TAOG

2023

The 62nd Annual Congress & The 9th International Symposium of Taiwan Association of Obstetrics and Gynecology

2023.8.12~13

台中裕元花園酒店

Windsor Hotel Taichung

The 62nd Annual Congress & The 9th International Symposium of Taiwan Association of Obstetrics and Gynecology

Program & Abstract

August 12-13 (Sat.-Sun.), 2023

Windsor Hotel Taichung, Taichung, Taiwan

Program HandBook_QR Code

Contents

Greetings

It is with great appreciation that having the 23rd member representatives, board directors and supervisors' support, Taiwan Association of Obstetrics and Gynecology (TAOG) has been established for 62 years. The declining birth rate crisis in Taiwan may cause concern and largely affects national society. Yet with the efforts done by previous leaders of TAOG, we are gratified that many outstanding students choose Ob-Gyns for future clinical work and research. We will enhance their training and practice courses, as well as promoting the development of realistic training models to ensure the best result of treatment for our patients.

In international affairs, AOFOG gave recognition to our contribution for our warm regards for Pakistan flood in November, 2022. Our participation in the 75th Annual Congress of JSOG strengthens our friendship with JSOG, KSOG, AOFOG, and FIGO officers in May, 2023. Furthermore, the discussion of plans in the future and well-organized arrangements at the AOFOG council meeting brought out more sparks and ideas among AOFOG council representatives in June, Vietnam.

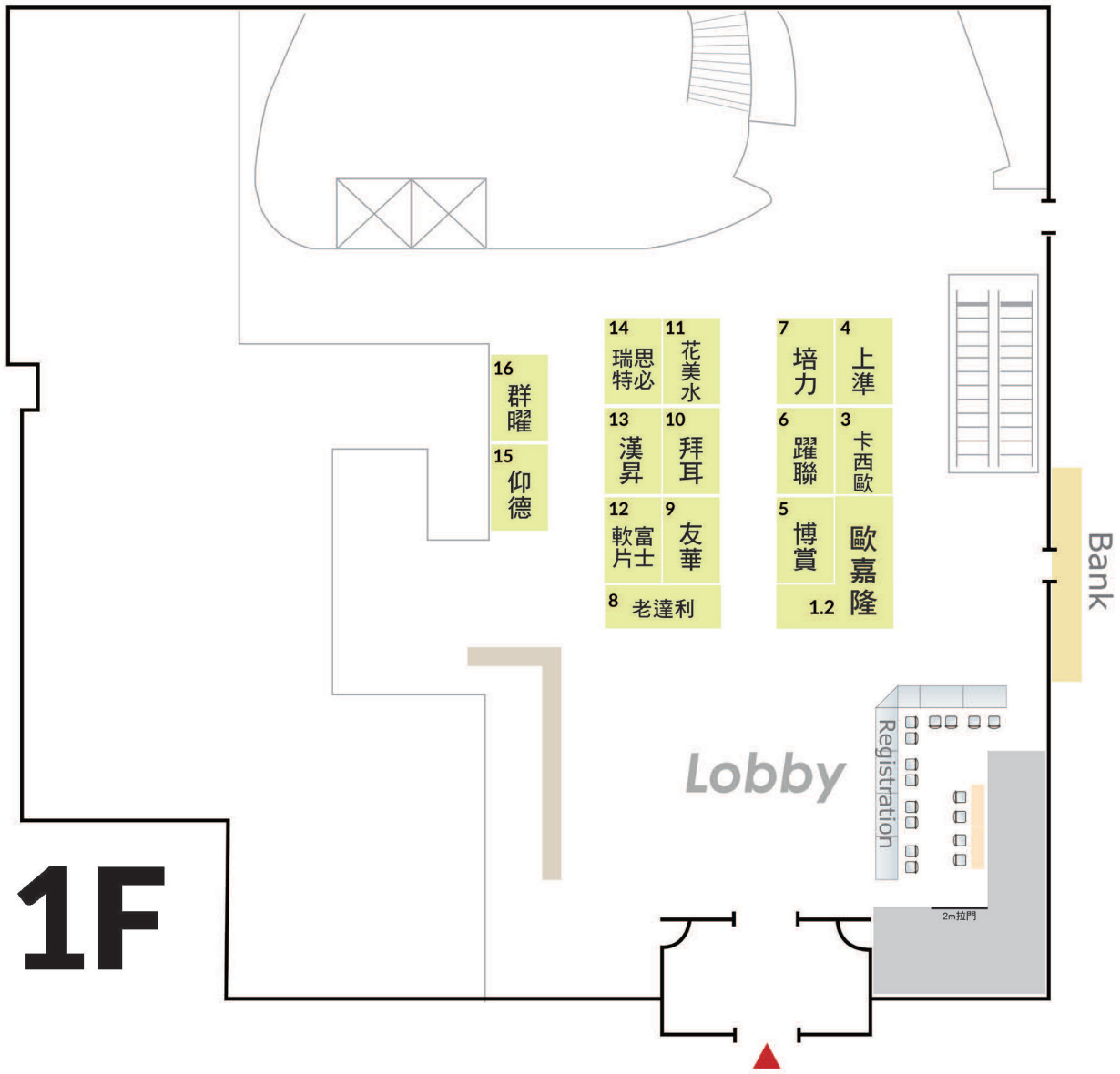
The 2nd American-Taiwan (AT) Online Joint Conference has been ended in satisfactory with exciting topics from outstanding speakers of ACOG on June 18. The collaboration between two societies increases the communication in academy and friendship. FIGO World Congress, 2023 will be held in October in Paris, and there will be a JKT session discussing about sharing the result of subsidies for infertility treatment in Japan, Korea and Taiwan. We are thrilled to share our results with the world. In November, we will attend the annual meeting of KSOG with extended young doctor program. We sincerely appreciate all the distinguished guests attending our annual congress in August.

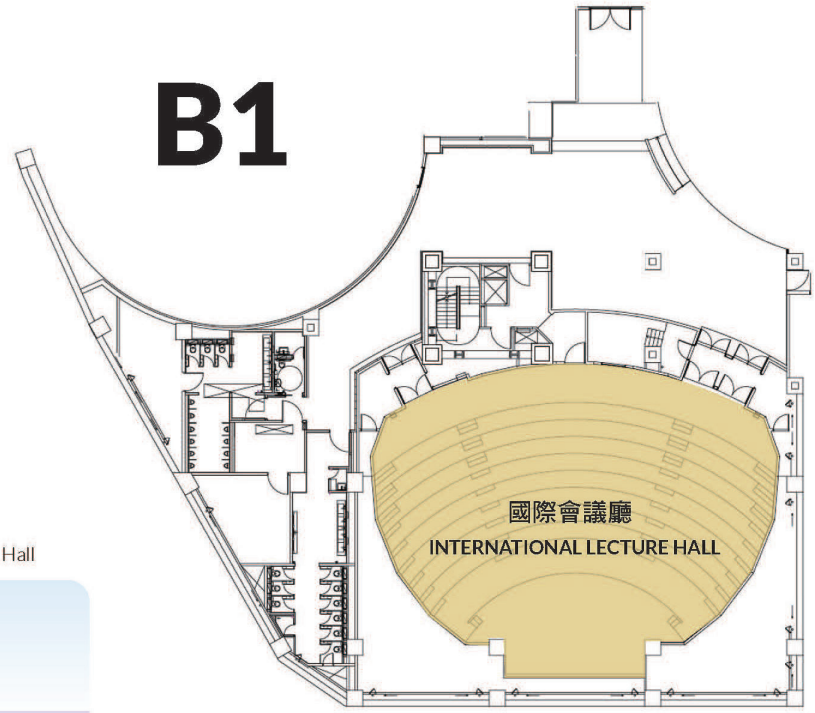
With indefatigable efforts and countless hours, we are extremely proud and touched to have TAOG Museum to preserve valuable and precious cultural relics with detailed introduction of our previous generation. Guests who visit TAOG Museum have always been amazed by its excellent work.

Finally, I would like to give special thanks the efforts of all the editorial Board of Taiwanese Journal of Obstetrics and Gynecology (TJOG). Congratulations! TJOG has reached SCI Impact Factor 2.1 in 2022. It is our honor and glory!

