indicated a negative correlation with delay in initiating DMARDs.

Conclusions: According to our study, delayed initiation of DMARD therapy neither showed any significant correlation with the PCS nor the MCS. It showed that though the early initiation of treatment favours the better progression of the disease, it does not necessarily improve the overall quality of life of the patients. Therefore, holistic approaches need to be taken in patient care, including rehabilitation along with drug therapy to improve the quality of life in patients with rheumatoid arthritis.

Keywords: *Anti-rheumatic agents, early initiation, quality of life, rheumatoid arthritis, of patients with rheumatoid arthritis*

OP – 37

KNOWLEDGE, ATTITUDES, AND PRACTICE OF LIFESTYLE MODIFICATIONS RECOMMENDED FOR HYPERTENSION MANAGEMENT AMONG ADULT HYPERTENSIVE PATIENTS IN A TERTIARY CARE HOSPITAL IN SRI LANKA

Jayalath UV[1*], Januban S[1], Iroshima PWS[1], Jayalath UJSM[1],
Jagathsiri PI[1], Dalugama CD[2]
[1]*Faculty of Medicine, University of Peradeniya, Sri Lanka*
[2]*Department of Medicine, Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka*
*uvin.jayalath.18@med.pdn.ac.lk

Introduction: Hypertension is a common risk factor for cardiovascular disease, diabetes and renal disease affecting approximately 1 billion people world-wide. Adherence to medications and lifestyle changes are important to achieve desired therapeutic goals.

Objectives: This study was designed to evaluate the knowledge, attitudes and practices of life style modification measures among adult hypertensive patients attending clinics in a tertiary care hospital in Sri Lanka.

Methods: This was a cross–sectional study conducted at the hypertension clinic of Teaching Hospital Peradeniya. A structured patient-administered questionnaire was used for data collection. The questionnaire assessed participants' demographic characteristics, knowledge, attitudes and practice of various lifestyle-modification measures. ANOVA tests were performed to find statistical significance.

Results: A total of 399 participants were included in the study and the majority were females 243(60.9%). The mean BMI value was 24.7 (SD 4.19). The mean knowledge score was 80.3 (SD13.3). The mean attitudes score was 76.2 (SD 4.5). The mean practice score was 55.4 (SD18.5). The majority (57.5%) of the population had adequate knowledge, but attitudes (94.9%) and practices (87.7%) with regarding the lifestyle modification of hypertension were not satisfactory in the majority. There was no statistically significant association of knowledge, attitudes and practices with the age, gender, ethnicity level of education, and duration of hypertension of the study population. Knowledge and attitudes with regard to lifestyle modifications were significantly associated with the control of the last systolic blood pressure reading (<0.05).

Conclusions: In our study, knowledge of lifestyle modification recommended for hypertension management was adequate, but attitudes and practices were not adequate. Implementing measures to improve the knowledge, attitudes, and practices of lifestyle modification measures in this population group is important.

Keywords: *Hypertension, knowledge, attitudes, practices, lifestyle modifications, hypertension management, adult hypertension, tertiary care*

OP – 38

COMPLEMENTARY AND ALTERNATIVE MEDICINE USAGE AMONG CHRONIC KIDNEY DISEASE PATIENTS IN A TERTIARY CARE SETTING

Ratnayake RMIUK[1*], Ravihari WA[1], Choki PT[1], Rimzy AA[1],
Rathnasooriya DT[1], Abeysekera RA[2]

[1]*Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka*
[2]*Department of Medicine, Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka*
*indeewariratnayake99@gmail.com

Introduction: There is a growing trend of patients with chronic kidney disease (CKD) seeking assistance from complementary and alternative medicine (CAM) in Sri Lanka. The lack of tangible evidence of its effectiveness requires a more nuanced understanding of the area, given the potentially detrimental effects of certain CAM practices leading to the worsening of kidney disease.

Objectives: This study was conducted to investigate the prevalence and patterns of CAM usage among CKD patients and identify potential associated factors.

Methods: A cross-sectional, observational study was performed at the CKD clinics of Teaching Hospital, Peradeniya and National Hospital, Kandy from June to August 2023. CKD patients were interviewed using an interviewer-based questionnaire regarding their CAM usage for treating CKD.

