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## Recent PeMSAA events: CME Programme with the Sri Lanka College of Internal Medicine:

### Quantum Leap - A Workshop on Transforming Medical Research with AI

PeMSAA was indeed happy to collaborate with the Sri Lanka College of Internal Medicine in organizing this very timely workshop. The resource person at this workshop was Dr. Masood Jawaid, an accomplished medical professional with vast experience in medical education, research and online education.





The workshop was conducted at the elibrary of the Faculty of Medicine, University of Peradeniya. A wide group of people that included professors, consultants, lecturers, postgraduate trainees, research assistants and pre intern medical officers attended this event.

### Quantum Leap - A Workshop on Transforming Medical Research with AI

The attendees gained hands-on experience on how AI could support in conducting medical research and found this a very beneficial training. PeMSAA would like to thank the Sri Lanka College of Internal Medicine for the opportunity to work together to facilitate this continuing medical education program.







### Recent PeMSAA events:

### 'Seniors Sharing Experiences' - Alumni giving a helping hand

In accordance with the Vision and Mission of PeMSAA, "To enable the faculty, its students and its alumni sail far and wide with the winds of change" PeMSAA very successfully moderated the event 'Seniors Sharing Experiences' this year too.





Seniors Sharing Experiences' provides a platform for the highest performing fresh graduates to speak frankly to their junior colleagues on the challenges they faced and strategies they used from a young graduate's perspective, to work effectively during their final year appointment and to excel at the final MBBS examination.

### 'Seniors Sharing Experiences' - Alumni giving a helping hand



This was followed by a one-on-one discussion that took place within the calming environs of the pillared area and the "Latha Mandapaya", at the Faculty of Medicine Peradeniya; this was between the resource panel and students, so that the latter were able to get advice and support based on their individualized needs and concerns.

The outstanding young graduates of the 16/17 batch conducted sessions for their 2 immediate juniors and super junior batch in July and September 2024. The sessions were held at the auditorium of Teaching hospital, Peradeniya and the Physiology Lecture Theatre at the Faculty of Medicine, Peradeniya. The initial part of the programme included presentations each specialty, and discussions aspects such time on management.



Both sessions were well attended and the feedback of the juniors has been very encouraging. PeMSAA wishes to thank the resource panel for their enthusiasm and commitment in making both sessions a success and would like to wish them the very best in life as they embark on their careers.

### Latest advances in unexplained subfertility &

### management

#### Introduction

Subfertility is diagnosed if a couple fails to achieve a pregnancy after one year of regular unprotected sexual intercourse. At present, one in seven couples are subfertile in the world. Unexplained infertility is diagnosed when investigations for ovulation, tubal patency and semen analysis are normal. For as many as 30 to 40% of couples experiencing subfertility, their subfertility remains unexplained. This is a diagnosis of exclusion. This does not mean that there is no cause for the subfertility, instead it means that standard fertility evaluation has failed to identify a cause. This is highly frustrating for the couple. Similarly, lack of strong evidence and consensus to manage this condition, over treatment and associated treatment related complications give added importance to this entity.

There are significant limitations of freely available standard tests. Routine semen analysis does not assess the fertilizing potential/sperm function of the spermatozoa and complex changes happen to the sperm before fertilization. Proof of ovulation does not indicate egg quality. It neither predicts ovarian reserve nor the likely ovarian response to fertility treatment. Even though standard tubal patency tests assess anatomical patency, they do not assess tubal functions such as ciliary motions and muscular activity.

### Possible underlying causes

Although the exact cause of unexplained infertility remains undetermined, several potential factors could be contributing to the condition. Some of these include:

- 1. Hormonal Imbalances affecting ovulation, egg quality and implantation.
- 2. Seminal pathologies such as sperm DNA fragmentation, which is not routinely tested, could affect fertility.
- Egg quality: This may be associated with maternal age. Poor egg quality can lead to difficulties with fertilization and embryo development.
- Tubal functional pathologies such as impaired ciliary motion, which is not detected by standard tests

### Latest advances in unexplained subfertility &

### management

### Possible underlying causes continued

- Immunological factors leading to attacks on sperm or embryo and preventing conception or implantation.
- Endometrial receptivity problems, which may not be detected in standard evaluation.
- Lifestyle and environmental factors, such as stress, diet and exposure to environmental toxins.
- 8. Gynaecological conditions such as minimal and mild endometriosis, adenomyosis and fibroids.

Many of above mentioned abnormalities have been found in couples with normal fertility, and furthermore, correction of abnormality does not always improve fertility. Therefore, there should be a balance between thorough and speculative investigations, accepting that subtle causes of subfertility may not be detectable and moving on to the treatment of the couple.

### Evaluation of couples with unexplained infertility

Diagnosis of the underlying cause for unexplained infertility is often challenging and it includes a wide spectrum of investigations, including the following aspects:

- 1.Ovulation confirmed by checking mid-luteal progesterone levels.
- 2.Ovarian reserve.
- 3. Tubal patency via hysterosalpingography or hysterosalpingo-contrast-sonography.
- 4.Uterine anatomy using 3D ultrasound imaging.
- 5.Seminal analysis for anti-sperm anti-bodies, DNA fragmentations and aneuploidy.
- 6.Diagnostic laparoscopy and hystreroscopy if indicated.

Assessment of vaginal microbiota, endometrial biopsy, testing for autoimmune conditions and thrombophilia are not routinely recommended.

### Latest advances in unexplained subfertility &

### management

### **Treatment Options**

In the absence of a definitive cause, treatment is empirical and the four main available management options are,

- 1. Expectant management.
- 2. Ovarian stimulation (OS).
- 3. Intra-uterine insemination (IUI) with or without ovarian stimulation.
- 4. In-vitro fertilization (IVF) and assisted reproductive technology (ART).