Shee-Uan Chen, MD
President of TAOG

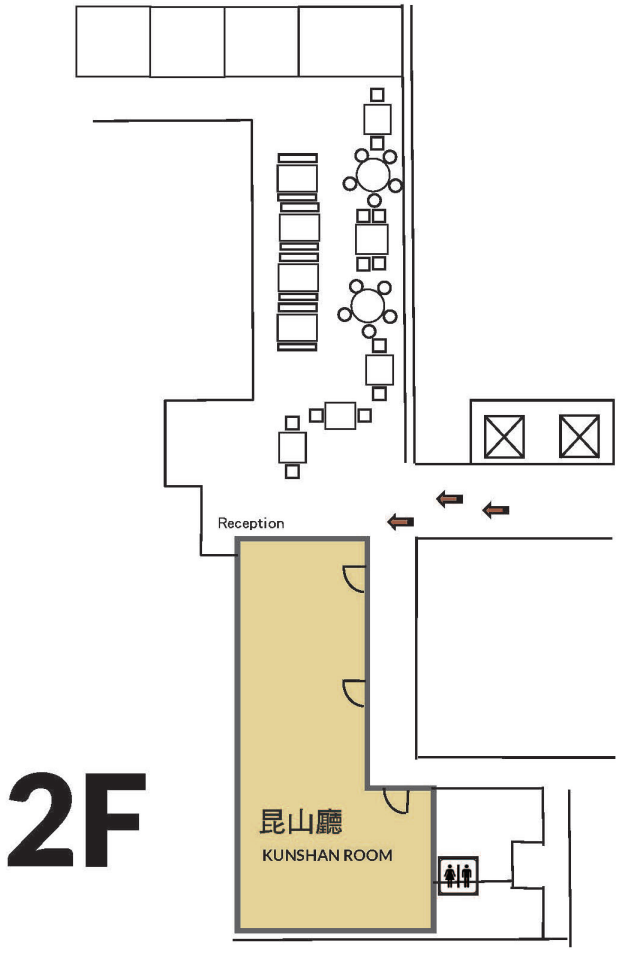
Floor Information of Windsor Hotel Taichung





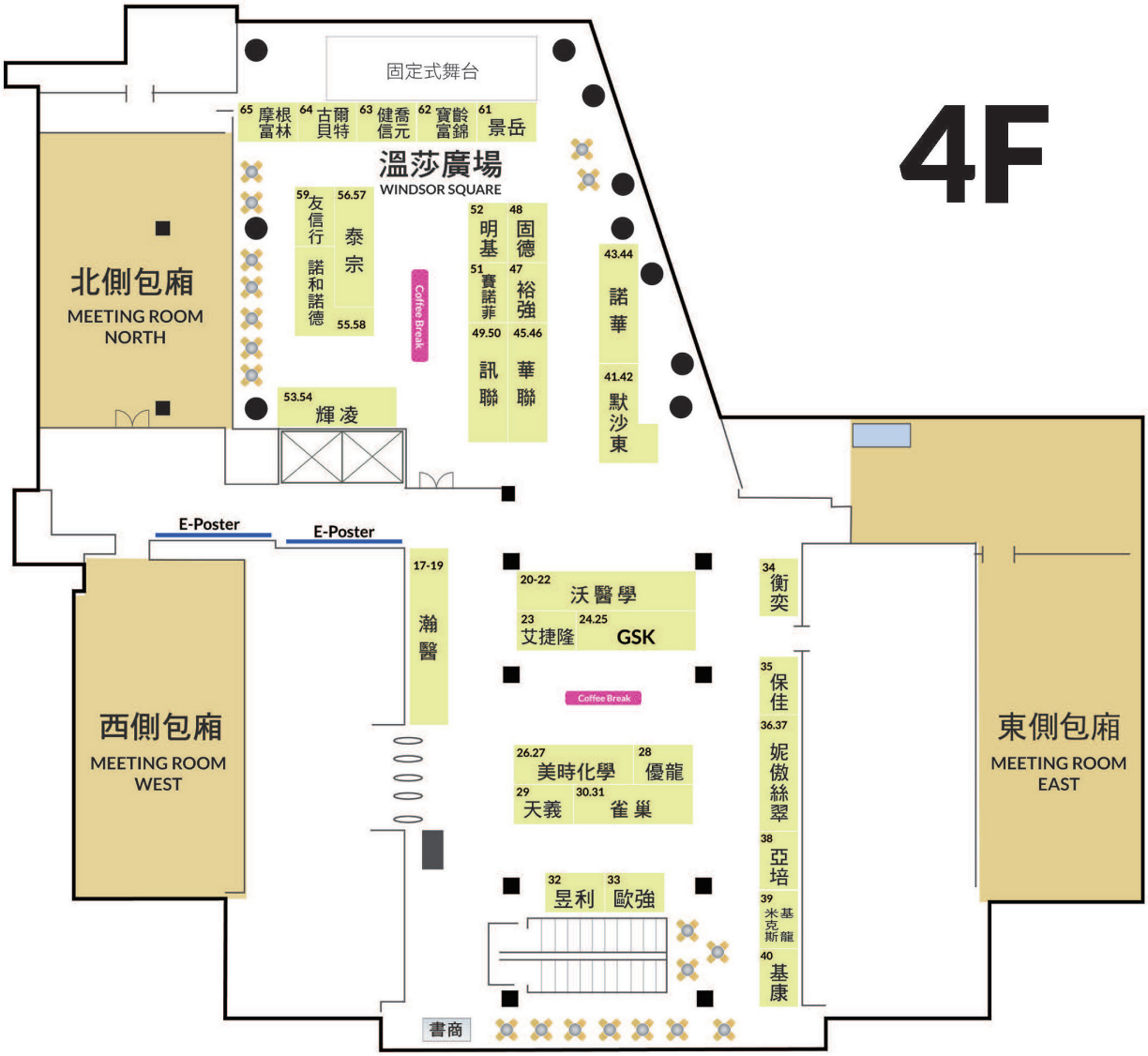
B1國際會議廳 International Lecture Hall

8/12	• 內視鏡 Video • 內視鏡 Video +生殖內分泌 Video • 內視鏡 Symposium
8/13	• Plenary Lecture • 午餐會報－GSK • 醫療倫理法律



2F昆山廳 Kunshan Room

8/12	• 內視鏡 Oral • 生殖內分泌 Oral • 午餐會報－美時化學 • 一般婦科 Oral
8/13	• 婦女泌尿 Oral • 婦女泌尿 Oral + Video • 午餐會報－諾和諾德 • 婦女泌尿 Symposium



	東側包廂 Meeting Room East	西側包廂 Meeting Room West	北側包廂 Meeting Room North
8/12	• 產科 Oral • 午餐會報－美商亞培 • 產科 Symposium	• Invited Speaker Lecture－AOFOG Session • Invited Speaker Lecture－FIGO/ACOG Session • 午餐會報－台灣拜耳 • Invited Speaker Lecture－J-K-T Session	• 婦癌 Oral • 午餐會報－健喬信元 • 婦癌 Symposium
8/13	• 一般婦科 Symposium • 更年期 Symposium • 午餐會報－台灣普羅生醫 • 會員代表大會	• Young Doctors' Session (婦癌+婦科) • Young Doctors' Session (生殖內分泌) • 午餐會報－默沙東 • 生殖內分泌 Symposium	• Young Doctors' Session (婦女泌尿) • Young Doctors' Session (母胎醫學及其他) • 午餐會報－賽諾菲 • 住院醫師教育訓練

The 62nd Annual Congress

of Taiwan Association of Obstetrics and Gynecology 2023

Program

August 12, 2023 (Sat.)

Invited Speaker Lecture (Ⅰ) AOFOG Session		
(4F) Meeting Room West		
Moderator: Pisake Lumbiganon (President of AOFOG), Tsung-Hsien Su (Fellow of TAOG)		
IS1	08:30-09:00	**Intimate Partner Violence** (online) *Speaker: John David Tait (President Elect of AOFOG, New Zealand)*
IS2	09:00-09:30	**Respectful Maternity Care** *Speaker: Rohana Haththotuwa (Secretary-General of AOFOG, Sri Lanka)*
IS3	09:30-10:00	**Caesarean Delivery on Maternal Request (CDMR): The Continuing Controversy** *Speaker: Ravi Chandran (Past President of AOFOG, Malaysia)*
	10:00-10:30	Coffee Break
Invited Speaker Lecture (Ⅱ) FIGO/ACOG Session		
(4F) Meeting Room West		
Moderator: Jeanne Conry (President of FIGO), Verda Hicks (President of ACOG)		
IS4	10:30-11:00	**Challenges to ObGyn Practice in a Changing Environment** *Speaker: Mark DeFrancesco (Past President of ACOG, USA)*
IS5	11:00-11:30	**Salivary miRNA Signature of Endometriosis** (online) *Speaker: Philippe Descamps (Vice-President of FIGO, France)*
IS6	11:30-12:00	**Born too Soon 2023 – the decade version of the WHO report** (online) *Speaker: Bo Jacobsson (Maternal and Neonatal Health, Division Director, FIGO, Sweden)*
	12:00-13:20	Lunch Time

Program / Day 2

August 12, 2023 (Sat.)