Results: Out of the 201 patient responses, 21.9% (n=44) of patients reported using CAM for their CKD. Of the patients using CAMs, biological therapies were used by 56.8% (n=25), and 50% (n=22) used Ayurvedic medicine, while 40.9% (n=18) used mind-body techniques. Out of the CAM users, only 20.5% (n=9) have discussed the use of CAM with their physician. 56.8% of patients were satisfied with the CAM usage. Family and relatives were the main information sources about CAM. The longer duration of CKD showed a statistically significant association with CAM usage (p=0.003), while age (p=0.14), gender (p=0.87), ethnicity (p=0.81) and stage of the disease (p=0.68) didn't show significant associations.

Conclusions: This study reveals that a considerable amount of CKD patients use CAM alongside conventional treatment, whilst only a minority disclosed this to their physician. This study highlights the shift towards CAM with disease progression. Overall, the importance of open discussion between patients and healthcare professionals is emphasized, which may contribute to a more coordinated approach in managing CKD.

Keywords: *Ayurvedic medicine, chronic kidney disease, complementary and alternative medicine, mind-body techniques*

OP – 39

DESCRIPTIVE STUDY OF DIAGNOSTIC YIELD OF ROUTINE ELECTROCARDIOGRAPHY IN HYPERTENSION

Herath HMN[1*], Herath HMKU[1], Herath SH[1], Heepitiya HGLC[1],
Hathurusinghe PV[1], Ralapanawa DMKU[2]

[1]*Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka*
[2]*Department of Medicine, Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka.*
*nympeanau98@gmail.com

Introduction: Hypertension is a significant non-communicable disease in Sri Lanka's middle- and old-aged population. As a developing country, we should provide better management to hypertensive patients with a smaller number of resources. Electrocardiography is a determinant of cardiac changes but the diagnostic yield of routine electrocardiography in Sri Lanka is yet under-researched.

Objectives: Our aim of this study was to identify the diagnostic yield of routine electrocardiography of hypertensive patients in the Peradeniya Teaching Hospital medical ward c section and the hypertension clinic.

Methods: This was a descriptive retrospective cross-sectional study done using the electrocardiographs of 202 hypertensive patients aged between 18-60 years. Consecutive sampling was used. Key electrocardiographic variables of interest were heart rate, cardiac rhythm, P wave duration, QT interval, T wave amplitude and left ventricular hypertrophy. The differences across the age groups (18-39, 40-60) and between male and female subjects were found using Pearson's chi-square test with the significance level set at 5% ($p < 0.05$) and Fisher's exact test.

Results: The commonest abnormalities presented were the abnormal QT duration (34.16%), sinus tachycardia (15.34%) and abnormal P wave duration (8.42%). The diagnostic yield (presence of at least one electrocardiographic abnormality) was 50% in both the 18-39 and 40-60 age groups. ECG abnormalities among females in the age group of 40-60 years were associated with the rhythm and the gender of the hypertensive individuals. There was the lowest in the participants under the age of 40 years and participation was increased with age.

Conclusions: According to the results, we can conclude that ECG changes among hypertensive individuals were improving the diagnostic yield of hypertension.

Keywords: *Hypertension, Electrocardiography, P wave, QT interval, T wave amplitude, Rate, Rhythm*

OP – 40

TEMPORAL TRENDS AND EPIDEMIOLOGICAL ANALYSIS OF DENGUE FEVER FROM 2017 TO 2023, IN KANDY, SRI LANKA: A RETROSPECTIVE STUDY

Weerasekara WGDM[1*], Noordeen F[2], Muthugala MARV[3,4], Akram MAFA[4]
[1]*Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka.*
[2]*Department of Microbiology, Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka.*
[3]*Department of Rabies, Medical Research Institute, Colombo 08.*
[4]*Department of Virology, National Hospital, Kandy*
*madumaliweerasekara94@gmail.com

Introduction: This study analyzed dengue trends in Kandy from 2017 to 2023, highlighting case fluctuations and the COVID-19 pandemic's impact on surveillance and reporting.

Objectives: Objective of this study was to examine temporal trends in dengue fever cases in Kandy over the past five years, focusing on monthly and yearly incidence variations.