Evidence is lacking to confirm the superiority of one treatment method over the other, and the prognosis is significantly impacted by the woman's age and the duration of subfertility.

- 1. Expectant management would be the best for women less than 35-years of age and with less than two years of unexplained subfertility. The woman should be advised regarding a healthy life style, achieving optimal weight and regular unprotected sexual intercourse. Prognosis is good, and 74% will achieve a pregnancy within five years; and this is a cost effective strategy with none of the adverse effects of fertility treatment. But the couple may not accept this, due to their sense of stress and frustration in this situation.
- 2. Ovarian stimulation (OS) and Intrauterine Insemination (IUI) is the first-line treatment of infertility. OS can be done with clomiphene citrate, letrozole and gonadotrophins. These stimulate the ovaries to produce multiple eggs which increases the chances of conception and these developing follicles produce oestrogens which will prime the endometrium to optimize the chances of successful implantation.
- 3. Intra-uterine insemination (IUI) involves placing washed and concentrated sperm directly into the uterus at the time of ovulation, which helps bypass potential issues with sperm motility or cervical mucus. IUI can be done in natural cycles as well as in stimulated cycles.

## Latest advances in unexplained subfertility & management

**4. In-vitro fertilization (IVF)** is not the first-line treatment for unexplained subfertility when the female partner's age is less than 38 years, and there is a definite place for expectant management and OS + IUI. IVF is recommended if IUI is unsuccessful or for women with advanced maternal age. IVF which involves stimulating the ovaries to produce multiple eggs, retrieving those eggs, fertilizing them with sperm in a laboratory, and then transferring the resulting embryos into the uterus. It overcomes many potential issues that might be causing unexplained infertility, such as subtle problems with egg quality, sperm function, or embryo implantation. Intracytoplasmic Sperm Injection (ICSI) is not routinely recommended for conventional IVF but, but can be considered in suspected male factor infertility.

#### Conclusions

Unexplained infertility is a challenge in reproductive medicine, especially due to the psychological impact on couples, and the limitations of evaluation and treatment options. Advances in reproductive medicine continue to improve the understanding and treatment of unexplained infertility, offering hope to many couples.

Dr. M. Champika Gihan

Department of Obstetrics & Gynaecology

Faculty of Medicine

University of Peradeniya

Batch 2000/01



## Updates from PeMSAA - UK: PeMSAA UK Charity Walk & Summer Gala at Peak District, 2024

PeMSAA-UK in Derby organized this hike and gala event, on the 20th of July 2024 at the picturesque Peak District. This event attracted more than 80 alumni and friends to support a worthy cause. This successful event raised over £1,500, which will be dedicated to enhancing medical education at the Faculty of Medicine, University of Peradeniya, Sri Lanka. The day was filled with camaraderie, fellowship and a shared commitment to giving back. It was a very memorable occasion for all.





### The PeMSAA - UK Research Grant 2024

The PeMSAA-UK Research Grant endeavours to cultivate and bolster research initiatives within the medical student community. Tailored to facilitate proof-of-concept studies, this grant serves as a crucial precursor for future major clinical investigations. Accessible to all medical students enrolled in the Faculty of Medicine at the University of Peradeniya, the grant offers a maximum funding of £250 per selected applicant or group.



# PeMSAA 17<sup>th</sup> International Medical Congress

21<sup>st</sup> & 22<sup>nd</sup> November 2024

"Inspiring better outcomes while embracing scarcities"

### Highlights

- Congress Lecture
- Felicitation Retired teachers / Outstanding undergraduates
- Plenary lectures Global health / Safe prescribing
- Updates Cardiology, Surgery and Psychiatry
- Symposia Medicine, Surgery, Obstetrics and Gynaecology and Paediatrics
- Discussion Healthy living
- Pre-congress workshops

Registration will open soon
Await further details
www.pemsaa.org pemsaa.temp@gmail.com

Peradeniya Medical School Alumni Association (PeMSAA)



17<sup>th</sup> International Medical Congress

21<sup>st</sup> & 22<sup>nd</sup> November 2024 Kandy, Sri Lanka



The 17th International Medical Congress of the PeMSAA will be held on 21-22nd November 2024, in Kandy, Sri Lanka.

The occasion will be graced by the Chief Guest, Professor Sivalingam Sivanathan, who is a Professor Emeritus of Physics, at the University of Illinois, Chicago. He is an alumnus of University of Peradeniya and has been actively collaborating with his alma mater for many years. He has authored or co-authored over 200 refereed journal articles and oral presentations.

The Guest of Honour, Dr. Palitha Abeykoon is a towering figure in the Sri Lankan medical scene and is currently Senior Advisor to the World Health Organization. He is an alumnus of the first batch at the University of Peradenya and has contributed greatly to development and provision of health services in Sri Lanka.

The Congress will include many other renown speakers. It will provide opportunities for alumni far and wide to share knowledge, experiences and fellowship, amidst the familiar environs of 'Pera'.

### Donations to the PeMSAA Students' Crisis Fund

The PeMSAA Student Crisis Fund was established to help undergraduate students at the Faculty of Medicine, Peradeniya, in the event of an acute personal crisis such as serious personal health problems, serious health problems of parents or guardiansincluding sudden death or permanent disability or loss of houses due to natural disasters, and other similar situations. We welcome donations, either as one-off donations or as regular monthly sums to the fund. We sincerely hope our alumni will generously donate to this cause, remembering how difficult life could sometimes be during undergraduate years. The details of the fund are as follows.

Name of account: 'PeMSAA Student Crisis Fund',

Account number: 87997354, Bank name: Bank of Ceylon

Bank branch: Super Grade Branch Peradeniya, Swift code: BCEYLKLX.