Invited Speaker Lecture (Ⅲ)J-K-T Session		
(4F) Meeting Room West		
Moderator: Aikou Okamoto (Congress President of JSOG, 2023), Hong-Nerng Ho (Fellow of TAOG)		
IS7	13:3014:00	**Modern treatment of fibroids with heavy menstrual bleeding** *Speaker: Yutaka Osuga (Vice Chairperson of JSOG, Japan)*
IS8	14:00-14:30	**Intraamniotic Infection/Inflammation and Preterm Birth: Significance, Challenges, and Future Directions** (online) *Speaker: Kyung-Joon Oh (Seoul National University Bundang Hospital, Korea)*
IS9	14:30-15:00	**The effect of obesity on female reproductive dysfunction** *Speaker: Mei-Jou Chen (National Taiwan University Hospital, Taiwan)*
	15:00-15:30	Coffee Break
Moderator: Hoon Kim (Secretary-General of KSOG), Man-Jung Hung (Chung Shan Medical University Hospital, Taiwan)		
IS10	15:30-16:00	**Outpatient hysteroscopic surgery in our department** (online) *Speaker: Osamu Hiraike (The University of Tokyo, Japan)*
IS11	16:00-16:30	**Oncofertility: Fertility preservation for female cancer patients** (online) *Speaker: Sanghoon Lee (Korea University Medical Center, Korea)*
IS12	16:30-17:00	**Treatment options for stress urinary incontinence** *Speaker: Hui-Hsuan Lau (Mackay Memorial Hospital, Taiwan)*
	18:00~21:00	Banquet 3F, International Hall, The Lin Hotel

August 13, 2023 (Sun.)

Plenary Lecture

(B1) International Lecture Hall

	08:25-08:30	**Opening Remarks** *Shee-Uan Chen (President of TAOG)*
Moderator: Yu-Shih Yang (Fellow of TAOG), Tsung-Cheng Kuo (Fellow of TAOG)		
P1	08:30-09:00	**Elective oocyte freezing for non-medical reasons** *Speaker: Shee-Uan Chen (President of TAOG)*
Moderator: Ravi Chandran (Past President of AOFOG), Ming-Chao Huang (Fellow of TAOG)		
P2	09:00-09:30	**FIGO: Leadership, Collaboration and Advocacy** *Speaker: Jeanne Conry (President of FIGO)*
Moderator: Kazunori Ochiai (Past President of AOFOG), Tsung-Hsien Su (Fellow of TAOG)		
P3	09:30-10:00	**WHO recommendations Intrapartum care for a positive childbirth experience** *Speaker: Pisake Lumbiganon (President of AOFOG)*
	10:00-10:30	Coffee Break
Moderator: Kiyoko Kato (Chairperson of JSOG), Horng-Der Tsai (Fellow of TAOG)		
P4	10:30-11:00	**How we could transfer our fruit from bench to bedside?** *Speaker: Tadashi Kimura (Immediate Past Chairperson of JSOG)*
Moderator: Young-Tak Kim (Chair, international committee, KSOG), Ming-Song Tsai (Chairman of Supervisor, TAOG)		
P5	11:00-11:30	**Early prediction of gestational diabetes mellitus** *Speaker: Joong-Shin Park (Chairman of Board, KSOG)*
Moderator: Mark DeFrancesco (Past President of ACOG), Ching-Hung Hsieh (Fellow of TAOG)		
P6	11:30-12:00	**The Obstetrician-Gynecologist as Leader** *Speaker: Verda Hicks (President of ACOG)*

Program / Day 2

August 13, 2023 (Sun.)

Young Doctors' Session (Ⅰ) Oncology & Gynecology

(4F) Meeting Room West

Moderator: Yao-Ching Hung (Asia University Hospital),
Hao Lin (Kaohsiung Chang Gung Memorial Hospital)

Y1	08:30-08:40	**Pretreatment Carcinoembryonic Antigen Can Assist Cancer Antigen 125 in predicting lymph node metastasis in endometrial carcinoma** Szu-Yu Huang 黃思于 (Kaohsiung Chang Gung Memorial Hospital)
Y2	08:40-08:50	**Estrogen/Progesterone Receptor Expression and CA125 as Preoperative Predictors to Estimate Lymph Node Metastasis in Endometrial Endometrioid Cancer** Shao-Chi Wang 王劭琪 (Kaohsiung Chang Gung Memorial Hospital)
Y3	08:50-09:00	**Maintenance chemotherapy in platinum-sensitive recurrent ovarian cancer** Yen-Fu Chen 陳彥甫 (Taichung Veterans General Hospital)
Y4	09:00-09:10	**Clinical characteristics and a two-year follow-up of unsatisfactory conventional Pap smears: a retrospective case-control study** Chin-Tzu Tien 田謹慈 (Hualien Tzu Chi Hospital)
Y5	09:10-09:20	**Evaluating Cervical Intraepithelial Neoplasia with Colposcopy Based on Artificial intelligence-assisted Model built by Convolutional Neural Network and Fuzzy Algorithm** Chien-Teng Liao 廖建滕 (Chi Mei Medical Center)
Y6	09:20-09:30	**Predictors of Surgical Outcomes of Laparoscopic Myomectomy with Barbed Sutures** Peng-Hsuan Huang 黃芃瑄 (Far Eastern Memorial Hospital)
Y7	09:30-09:40	**Unraveling the Epithelial Microarchitecture of the Endometrium in Patients with Adenomyosis** Angel Hsin-Yu Pai 白欣玉 (Linkou Chang Gung Memorial Hospital)
Y8	09:40-09:50	**Exploring the Endometrial Expression of Alpha1-Antitrypsin Isoforms in Patients with Endometriosis** Chen-Ti Wang 王貞棣 (Linkou Chang Gung Memorial Hospital)

August 13, 2023 (Sun.)

Young Doctors' Session (Ⅱ) Reproduction

(4F) Meeting Room West

Moderator: Chi-Huang Chen (Taipei Medical University Hospital),
Kuan-Hao Tsui (Kaohsiung Veterans General Hospital)

Y9	10:30-10:40	**The association between ovarian reserve and organophosphate flame retardants in women of childbearing age** Hao Ting Lien 連顥庭 (Kaohsiung Chang Gung Memorial Hospital)
Y10	10:40-10:50	**Aberrant MiRNA Expression in Repeat Post-receptivity Endometrium in MiRNA-based Endometrial Receptivity analysis (MIRA) Predict Recurrent Implantation Failure: Case Series** Yu-Li Chuang 莊羽豐 (Changhua Christian Hospital)
Y11	10:50-11:00	**Do ectopic pregnancy only has negative impact on subsequent pregnancy outcome: A Nationwide Population-Based Retrospective Cohort Study in Taiwan** Wei-Ting Lee 李瑋婷 (China Medical University Hospital)
Y12	11:00-11:10	**Quality of life among infertile women undergoing in vitro fertilization-embryo transfer in Taiwan** Chih-Wei Lin 林智偉 (National Cheng Kung University Hospital)
Y13	11:10-11:20	**Assessment of female cryopreservation of oocyte in KMUH** I-Le Hsu 徐以樂 (Kaohsiung Medical University Hospital)
Y14	11:20-11:30	**The live birth rate of vitrified oocyte accumulation for managing diminished ovarian reserve: a retrospective cohort study** Kuan Sheng Lee 李冠昇 (Mackay Memorial Hospital)
Y15	11:30-11:40	**Comparing cumulative ongoing pregnancy rate between the progestin-primed ovarian stimulation protocol and GnRH-antagonist protocol in hyper-responder attending IVF/ICSI cycles** Chi-Huan Tsai 蔡奇桓 (National Taiwan University Hospital)
Y16	11:40-11:50	**Does low progesterone level on trigger day influence the reproductive outcomes of fresh embryo transfer in poor responder?** Chi-Ting Lai 賴祈廷 (National Taiwan University Hospital)

August 13, 2023 (Sun.)