Methods: Epidemiological data of clinically suspected dengue patients at National Hospital, Kandy were collected from the Infection Control Unit and Virology Laboratory with permissions. Retrospective analysis covered 2017-2023, focusing on clinically suspected and laboratory confirmed cases, outcomes, and seasonal trends. Data were entered into a Microsoft Excel spreadsheet and analysed via SPSS Statistics version 21.

Results: In 2017, total admitted suspected dengue cases surged to 10,979, with 2,888 laboratory-confirmed cases and 11 fatalities, representing roughly 0.1% of total cases. The following year, the number of cases decreased to 3,260, with 356 confirmed cases and 02 deaths, accounting for approximately 0.06% of the total cases. In 2019, cases rose to 5,634, with 901 laboratory-confirmed cases and 07 deaths, amounting to about 0.12% of total cases. Due to the COVID-19 pandemic, data for 2020 was not available. In 2021, there was a notable drop in cases to 840, with no reported deaths. Lastly, in 2022, there were 3,528 total cases, with 1,078 confirmed cases and 07 fatalities. In 2023, the number of suspected dengue cases reached 5,176, with 1,344 confirmed cases and 07 fatalities, making up approximately 0.14% of the total cases. Regarding seasonality, dengue consistently peaked from June to October each year: in 2017 (June 1,415 to October 604), 2018 (June 341 to October 173), 2019 (June 202 to October 838), 2021 (June 50 to October 72), 2022 (June 423 to October 241), and 2023 (June 402 to October 304). Over the last six years, dengue cases consistently peak from June to October, indicating seasonal spikes in transmission.

Conclusions: Dengue cases peaked from June to October each year, with significant fluctuations influenced by pandemic disruptions. Vigilant surveillance and targeted interventions during these peak months are essential to effectively manage and reduce dengue outbreaks.

Keywords: *Dengue, epidemiology, outbreaks, surveillance, trends*

OP – 41

KNOWLEDGE AND ATTITUDES REGARDING CHRONIC COMPLICATIONS OF TYPE 2 DIABETES MELLITUS AMONG EMPLOYEES IN GOVERNMENT INSTITUTIONS IN THE KANDY MUNICIPAL COUNCIL AREA

Wijesooriya WMSL[1*], Wijenayaka PA[1], Wijerathne AGAN[1], Wijewardhana HMCG[1], Athapaththu AMLB[1], Tennakoon SUB[2]

[1]*Faculty of Medicine, University of Peradeniya, Sri Lanka.*
[2]*Department of Community Medicine, Faculty of Medicine, University of Peradeniya, Sri Lanka.*
*sandaruwijesooriya@gmail.com

Introduction: The current trend of urbanization and unhealthy lifestyles among government employees keeps growing, making them vulnerable to non-communicable diseases, including diabetes. Their level of knowledge and attitudes towards diabetes and its complications is an important marker of their standpoint on the disease. This aspect has been rarely studied, making this research timely and important.

Objectives: To assess the knowledge and attitudes about common chronic complications of type 2 diabetes mellitus among employees in government institutions in the Kandy municipal council area.

Methods: This descriptive cross-sectional study involved 310 government employees in the Kandy municipal council area, assessing their knowledge and attitudes towards chronic complications of type 2 diabetes mellitus using a self-administered questionnaire. Participants were categorized into knowledge and attitude levels, and the factors affecting knowledge and attitudes were analyzed.

Results: Among 302 respondents, with a mean age of 40.61±8.23 years, 72.8% were females and 27.2% were males. The mean knowledge score was 76.8%±23.4, and the mean attitude score was 76.1%±17.3. Knowledge levels were very good in 59.3%, good in 28.5%, fair in 7.9%, and poor in 4.3% of participants. Attitudes were very good in 63.6%, good in 30.5%, fair in 4.0%, and poor in 2.0% of participants. Significant associations were found between knowledge level and factors such as sex, locality, years of education, family income, and family history of diabetes. For attitudes, significant factors included sex, family income, family history of diabetes, and diabetes-related knowledge.

Conclusions: Our study found that participants had adequate knowledge and generally positive attitudes toward chronic complications of type 2 diabetes mellitus. About 10% of the participants were already diagnosed with diabetes. Significant factors associated with both knowledge and attitudes included sex, family income, and the family history of diabetes.