Young Doctors' Session (Ⅲ) Urogynecology

(4F) Meeting Room North

Moderator: Wen-Chu Huang (Mackay Memorial Hospital),
Wu-Chiao Hsieh (Linkou Chang Gung Memorial Hospital)

Y17	08:30-08:40	**The impact of pre-operative Maximum Urethral Closure Pressure (MUCP) on Mid-urethral sling (MUS) outcomes** Huan-Ka Chiung 蔣奐巧 (Linkou Chang Gung Memorial Hospital)
Y18	08:40-08:50	**Tape-releasing suture with "Long Loop" on Mid-urethral Sling: a novel procedure for management of Iatrogenic Urethral Obstruction** I-Chieh Sung 宋怡潔 (Kaohsiung Medical University Hospital)
Y19	08:50-09:00	**Urethral mobility is associated with postoperative de novo stress urinary incontinence following transvaginal mesh surgery** Chieh-Yu Chang 張介禹 (Kaohsiung Medical University Hospital)
Y20	09:00-09:10	**The mechanical property and tissue reaction of degradable hybrid Polycaprolactone mesh/drug-eluting Polycaprolactone nanofibers prolapse mats** Yi-Chun Chou 周怡君 (Linkou Chang Gung Memorial Hospital)
Y21	09:10-09:20	**Comparison between anterior-apical mesh (Surelift) and anterior mesh (Surelift) in transvaginal pelvic organ prolapse surgery: Surgical and Functional Outcomes at 1 Year** Chia-Hsuan Yang 楊佳璇 (Linkou Chang Gung Memorial Hospital)
Y22	09:20-09:30	**Rotational vaginal flaps in posterior vaginal wall prolapse reconstruction** Yi-Ting Chen 陳怡婷 (National Taiwan University Hospital)
Y23	09:30-09:40	**The impact of biofeedback and electrostimulation-assisted pelvic floor muscle training on the change of sexual function in women with stress urinary incontinence** Yu-Ting Lu 呂羽婷 (Mackay Memorial Hospital)
Y24	09:40-09:50	**Comparison of Er:YAG and CO2 laser therapy for women with stress urinary incontinence** Pei-Chen Li 李佩蓁 (Hualien Tzu Chi Hospital)

August 13, 2023 (Sun.)

Young Doctors' Session (IV) Obstetrics & Others

(4F) Meeting Room North

Moderator: Cheng-Kun Chang (Cardinal Tien Hospital),
S. W. Steven Shaw (Taipei Chang Gung Memorial Hospital)

Y25	10:30-10:40	**Preliminary results of COVID-19 vaccination among Taiwanese pregnant women: A single-center, prospective, case–control study** Yi-Ting Hsu 許伊婷 (Tung's Taichung MetroHarbour Hospital)
Y26	10:40-10:50	**Serologic features and dynamics of serum antibodies in Taiwanese pregnant women and infants after COVID-19 vaccination: a longitudinal observational study** Ting-Yi Chu 朱庭儀 (Taipei Chang Gung Memorial Hospital)
Y27	10:50-11:00	**First-trimester cervical elastography, cervical length and endocervical canal width of pregnant women with cervical insufficiency** Yu-Hao Chen 陳昱豪 (Mackay Memorial Hospital)
Y28	11:00-11:10	**A 20-years retrospective study of postnatal surgery for open vs closed spinal dysraphism and introduction the first clinical trial of fetoscopic repair in Taiwan** Meng-Syuan Lin 林孟萱 (Chang Gung Memorial Hospital)
Y29	11:10-11:20	**The impact of hysterectomy for benign non-prolapse uterine tumors on subsequent ovarian reserve, lower urinary tract symptoms and sexual function: a multi-directional prospective analysis** Yu-Ju Hsiao 蕭郁儒 (Kaohsiung Chang Gung Memorial Hospital)
Y30	11:20-11:30	**Implementation of a machine learning model in acute coronary syndrome/acute stroke risk assessment for women with lower urinary tract symptoms** Tzu-Tsen Shen 沈姿岑 (Chi Mei Medical Center)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Abstract

I Invited Speaker Lecture (I)
AOFOG Session

【*IS1-3*】


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John David Tait

(IS1)

CURRICULUM VITAE

John David Tait

Education

University	Monash University, Melbourne, Victoria - MBBS

Professional Employment

Feb 1986-Present	Part time Specialist in Obstetrics & Gynaecology Wellington Woman' s Hospital Clinical Senior Lecturer Wellington Medical School, University of Otago

Positions of Responsibility

2012-Present	NZ representative AOFOG
2016-Present	Member ACC N.E. Taskforce
2016-Present	Member Waikato Maternity Services Task Force
2019-2022	AOFOG Vice President
2022-Present	AOFOG President Elect
2017-Present	Chair of Perinatal Maternal Mortality Review Committee (PMMRC)
2017-Present	Executive member responsible for the development and implementation of Taurite Ora Maori Health Strategy and Action Plan
2017-Present	Member of the Health Practitioner Disciplinary Tribunal
2021-Present	Chair, COVID Independent Safety Monitoring Board

Intimate Partner Violence

John David Tait
AOFOG President Elect, New Zealand

Incidence.

Consequences.

What can we do as Obstetricians and Gynaecologists?

Rohana Haththotuwa (IS2)

CURRICULUM VITAE

Rohana Haththotuwa

- Founder Chairman, Ninewells CARE Mother & Baby Hospital
- Secretary General AOFOG
- President South Asian Federation of Obstetrics & Gynaecology (SAFOG)
- President, South Asian Federation of Menopause Societies
- President, World Gestoses Organisation
- Past Chair, Menstrual Disorders Committee FIGO
- Past President Sri Lanka College of O &G
- Past President Sri Lanka Menopause Society
- Founder Chairman, Ninewells CARE Mother & Baby Hospital
- Secretary General AOFOG
- President South Asian Federation of Obstetrics & Gynaecology (SAFOG)
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- Past President Sri Lanka College of O &G
- Past President Sri Lanka Menopause Society

Respectful Maternity Care

Rohana Haththotuwa

Secretary General of AOFOG, Sri Lanka

Respectful maternity care (RMC) refers to care organized for and provided to all women in a manner that maintains their; dignity, privacy, confidentiality, ensuring freedom from harm and mistreatment, enabling informed choice and providing continuous support during labour and childbirth. It is being increasingly recognised as a critical element of strategies to improve the quality of maternity care, and all women need and deserve respectful care.

Major component of global efforts of WHO to reduce maternal mortality is to ensure that all women have access to skilled care before, during, and after childbirth. But access to quality services is not guaranteed for many women, especially in low- and middle-income countries. Even when services are available, care may be compromised by mistreatment during childbirth, including abusive, neglectful, or disrespectful care. Mistreatment may be presented as: physical, sexual, or verbal abuse, stigma and discrimination, failure to meet professional standards of care, poor rapport between women and providers, health system dysfunctions and constraints.

By an evidence- based approach to determine what constitutes during childbirth in health facilities for RMC, 12 domains were synthesized by analysing sixty-seven studies from 32 countries. The 12 domains are, being free from harm and mistreatment, maintaining privacy and confidentiality, preserving women' s dignity, prospective provision of information and seeking informed consent, ensuring continuous access to family and community support, enhancing quality of physical environment and resources, providing equitable maternity care, engaging with effective communication, respecting women' s choices that strengthens their capacities to give birth. availability of competent and motivated human resources, provision of efficient and effective care & continuity of care, based on these WHO developed, WHO recommendations on intrapartum care for a positive childbirth experience. Further WHO developed the WHO labour care guide to monitor labour. Promoting RMC ill help to create a positive impact on child birth experiences, encourage women attending health care facilities for child birth and reduce near miss maternal deaths.

Ravi Chandran

(IS3)

CURRICULUM VITAE

CHANDRAN, Ravi

Dr. Ravi Chandran is currently Consultant Obstetrician and Gynaecologist at the prestigious Gleneagles Medical Centre in Kuala Lumpur Malaysia. He obtained his Membership of the RCOG UK in 1988 followed by sub-speciality training in Maternal Fetal Medicine at King' s College Hospital London and the John Radcliffe Hospital at Oxford University. He pursued an academic career at the National University of Malaysia and during his tenure as Associate Professor, was involved in research activities culminating in publications in leading journals including the BJOG, AJOG and Lancet. In 1998 he was made a Fellow of the Royal College of Physicians of Ireland and in 2001 was elevated to the Fellowship of the RCOG UK.

Over the last 15 years, he has been actively involved in the AOFOG and joined the Executive Board as Treasurer in 2009 during which time he streamlined the application process for scientific workshop grants. As Vice-President in 2013 – 2015, he played a leading role in the review of the AOFOG Constitution. In June 2017, he was elected as President of AOFOG. During his tenure, he made it his mission to make the AOFOG a more efficient and pro-active organisation and one that is relevant to all member National Societies. Under his leadership, the AOFOG has promoted more scientific activity in the less fortunate National Societies including Bangladesh, Nepal, Pakistan, Myanmar, Cambodia, Laos, Mongolia, Fiji and Papua New Guinea whilst tapping into the knowledge and expertise of our more developed National Societies from Japan, Korea, Taiwan, Hong Kong and India. He has also been instrumental in fostering a better working relationship with both regional and international organisations such as the SAFOG, RCOG, ACOG and FIGO. In recognition of his work, he was awarded an Honorary Fellowship of the Indian College of Obstetricians & Gynaecologists in 2019.

He was a member of the Strategic Planning Committee of FIGO and played an active role in mapping the road ahead for FIGO. In October 2021, he was elected to the Board of Trustees of FIGO. He is thus ideally placed to align the aspirations of both FIGO and AOFOG in an efficient and cost-effective manner for the betterment of women' s health in the Asia Oceania region.