Keywords: *Type 2 diabetes mellitus, government employees, knowledge and attitudes, chronic complications, Kandy*

OP – 42

PREVALENCE AND EFFECT ON GLYCEMIC CONTROL OF SELF-MONITORING OF BLOOD GLUCOSE- A CROSS-SECTIONAL STUDY BASED IN KANDY

Ranasinghe KWRNN[1], Rajapaksha RMB[1*], Ranathunga JADK[1], Ranaweera WG[1], Ranepura RDAG[1], Medagama A[2, 5], Antonypillai C[4], Ratnatunga CN[3]

[1]*Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka*
[2]*Department of Medicine, Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka*
[3]*Department of Microbiology, Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka*
[4]*Endocrinology Unit, National Hospital Kandy, Sri Lanka*
[5]*Teaching Hospital Peradeniya, Sri Lanka*
*piumi.rajapaksha.18@med.pdn.ac.lk

Introduction: Diabetes self-care including self- monitoring of blood glucose (SMBG) plays a crucial role in the effective management of diabetes especially in Type 1 Diabetes (T1DM) and insulin-dependent Type 2 Diabetes (T2DM).

Objectives: This study aimed to assess the prevalence of self-monitoring of blood glucose, factors affecting self-monitoring, and evaluating its effect on glycaemic control.

Methods: A descriptive cross-sectional study was done on a sample of 357 participants, with T1DM and T2DM at diabetic clinics at National Hospital Kandy and Teaching Hospital Peradeniya. Data collection was done using an interviewer-administered questionnaire and patient records. The prevalence of SMBG and associated factors were evaluated using SPSS (version 26) with the Pearson's chi-square test and Fisher's exact test. The HbA1C values comparisons were done with Mann-Whitney U test.

Results: Overall prevalence of SMBG was 43.40% with 96.4% among T1DM and 38.9% among T2DM patients. There was a significant association between glucometer usage and age group ($p<0.001$), education level ($p=0.011$), income level ($p=0.013$), presence of comorbidities ($p=0.021$), hypoglycaemic attacks ($p<0.001$), type of diabetes ($p<0.001$), duration of diabetes ($p=0.001$) and treatment regime ($p<0.001$) while no association was seen with other variables including occupation. Calculated self-care score showed a significant association with glucometer usage ($p=0.012$). The majority of the glucometer users (70.96%) recorded the glucometer readings, changed their diet (71%) and self-titrated insulin accordingly (65.50%) of insulin dependent patients according to readings. There was no significant difference in median HbA1c values between the glucometer users and non-users ($p=0.267$).

Conclusions: A satisfactory overall prevalence of self-monitoring was seen among the diabetic patients in the sample population with a high prevalence among T1DM patients which supports the current guidelines.

Keywords: *Diabetes, self-monitoring of blood glucose (SMBG), glucometer, T1DM, T2DM*

OP – 43

OUT-OF-POCKET EXPENDITURE (OOPE) ON DIABETIC CARE, DIABETIC DRUG ADHERENCE AND ASSOCIATED FACTORS AMONG PATIENTS ATTENDING THE DIABETIC CLINIC AT TEACHING HOSPITAL PERADENIYA.

Weerasooriya RMBS[1*], Weradoowa HM[1], Wickremasinghe WAMS[1],
Widanagamage PWSJP[1], Gunawardane DA[2]
[1]Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka
[2]Department of Community Medicine, Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka
*[*]bimsaraweerasooriya@gmail.com

Introduction: Diabetes Mellitus is one of the most common non-communicable diseases affecting the global population, including Sri Lanka. Despite living in a country with free healthcare, patients spend a significant amount of money out of their pocket, which can affect their drug adherence. Data regarding these expenditures and antidiabetic drug adherence are scarce in Sri Lanka.

Objectives: To describe OOPE on diabetic care, diabetic drug adherence and associated factors among patients attending the diabetic clinic at Teaching Hospital Peradeniya.

Methods: An analytical cross-sectional study was carried out with 422 patients. An interviewer-administered questionnaire was used to collect information regarding OOPE. Drug adherence was assessed using the Brief Adherence Rating Scale. The study was conducted from July to August 2023.

Results: The median quarterly OOPE of a patient attending the diabetic clinic of Teaching Hospital Peradeniya was LKR 1700. Patients had spent most (26.42%) on medications, followed by transportation (17.50%) and laboratory testing (16.61%). Most (70.6%) of the participants were found to have a good adherence to antidiabetic medications. A significant association was found between total OOPE and drug adherence. Distance travelled, type of diabetes, duration of disease and treatment pattern were found to have a statistically significant association with OOPE, while treatment pattern showed a statistically significant association with drug adherence.

Conclusions: OOPE for diabetic care was a significant challenge for many patients. Although drug adherence among diabetic patients was good, a notable proportion struggled with poor adherence. OOPE on diabetic care was associated with the level of drug adherence.

Keywords: *Diabetes mellitus, drug adherence, out-of-pocket expenditure (OOPE)*

OP – 44

KNOWLEDGE, ATTITUDE AND PRACTICES REGARDING PREVENTION OF DIABETIC FOOT ULCERS AMONG DIABETIC PATIENTS IN TEACHING HOSPITAL PERADENIYA

Abeysinghe AMMEK[1*], Abeyrathne KMGYDB[1], Abeysekara RMSK[1],
Abeysinghe PMAV[1], Abhayasekara MARL[1], Peiris SPM[2]
[1]Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka
[2]Department of Surgery, *Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka*
*madhuja.abeysinghe.18@med.pdn.ac.lk

Introduction: Diabetes mellitus is a complex and chronic metabolic illness associated with various complications. Among them, diabetic foot ulcer is considered the most preventable complication.

Objectives: To assess knowledge, attitude and practices (KAP) regarding prevention of diabetic foot ulcers among diabetic patients.

Methods: A cross-sectional study was conducted at the diabetes clinic, Teaching Hospital Peradeniya, Sri Lanka. For this study, 271 patients with type-2 diabetes mellitus, aged 18 years or older were selected by simple random sampling. An interviewer-administered validated questionnaire was used. Independent t-test, one-way ANOVA with post hoc analyses were used to analyse the variances of means of KAP scores with regards to gender, level of education, level of monthly income and duration of diabetes (CI=95%, $p<0.05$).

Results: The mean knowledge score was 10.1 out of 12. Attitude and practice scores were 4.2 and 14.3 out of 5 and 26, respectively. Majority correctly identified key factors associated with diabetic foot ulcers: reduced blood flow (81.9%), reduced sensation (93.4%), and importance of inspecting feet (96.3%). Awareness about diabetic flat foot and foot gangrene was limited. More than 90% expressed favorable attitude to undertake preventive measures including exercise, dietary changes, daily foot examination and special footwear. Only 61.6% favored to wear footwear indoors. Regarding practices, 66.8% performed daily foot examination, 71.2% inspected footwear, 67.9% refrained from outdoor barefoot walking. Only 51.3% wore comfortable footwear and 40.6% washed their feet daily. Notably 35.8% had not received regular professional foot check-ups. Statistically significant difference in mean knowledge scores showed only in groups based on education level. Attitude scores exhibited statistically significant differences only among groups based on monthly income level. Practice scores demonstrated statistically significant differences among groups based on gender, education level, and monthly income.

Conclusions: This study revealed a satisfactory level of knowledge and positive attitude. However, there existed a gap between knowledge and actual practices in foot care.

Keywords: *Attitudes, diabetes mellitus, foot ulcer prevention, knowledge, practices*

OP – 45

ANALYSIS OF FACTORS CONTRIBUTING TO DIABETIC FOOT ULCERS IN A SAMPLE OF PATIENTS FROM THE NATIONAL HOSPITAL KANDY

Piyumal PGSS[1*], Premarathna SMADGS[1], Piyumali MMC[1], Polhengoda PMSP[1],
Pramod MWR[1], Antonypillai CN[2], Wijetunge S[3]

[1]*Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka*
[2]*National Hospital, Kandy*
[3]*Department of Pathology, Faculty of Medicine, University of Peradeniya, Peradeniya,
Sri Lanka*
*sithum990601@gmail.com

Introduction: Diabetic foot ulcers (DFU) is a common morbidity among diabetic patients in Sri Lanka with a significant impact on their mental and physical well-being. Although the main underlying cause is poor long-term glycaemic control-related complications, the attributing factors are multifactorial. This study investigates these factors aiming to suggest preventive strategies.