Caesarean Delivery on Maternal Request (CDMR): The Continuing Controversy

Ravi Chandran
Past President of AOFOG, Malaysia

CDMR is primary prelabour caesarean section on maternal request in the absence of any maternal or fetal indication. It has been well documented that caesarean section rates have increased exponentially worldwide and although accurate data is not available, it is clear that the rate of CDMR is also on the rise. The absolute proportion of CDMR was 11-fold higher in upper middle-income countries than high-income countries. The Middle East had the highest CDMR rates followed closely by East Asia. This increasing rate of CDMR not only reflects changing medical practice but also the shift in the attitude of both healthcare providers and patients. This paper explores the underlying reasons for maternal requests for caesarean sections and the available evidence for the potential risks and benefits of CDMR. The potential risks of operative morbidity, neonatal respiratory problems and greater complications in subsequent pregnancies including scar rupture and placenta accreta spectrum need to be balanced against the potential short-term benefits on the pelvic floor and sexual function. CDMR raises the specter of ethical dilemmas for healthcare providers and their response to such requests will be addressed. Healthcare providers in this region need to equip themselves to face this rising tide from both the medical and ethical perspective.


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Invited Speaker Lecture (Ⅱ)
FIGO/ACOG Session

【*IS4-6*】


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Mark S. DeFrancesco
(IS4)

CURRICULUM VITAE

Mark S. DeFrancesco, M.D, MBA
Past President of the American College of Obstetricians and Gynecologists (ACOG)

EDUCATION
1976-1980 Univ. Of Conn. School of Medicine Farmington, CT MD
1980-1984 Residency: Obstetrics and Gynecology Univ. Of Connecticut

OFFICES HELD / ACTIVITIES
2016-2019 ACOG representative on National Academy of Medicine' s Collaborative on Clinician Well-Being and Resilience
2006-2013, 2014-2017 Member, ACOG National Executive Board

BOARD MEMBERSHIPS
Accreditation Commission for Health Care (ACHC)
2020-present Member of Board of Commissioners
2022-present Secretary
Accreditation Association for Hospitals and Health Systems (AAHHS):
2012-2020 Member of Board of Directors, AAHHS
2018-2020 Vice Chair
2012-2018 Treasurer
Accreditation Association for Ambulatory Health Care (AAAHC):
2009-2010 President
2008-2009 Vice-President
2007-2008 Secretary
2005-2006 Chair, AAAHC Accreditation Committee
2010-2017 Chair, Bylaws Committee

OTHER ACTIVITIES:
1984-present Connecticut State Medical Society
1984-present New England OB-GYN Society
2013-2014, 2022 President

HOSPITAL APPOINTMENTS
St. Mary' s Hospital, Waterbury, Connecticut:
1987-2010 Chairman, Department of Obstetrics and Gynecology
2010-2020 Courtesy/Community Attending Staff

Challenges to ObGyn Practice in a Changing Environment

Mark S. DeFrancesco, MD, MBA, FACOG
Past President, ACOG (2015-16)

There have been many changes in technology, society and healthcare that have impacted the way we practice medicine. These changes are real challenges to medical practice as we have traditionally known it. New and better methods of screening for cervical cancer for instance, have reduced the recommended frequency of traditional screening. Long acting contraception has also reduced the need for more frequent visits to the clinic. Increased specialization within our specialty (sub-specialization) has had a major impact on our medical workforce, as has the changing demographics of that workforce. Electronic medical records have changed the workflow in our clinics and added in many cases to physician "burnout," threatening medical provider wellness. Accreditation seeks to assure high quality care, but at the same time is very challenging to small private practice to undergo the accreditation process. Many of these challenges, as well as the tremendous economic pressure of providing care, have led to the formation of large, corporate organizations to provide healthcare, with another whole set of challenges resulting from that phenomenon.

This presentation will review the major challenges facing medical practice today and suggest ways that these challenges can be met.

Philippe Descamps
(IS5)

CURRICULUM VITAE

PHILIPPE DESCAMPS M.D, Ph.D

CURRENT POSITIONS

Distinguished Professor, Obstetrics and Gynecology

French National College of Gynecologists and Obstetricians (CNGOF)

2012- President of the International Relations Committee

French Society of Gynecological and Pelvic Surgery (SCGP)

2011- Vice-President of the society

International Federation of Gynecology and Obstetrics (FIGO)

2015- Council Member, elected as French representative during the FIGO World congress held in Vancouver

Member of the Endometriosis and Uterine Disorders (SEUD) and World Endometriosis Societies

Salivary miRNA Signature of Endometriosis

Sofiane Bendifallah, M.D.,Ph.D.
Yohann Dabi, M.D., Stéphane Suisse, LéaDelbos, M.D., Andrew Spiers, M.D.,
MathieuPoilblanc, M.D., Francois Golfier, M.D., Ph.D., +14, and Philippe Descamps, M.D.,

BACKGROUND

The discovery of a saliva-based micro– ribonucleic acid (miRNA) signature for endometriosis in 2022 opened up new perspectives for early and noninvasive diagnosis of the disease. The 109-miRNA saliva signature is the product of miRNA biomarkers and artificial intelligence (AI) modeling. We designed a multicenter study to provide external validation of its diagnostic accuracy. We present here an interim analysis.

METHODS

The first 200 patients included in the multicenter prospective ENDOmiRNA Saliva Test study (NCT05244668) were included for interim analysis. The study population comprised women from 18 to 43 years of age with a formal diagnosis of endometriosis or with suspected endometriosis. Epidemiologic, clinical, and saliva sequencing data were collected between November 2021 and March 2022. Genomewide miRNA expression profiling by small RNA sequencing using next-generation sequencing (NGS) was performed, and a random forest algorithm was used to assess the diagnostic accuracy.

RESULTS

In this interim analysis of the external validation cohort, with a population prevalence of 79.5%, the 109-miRNA saliva diagnostic signature for endometriosis had a sensitivity of 96.2% (95% confidence interval [CI], 93.7 to 97.3%), specificity of 95.1% (95% CI, 85.2 to 99.1%), positive predictive value of 95.1% (95% CI, 85.2 to 99.1%), negative predictive value of 86.7% (95% CI, 77.6 to 90.3%), positive likelihood ratio of 19.7 (95% CI, 6.3 to 108.8), negative likelihood ratio of 0.04 (95% CI, 0.03 to 0.07), and area under the receiver operating characteristic curve of 0.96 (95% CI, 0.92 to 0.98).

CONCLUSIONS

The use of NGS and AI in the sequencing and analysis of miRNA provided a saliva-based miRNA signature for endometriosis. Our interim analysis of a prospective multicenter external validation study provides support for its ongoing investigation as a diagnostic tool.

Bo Jacobsson
(IS6)

CURRICULUM VITAE

Bo Jacobsson, M.D. Ph.D. Professor

Education

2003 Ph.D. Infectious and inflammatory mechanisms in preterm birth and cerebral palsy, University of Gothenburg

SHORT BIOGRAPHY

Bo Jacobsson is presently director of the Perinatal Research Laboratory at Sahlgrenska University Hospital in Gothenburg, Sweden where he also does his clinical obstetrical and fetal medicine practice. Prof Jacobsson has also been head of Fetal Medicine department and was a member of the Board of Directors for Sahlgrenska Academy at University of Gothenburg, Sweden between 2015-2021. He is now part of the Research Council at the same institution. From 2023 he is the Deputy Head of the Division, Department of Pediatrics and Department of Obstetrics and Gynecology at Institute of Clinical Sciences, University of Gothenburg.

Prof. Jacobsson' s research groups are located in Gothenburg, Sweden and in Oslo, Norway. He is a steering group member of Genomic Medicine Sweden and is chairing the Genomic Medicine Sweden complex diseases group. He is also Swedish representative in Nordic Society of Precision Medicine. Prof. Jacobsson is chair of FIGO Working Group on Preterm Delivery 2019-2021 and he is presently the FIGO Division Director of Maternal and Neonatal Health 2021-2023. He is a part of the Partnership for Maternal, Newborn & Child Health, Knowledge and Evidence Working Group and is a co-lead of the MNCH workstream. He is the co-editor of the "Born-too-soon - the decade version" and co-chairing the Global Advocacy group for the same publication. He is part of the board of directors of European Association of Perinatal Medicine (EAPM) and is chairing the EAPM Special Interest Group of Preterm Birth. He is studying basic and applied aspects of the mechanisms of preterm delivery and genetics of complex disease. Another area that has attracted his interest is genetic components of the timing of delivery and also the interplay between genes and the environment. One of his main interests for the moment is the possibility to prevent preterm delivery to happen by public health, diatry and medical interventions. The main research aim is to identify and apply different strategies to prevent preterm delivery to increase the outcome of healthy children. He has also studied infections during pregnancy and pregnancy and child outcome. Prof Jacobsson has a track record of being involved in all levels of education since 30 years.

Born too Soon 2023 – the decade version of the WHO report

Bo Jacobsson
Maternal and Neonatal Health, Division Director, FIGO, Sweden

〝Born too soon: decade of action on preterm birth" was launched in May 2023 by WHO, UNPA, UNICEF and PMNCH. FIGO was involved and co-edited the report. The report shows that there has been no global reduction in preterm birth rates but there is a protentional to do a lot in the upcoming years. "Born too soon: decade of action on preterm birth" looks to the future, setting an ambitious agenda to reduce the burden of preterm birth by addressing factors outside of the health system that affect preterm birth; and, within health systems, by providing high-quality, respectful care for women and babies so that they can survive and thrive, no matter where they are born.

This report is intended to inspire and support country-led action: politicians, policy-makers and leaders of all stakeholder groups are its primary audience. However, leadership "from the top" often emerges in response to a unified call to action by a broad-based coalition of committed advocates "from the bottom".


TAOG
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Invited Speaker Lecture (Ⅲ)
J-K-T Session

【*IS7-12*】


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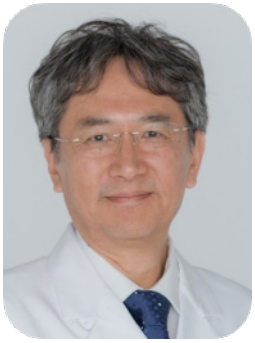
Yutaka Osuga
(IS7)



CURRICULUM VITAE

Yutaka Osuga, MD, PhD

- Professor and Chair, Obstetrics and Gynecology, Graduate School of Medicine, the University of Tokyo
- Deputy director, the University of Tokyo Hospital
- President, Japan Society for Reproductive Medicine
- Past President, Japan Society of Gynecologic and Obstetric Endoscopy and Minimally Invasive Therapy

Prof. Osuga received his MD in 1985 and PhD in 1995 from the Faculty of Medicine of the University of Tokyo, Japan. He completed his OB/GYN residency training at the University of Tokyo. He trained as a postdoctoral fellow in the field of ovarian physiology in Stanford University from 1995 to 1997. He is board certified by Japan Society of Obstetrics and Gynecology, Japan Society of Gynecologic and Obstetric Endoscopy and Minimally Invasive Therapy, Japan Society for Reproductive Medicine, and Japanese Society of Anti-Aging Medicine.

Prof. Osuga provides clinical services in gynecology and reproductive medicine with special expertise in laparoscopic surgery and assisted reproductive technology. His main research targets cover a wide variety of physiology and pathology of reproduction including endometriosis, implantation, folliculogenesis, and reproductive aging. He has authored over 500 research papers published in eminent peer-reviewed journals and has written and edited many textbooks. He serves as an executive board member of several medical groups and associations and an editor of several international journals. He is frequently sought out to provide his expertise at international medical conferences and academic institutions.

Modern treatment of fibroids with heavy menstrual bleeding

Yutaka Osuga
Vice Chairperson of JSOG, Japan

Leiomyoma seems to be a most common cause of AUB, especially HMB. Many factors are involved in the formation and growth of uterine leiomyoma, such as genetic and epigenetic factors, epidemiologic factors, extracellular matrix, chemokines, and cytokines. In addition, estrogen and progesterone are the key drivers to develop fibroids. Regarding heavy menstrual bleeding, the increase in endometrial surface is one of the most plausible reasons. Fragile and engorged blood vessels may also be a cause. Other suggested mechanisms are defective decidualization, reduced vasoconstriction, reduced hemostasis, uterine venous ectasia, increase in TGFbeta3, endometrial inflammation, etc. For medical treatment of fibroids, COCs, progestins, LNG-IUS, SPRM, GnRH agonist, GnRH antagonist, and GnRH antagonist add-back are used. All COC, Progestin, and LNG are effective for reducing HMB, since the drugs make the endometrium thin. However, in terms of bulk-related symptoms, these drugs are not effective since they are unable to shrink the size of uterus. SPRM is a new class of progesterone receptor ligands. Ulipristal acetate (UA) is one of SPRMs, which works as progesterone antagonist in fibroid treatment. Compared to GnRH analogues, which mainly acts on the pituitary, SPRM acts on fibroid and the endometrium in addition to the pituitary. At the same time, UPA does not lower serum estradiol levels, while leuprorelin decreased them significantly. However, European Medicines Agency (EMA) issued a recommendation that UPA should be used in a very restricted manner due to its adverse effect of serious liver injury, which led to liver transplantation. Recently, oral GnRH antagonists have been developed and now they are in the market. Both GnRH agonists and GnRH antagonists finally suppresses estradiol levels. The difference is that GnRH agonist increases serum estradiol levels during the first one or two weeks, while GnRH antagonist quickly suppresses serum estradiol levels. Recently, GnRH antagonist with add-back therapy has been developed to overcome the problem of the bone loss associated with GnRH antagonist monotherapy. In GnRH antagonist with add-back, HMB reduces as well as the monotherapy while the bone less is much less than the monotherapy. However, size reduction of fibroid is little in GnRH antagonist with add-back therapy. For non-medical treatment of fibroid, hysterectomy, myomectomy, hysteroscopic resection, uterine artery emobolization, and focused ultrasound are used. Hysterectomy is a gold standard for those who don’ t need to preserve their fertility. In hysteroscopic surgery, hysteroscopic morcellation and bipolar resectoscope are the current standard. Using GnRH antagonist before surgery to reduce the size may make the surgeries easier. Uterine artery embolization (UAE) is another choice. Regarding, focused ultrasound, high intensity ultrasound (HIFU) is mainly performed in China and MRI guided focused ultrasound (MRgFUS) is in the rest of the world.

Kyung-Joon Oh
(IS8)

CURRICULUM VITAE

KYUNG-JOON OH, M.D., Ph.D.
Seoul National University Bundang Hospital
Dept. of OB/GYN
Seongnam-si, Gyeonggi-do, 13620, Korea.

Education

1993 - 1995 Pre-Med., Seoul National University, Seoul, Korea
1995 - 1999 M.D., Seoul National University School of Medicine, Seoul, Korea
2003 - 2008 M.S., Seoul National University Postgraduate School, Seoul, Korea
2009 - 2016 Ph.D., Seoul National University Postgraduate School, Seoul, Korea

Training

1999 - 2000 Internship, Seoul National University Hospital, Seoul, Korea
2000 - 2004 Residency, Dept. of OB/GYN, Seoul National University Hospital, Seoul, Korea
2007 - 2010 Fellowship, Dept. of OB/GYN, Seoul National University Hospital, Seoul, Korea

Faculty Appointments:

2010 - 2015 Assistant Professor, Dept. of OB/GYN, Seoul National University Bundang Hospital, Seongnam-si, Gyeonggi-do, Republic of Korea
2015 - 2020 Associate Professor, Dept. of OB/GYN, Seoul National University Bundang Hospital, Seongnam-si, Gyeonggi-do, Republic of Korea
2021 - Professor Dept. of OB/GYN, Seoul National University Bundang Hospital, Seongnam-si, Gyeonggi-do, Republic of Korea

Awards

2020 Best research award, Korean Society of Obstetrics and Gynecology
2020 Best research award Korean Society of Maternal-Fetal Medicine

Major Activites in Academic Societies

2000 Member, Korean Society of Obstetrics and Gynecology
2007 Member, Korean Society of Perinatology
2007 Member, Korean Society of Maternal-Fetal Medicine
2007 Member, Korean Society of Ultrasound in Obstetrics and Gynecology

Intraamniotic Infection/Inflammation and Preterm Birth: Significance, Challenges, and Future Directions

Kyung-Joon Oh
Seoul National University Bundang Hospital, Korea

Preterm birth, which refers to delivery occurring before 37 weeks of gestation, poses a significant global health concern with profound implications for the health of both mothers and newborns. Despite its clinical and academic importance, preterm birth received limited attention in obstetrics textbooks of the 1970s, often being briefly mentioned in relation to tocolytics. However, attempts to prolong pregnancy through uterine tocolysis proved unsuccessful as preterm birth encompasses a complex syndrome with diverse underlying causes that cannot be resolved by merely suppressing uterine contractions.

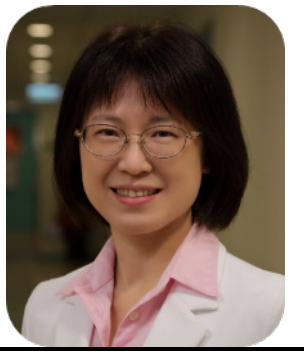
It was not until the late 1980s and early 1990s that the significance of intraamniotic infection as a leading cause of preterm birth began to emerge. Over the past a few decades, extensive research has solidified its pivotal role in the pathogenesis of this condition. Various microbial organisms, including bacteria and fungi, can invade the amniotic cavity, triggering a cascade of immune responses and inflammatory processes. These events disrupt the delicate balance within the uterine environment, leading to premature cervical ripening, membrane rupture, and ultimately preterm labor. Additionally, recent studies have highlighted the importance of sterile inflammation in contributing to preterm birth. Factors such as tissue damage, oxidative stress, and activation of the maternal immune system can induce sterile inflammation, further exacerbating the risk of preterm birth.