Objectives: To describe the extent of diabetic control, co-morbidities and socio-economic and behavioural factors associated with diabetic foot ulcers in a sample of patients from the National Hospital, Kandy.

Methods: This descriptive study focused on 70 consecutive diabetic foot ulcer patients in surgical wards. Data was collected via a researcher-administered questionnaire and by examination of the patient. Chi-square was used as the statistical test.

Results: The mean age of the study sample was 62.6 years (SD=11.2), predominantly male (54.3%) and urban and semi-urban residents (67.1%). Of the subjects, 48.6% had completed GCE Ordinary Level, 51.4% were employed and 50% in the lower-middle-income class. Although most had regular clinic visits with medication (84.3%), peripheral neuropathy (41.4%) and vascular disease (31.4%) were common comorbidities. Participation rate in diabetic care awareness programme was 65.7% while regular foot care and diabetic diet were seen among 42.9% and 48.1% of participants, respectively. Only 15.7% had been investigated for HbA1c. A significant association was found between education level and consistent footwear use.

Conclusions: The study found that despite regular clinic visits awareness of long term diabetic control and care was suboptimal. The prevalent risk factors for DFU in the study group were poor compliance with health education, improper adherence to diabetic diets, walking barefoot, poor foot care and low income. Communication gaps between healthcare workers and patients regarding foot care and overall diabetic control and monitoring long term diabetic control at clinic level need improvement.

Keywords: *Behavioural factors, co-morbidities, diabetic control, diabetic foot ulcers*

POSTER PRESENTATION ABSTRACTS

PP – 01

PILONIDAL SINUS: AN UNUSUAL CAUSE FOR PYREXIA OF UNKNOWN ORIGIN

Jayasooriya HK[1*], Bowatte PGCS[2], Pathirana NPNB[1], Wijayasuriya WAKR[1]
[1] *Faculty of Medicine, Wayamba University of Sri Lanka*
[2] *Department of Medicine, Faculty of Medicine, Wayamba University of Sri Lanka*
*kalhara98@gmail.com

Introduction: Pyrexia of Unknown Origin (PUO) is defined as a temperature of more than 38.0 ^{0}C on several occasions for more than three weeks, despite an appropriate initial inpatient or outpatient evaluation. Pilonidal Sinus (PS) is an involuted nest of hair into the subcutaneous tissue due to repeated friction trauma resulting in chronic inflammation, classically in the natal cleft in males who sit still for a long duration. We report the first case of PUO in medical literature occurred with infected PS.

Case presentation: A 55-year-old male, presented with a low-grade fever for 3 months duration. He denied any localizing symptoms. For the past three months, he remained undiagnosed with appropriate intelligent and invasive investigations including echocardiogram, bone marrow biopsy, and relevant ultrasound scans. Common causes of PUO; infective, inflammatory, neoplastic, drug-induced, and other causes were excluded, and his fever subsided with antibiotics and recurred after stopping. Apart from cirrhosis no other comorbidities in the past. He is a security officer who sits still for longer durations. Meticulous physical examination at this time found a 1 cm PS at the natal cleft. All other findings were unremarkable. Investigations revealed CRP 10.8 mg/L and ESR 107 mm/hour and other investigations were normal. An infected PS was diagnosed liaising with the surgical team and subsequently managed with oral antibiotics, which subsided the fever without any surgical procedures. The patient was advised to avoid sitting for longer periods to aid the spontaneous healing of the PS. On follow-up at three months, all the symptoms were subsided while PS was cured spontaneously without any surgical interventions.

Conclusions: PS can be a rare cause for PUO which may not be detected early due to its concealed location and the majority being asymptomatic. Meticulous physical examination is crucial for overcoming diagnostic difficulties in PUO to diagnose rare aetiologies like PS.