Despite the growing recognition of intraamniotic infection and inflammation in preterm birth, optimal treatment strategies remain elusive. While antibiotics are commonly used, their efficacy in preventing preterm birth and mitigating adverse outcomes is still a topic of ongoing investigation. The ORACLE II study have brought attention to the potential risks associated with indiscriminate antibiotic use in cases where the underlying cause of preterm labor is unclear. The study highlighted that administering antibiotics without a confirmed diagnosis of intraamniotic infection may not only be ineffective but could also pose risks to the fetus. This emphasizes the importance of accurate diagnosis and targeted interventions based on a comprehensive assessment of the specific situation.

Accurate diagnosis of intraamniotic infection and inflammation is paramount for effective management of preterm birth. While invasive amniocentesis allows for direct sampling of amniotic fluid, it carries the risk of procedure-related complications. Non-invasive methods, such as biomarker analysis of maternal blood and vaginal discharge, may offer potential alternatives for diagnosing intraamniotic infection and inflammation. However, it should be noted that these non-invasive methods, while promising, currently face limitations in terms of their accuracy, making their clinical applicability uncertain. Further research is required to validate their diagnostic utility and establish standardized protocols before widespread implementation can be considered.

In this presentation, we aim to present our research findings on the effective diagnosis and management of intraamniotic infection and inflammation in the context of preterm birth. We have developed a novel biomarker and a simplified clinical application technique to identify intra-amniotic inflammation. Additionally, we have developed a new rapid bedside test to diagnose and monitor intraamniotic inflammation in preterm premature rupture of membranes (pPROM) using transcervically collected amniotic fluid. Our study also shows the effectiveness of clarithromycin-based combination therapy in eradicating intraamniotic infection/inflammation in a subset of patients with intraamniotic infection/inflammation presenting with pPROM, preterm labor with intact membranes and cervical insufficiency.

Mei-Jou Chen
(IS9)



CURRICULUM VITAE

Prof. Mei-Jou Chen

Professor Mei-Jou Chen is an accomplished researcher in the field of Obstetrics and Gynecology, with a special focus on Reproductive Endocrinology and Assisted Reproductive Technology. She was born on January 10, 1973, in Taipei, Taiwan. Currently, she serves as a Full Professor in the Department of Obstetrics and Gynecology at the College of Medicine, National Taiwan University.

Professor Chen completed her medical education at Taipei Medical University, earning an M.D. degree in 1998. She then pursued further training and specialization, completing her residency in Obstetrics and Gynecology at National Taiwan University Hospital from 1998 to 2002. She obtained her Ph.D. in Clinical Medicine from the College of Medicine at National Taiwan University in 2009. Her research interests primarily revolve around Reproductive Endocrinology, Polycystic Ovary Syndrome, Congenital Urogenital Malformation, Assisted Reproductive Technology, and Minimal Invasive Surgery.

Professor Chen has published nearly 80 peer-reviewed publications, demonstrating her commitment to advancing medical knowledge. She also made significant contributions to her field, both through her research and her active involvement in various academic societies. She has held prestigious positions, including President of the Taiwanese Society of Reproductive Medicine, Executive Supervisor of the Taiwanese Association of Obstetrics and Gynecology, and Committee Member of REI in the Asia & Oceania Federation of Obstetrics & Gynecology.

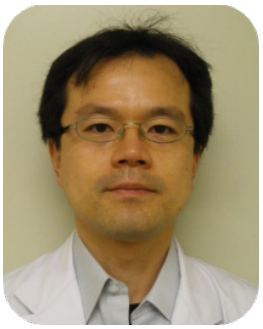
Professor Mei-Jou Chen has received numerous awards and recognitions for her outstanding research work, including the Young Investigator Award of the National Science Council of Taiwan and multiple research awards from prestigious organizations such as the Taiwanese Society of Reproductive Medicine, Taiwan Association of Obstetrics and Gynecology, Infertility Foundation ROC, and Professor Lee TY's Foundation of Reproductive Medicine.

The effect of Obesity on female reproductive dysfunction

Mei-Jou Chen M.D., Ph.D
Department of Obstetrics and Gynecology, National Taiwan University Hospital

Obesity not only contributes to the increase risk of cardiometabolic disorders, but also has been recognized as a risk factor of ovarian dysfunction. It has distinctive pattern of ovarian hormone profile levels and can directly induce ovarian inflammation to reduce oocyte quality. In our previous study, we have observed a negative association between high body mass index (BMI) and ovarian reserve which represented by anti-Mullerian hormone (AMH) levels, ovarian antral follicle counts and ovarian volume in women with PCOS. Further studies have proved the harmful effect of obesity, insulin resistance and metabolic disturbances on AMH levels and ovarian function; also appear in women without PCOS and with normal menstruation period. Although obesity is not a necessary criterion for polycystic ovary syndrome (PCOS), while visceral adiposity has proved to amplify and worsen all metabolic and reproductive outcomes for women with PCOS and it' s interaction with androgen excess has been considered to be involved in the major pathogenesis of PCOS. The pathological roles of obesity including increases insulin resistance and compensatory hyperinsulinemia, which in turn increases adipogenesis and decreases lipolysis. Besides, obesity sensitizes thecal cells to LH stimulation and amplifies functional ovarian hyperandrogenism by upregulating ovarian androgen production. We have previously reported that the obesogenic induced abdominal obesity can affect granulosa cell function and ovarian folliculogenesis by in vivo and in vitro models, which further substantiate the hypothesis that the abdominal adiposity can destroy the ovarian function independently.

Osamu Hiraike
(IS10)



CURRICULUM VITAE

Osamu Hiraike, M.D. Ph. D.

EDUCATION

2002 Ph. D. Graduate School of Medicine, The University of Tokyo, Tokyo, Japan
Dissertation: Analysis of transcriptional co-factors associating transcriptional activation domain of BRCA1

1995 M. D. Faculty of Medicine, The University of Tokyo, Tokyo, Japan

EMPLOYMENTS

2015-present Associate Professor, Department of Obstetrics and Gynecology, The University of Tokyo, Japan.

2013-present Full-time Lecturer / Assistant Professor, Department of Obstetrics and Gynecology, The University of Tokyo, Tokyo, Japan.

2008-2012 Assistant Professor, Department of Obstetrics and Gynecology, The University of Tokyo, Japan.

2007-2008 Chief Resident, Department of Obstetrics and Gynecology, Kanto Central Hospital, Tokyo, Japan.

2005-2007 Guest Researcher, Department of Medical Nutrition and Biosciences, Karolinska Institute.

2003-2005 Assistant Professor, Department of Obstetrics and Gynecology, The University of Tokyo, Japan.

2003-2003 Department of Obstetrics and Gynecology, The University of Tokyo Hospital.

2002-2003 Chief Resident, Department of Obstetrics and Gynecology, Sanraku Hospital, Tokyo, Japan.

2002-2002 Department of Obstetrics and Gynecology, The University of Tokyo Hospital.

1997-1998 Department of Obstetrics and Gynecology, The University of Tokyo Hospital.

1996-1997 Department of Obstetrics and Gynecology, Yaizu Municipal Hospital, Shizuoka, Japan.

1995-1996 Resident in the Department of Obstetrics and Gynecology, The University of Tokyo Hospital.

MEMBERSHIP OF ACADEMIC SOCIETIES

Japan Society of Obstetrics and Gynecology (Delegate, Member of Committee)
Japan Society of Reproductive Medicine (Delegate, Member of Committee)
Japan Society of Gynecologic and Obstetric Endoscopy (Councilor, Chief executive secretary)
Japan Society of Endoscopic Surgery (Delegate, Member of Committee)
Japan Society for Menopause and Women’ s Health (Delegate, Executive secretary)
Japan Society of Endocrinology (Delegate)
Japanese Cancer Association
Editorial board of Molecular and Cellular Endocrinology
https://www.sciencedirect.com/journal/molecular-and-cellular-endocrinology/about/editorial-board

Outpatient hysteroscopic surgery in our department

Osamu Hiraike
The University of Tokyo Hospital

The diagnosis of intracavital lesion is preferentially done by hysteroscopy. Hysteroscopy was firstly introduced as a rigid one and the serious problem of the hysteroscopy was its large diameter, which required prior dilatation of the uterine cervix. Since then, after the introduction of flexible hysteroscopy, it has been the mainstay for outpatient examinations in Japan.