Keywords: *C-reactive protein, Pilonidal sinus, Pyrexia of unknown origin*

PP – 02

DELIBERATE FOREIGN BODY INGESTION AND INSERTION TO BODY CAVITIES IN A PATIENT WITH EMOTIONALLY UNSTABLE PERSONALITY DISORDER-BORDERLINE TYPE AND COMORBID PSYCHIATRIC DISORDERS

Wijayasuriya WAKR[1*], Liyanage ULNS[2], Jayasooriya HK[1]
[1] *Faculty of Medicine, Wayamba University of Sri Lanka*
[2] *Department of Psychiatry, Faculty of Medicine, Wayamba University of Sri Lanka*
*wkumuthu@gmail.com

Introduction: Deliberate Foreign Body Ingestion (DFBI) and Deliberate Foreign Body Insertion into Body Cavities (DFBIBC) are rare yet life-threatening behaviours often associated with psychiatric conditions, notably Emotionally Unstable Personality Disorder-Borderline Type (EUPD-BT). Despite their rarity, they pose significant risks of infection, trauma and obstruction. Coexisting depression and mental retardation intensify DFBI, complicating clinical management and the multidisciplinary approach to effective management.

Case presentation: An 18-year-old girl with EUPD-BT, severe depression without psychotic symptoms, and mild mental retardation had multiple episodes of DFBI. She had ingested various plastic objects, including toothbrushes and pens, leading to life-threatening intestinal obstructions requiring surgical interventions including rigid endoscopy, gastrostomy, and open laparotomy. The patient has a turbulent family history, notable for instability along with childhood adversities, including parenteral disharmony. She was admitted to the psychiatric ward following suspected sexual abuse and harassment by her father. Previous examinations revealed a piece of cotton and clothing in her vagina, suggesting DFBIBC. However, liaison with the forensic department excluded evidence of sexual abuse, including hymenal injuries. During her stay, a child and adolescent psychiatrist's opinion was sought, and treated with sertraline, aripiprazole, and lithium carbonate to reduce her self-harming behaviour. Dialectical behavioural therapy was employed to enhance distress tolerance, emotional regulation, mindfulness, problem-solving skills and adaptive coping methods. The current management includes strict monitoring due to the potential risk of self-harm, absconding and the risk of life-threatening DFBI and DFBIBC.

Conclusions: EUPD-BT is a management challenge when it co-exists with multiple psychiatric conditions, DFBI, and DFBIBC. To overcome these management difficulties, the importance of multidisciplinary bio-psychosocial approaches plays a crucial role in individualised patient management plans, such as dialectical behavioural therapy and medications for psychological and psychopharmacological management, respectively. Social interventions like psychoeducation and mitigating life-threatening risks improve the prognosis, though poor family support and mental retardation challenge the overall outcome.

Keywords: *Bio-psychosocial approach, Borderline personality disorder, Deliberate self-harm, Multidisciplinary team*

PP – 03

AN INFANT WITH A SPIRAL FRACTURE – AN EYE OPENER FOR A HOLISTIC APPROACH

Wijayarathne JAPT*, Kitulwatte IDG
Department of Forensic Medicine, Faculty of Medicine, University of Kelaniya, Sri Lanka
*pabasarawijayarathne@gmail.com

Introduction: A holistic approach or having a proper understanding of a child within the context of the family, community and culture is crucially important in addressing the well-being of a child. Within the context of medico legal examination and reporting of cases of child abuse, the role of a holistic approach and multidisciplinary management is highlighted based on the principle of the best interest of the child.

Case Presentation: A three-month-old baby, referred by the treating physicians, was subjected to a medico-legal examination. He was found to have a spiral fracture of the left humeral shaft and two abrasions over the right forehead and lower back. The explanation given by the mother was that the baby had been held by his father as a shield during a fight between father and their neighbours, and during the attempt of rescue the baby by mother, he might have sustained those injuries. The unusual and incompatible history demanded further inquiries. An in-depth inquiry revealed that multiple psycho-social and financial problems, including substance misuse by both parents and frequent domestic violence, exist in the family. This raised significant concerns regarding the safety of the baby. It was decided at the institutional case conference with pediatrician, judicial medical officers, child psychiatrist, police and officers from National Child Protection Authority to refer parents for psychiatric management and to re-assess in one year and meanwhile hand over the baby to a child development center.

Conclusions: The multidisciplinary approach with an evaluation of the psycho-social background of this child facilitated a coordinated response to ensure safety while assisting medico legal team in the investigation and prosecution with the least possible trauma to the child.

Keywords: *Child abuse, holistic health, spiral fractures*

"Nothing has such power to broaden the mind as the ability to investigate systematically and truly all that comes under thy observation in life"

- MARCUS AURELIUS

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