For the hysteroscopic surgery, resectoscope was first used for the treatment of submucosal myoma in 1978. Resectoscope is beneficial for various intracavital lesion such as endometrial polyp and submucous myoma, but it requires cervical dilation and general anesthesia due to its diameter. There is another trend of hysteroscopy in Europe and in the United States. The invention of various specialized instruments including mini-bipolar, tissue removal device, and narrow-diameter rigid hysteroscopy enabled us to perform outpatient hysteroscopic surgery in recent years. The major advantages of the narrow-diameter rigid hysteroscope and tissue removal device are that it can be performed without anesthesia, has significantly improved image quality, and can be equipped with its own manipulating instruments. Tissue removal device is a morcellation device is already widely used in Europe and the United States, and is expected to be a revolutionary device that can be applied to various pathologies in the uterine cavity and reduce operating time compared to conventional hysteroscopic procedures.

At our hospital, endometrial biopsy, endometrial polypectomy, and dissection of adhesions in the uterine lumen for Asherman's syndrome have been performed using the narrow-diameter hard hysteroscope since 2015, and the indications for tubal drainage and polypectomy are being expanded for the soft hysteroscope. We also introduced tissue removal device in 2022. I would like to introduce recent treatment strategies in our hospital for the treatment of intracavital lesions and the current status of these procedures will be reported, and future prospects will also be discussed.

Sanghoon Lee
(IS11)

CURRICULUM VITAE

Sanghoon Lee
Professor, Division of OB&GY College of Medicine, Korea University, Seoul, Korea

Education

Mar.1995~Feb.2001	M.D. degree from College of Medicine, Korea University, Seoul, Korea
Jul.2003~Jun.2005	Master degree from Graduate School, Korea University, Seoul, Korea
Mar.2011~Aug.2013	Ph.D. degree from Graduate School, Korea University, Seoul, Korea

Professonal Experience

Mar.2002~Feb.2006	Residency of OB&GY, Korea University Medical Center, Seoul, Korea
May.2009~Jan.2011	Research Fellow, Institute for Fertility Preservation, Department of Obstetrics and Gynecology, New York Medical College/ Westchester Medical Center, NY
Mar.2011~Feb.2015	Clinical Assistant Professor, Korea University
Mar.2015~Aug.2015	Assistant Professor, Division of Gynecology Oncology, Department of Obstetrics and Gynecology, Korea University Medical Center
Sep.2015~Aug.2021	Associate Professor, Division of Gynecology Oncology, Korea University Medical Center
Mar.2019~Feb.2021	Visiting Scholar, Moores Cancer Center, University of California, San Diego, San Diego, CA
Sep.2021~Present	Professor, Division of Gynecology Oncology at Korea University Medical Center

Academic Award

In-Training Awards for Research : 2010 American Society for Reproductive Medicine
Marquis Who' s Who in the world 2019

Membership

2021~	General Secretary, Korean Society of Geriatric Gynecology
2021~	General Secretary, Korean Gynecologic Cancer Research

Editorial Board Member

2017~Present	Clinical and Experimental Reproductive Medicine (pISSN 2287-8572, eISSN 2287-8580): Editorial Member

Oncofertility: Fertility preservation for female cancer patients

Sanghoon Lee MD, PhD
Professor, Division of Gynecologic Oncology,
Department of Obstetrics and Gynecology, Korea University College of Medicine

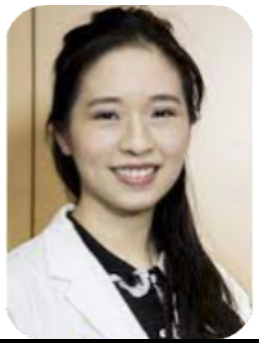
Cancer treatments, while life-saving, can have detrimental effects on fertility in women. The side effects, such as ovarian failure and infertility, can significantly impact the quality of life for these patients. Traditional methods of fertility preservation, such as embryo or oocyte cryopreservation, may not always be suitable due to individual conditions and treatment methods. In such cases, ovarian tissue cryopreservation and transplantation offer a promising option for fertility preservation, especially in pre-pubertal girls and adult patients requiring immediate treatment or ineligible for ovarian stimulation.

To improve the outcomes of ovarian tissue cryopreservation and transplantation, various methods and strategies can be employed. It is crucial to consider these options to help patients and clinicians make informed decisions regarding the complexity of each patient's situation. Effective multidisciplinary oncofertility strategies play a vital role in providing high-quality care to cancer patients considering fertility preservation.

An oncofertility team, consisting of highly skilled and experienced professionals, should be involved in the process. This team considers factors such as cryopreservation methods, thawing processes, and devices to optimize the preservation of ovarian tissue. They also focus on surgical procedures for transplantation and keep up-to-date with advances in technologies related to fertility preservation.

By utilizing these multidisciplinary strategies, clinicians can enhance the success rates and outcomes of ovarian tissue cryopreservation and transplantation. This approach ensures that patients have access to the best possible care and fertility preservation options, taking into account their individual circumstances and treatment requirements.

Hui-Hsuan Lau
(IS12)



CURRICULUM VITAE

Hui-Hsuan Lau, MD

Education

MD, Taipei Medical College

Resident training

2005-2009 Dept of Obs/Gyn, Mackay Memorial Hosp

2009-2011 Division of Urogynecology, Dept of Obs/Gyn, Mackay Memorial Hosp

Position

2021~ Associate Professor, Mackay Medical College

2022~ Director of The Urogynecology Unit, Dept of Obs/Gyn, Mackay Memorial Hospital

2017~ Deputy CEO, The Foundation of Women' s Health and Urogynecology of Taiwan

2023~ Deputy Secretary General, Taiwan Association of Obstetrics and Gynecology (TAOG)

2011~ Deputy Secretary General, The Asia-Pacific Urogynecology Association (APUGA)

2020~ Deputy Secretary General, Taiwan Urogynecology Association (TUGA)

2011~ Attending Doctor, Dept of Obs/Gyn, Mackay Memorial Hospital

Treatment options for stress urinary incontinence

Hui-Hsuan Lau[1,2,3]

[1]*Senior Attending Doctor, Dept. of Obs./Gyn., Mackay Memorial Hospital*

[2]*Associate Professor, Department of Medicine, Mackay Medical College*

[3]*Vice Secretary, Asia Pacific Urogynecology Association*

Stress urinary incontinence (SUI) is the most common type of urinary incontinence. Treatment options for SUI in women are designed to prevent the involuntary loss of urine from the urethra during increases in intra-abdominal pressure that occur during physical activity, coughing, or sneezing. SUI can happen when pelvic tissues and muscles, which support the bladder and urethra, become weak and allow the bladder neck to descend during bursts of physical activity. Weakness may occur from pregnancy, childbirth, aging, or prior pelvic surgery. Other risk factors for SUI include chronic coughing or straining, obesity and smoking.

There is a wide spectrum of treatment options available for patients with SUI, including conservative and surgical managements. Effective nonsurgical therapies include behavioral therapy, electrical stimulation, pelvic floor muscle training, and so on. The conservative treatments have been well studied with regards of the efficacy and safety [1]. The goal of surgical treatment for female SUI is to reposition the urethra. To create a backboard support and stabilize the urethra and bladder neck to achieve continence mechanism when increasing intra-abdominal pressure. Another mechanism is to create coaptation and/or compression to augment the urethral resistance provided by the intrinsic sphincter unit, such as intra-urethral bulking agent injection. Mesh sling procedures are currently the most common type of surgery performed to correct SUI [2]. While all surgeries for SUI carry some risks, it is important to understand the risks and benefits for surgical mesh slings used in SUI repair.

1. Todhunter-Brown A, Hazelton C, Campbell P, Elders A, Hagen S, McClurg D. Conservative interventions for treating urinary incontinence in women: an Overview of Cochrane systematic reviews. Cochrane Database Syst Rev. 2022 Sep 2;9(9):CD012337.
2. Ford AA, Rogerson L, Cody JD, Aluko P, Ogah JA. Mid-urethral sling operations for stress urinary incontinence in women. Cochrane Database Syst Rev. 2017 Jul 31;7(7):CD006375.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Plenary Lecture

【*P1-6*】


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Shee-Uan Chen
(P1)

CURRICULUM VITAE

Shee-Uan Chen

President, Taiwan Association of Obstetrics and Gynecology.

Professor and Director, Department of Obstetrics and Gynecology, National Taiwan University Hospital

Education

College of Medicine, National Taiwan University.

Employment/Leadership Positions

Dr. Shee-Uan Chen was a graduate of College of Medicine, National Taiwan University. He completed the residency training of Obstetrics and Gynecology and research fellow of reproductive medicine in National Taiwan University Hospital. His major research interests include clinical and basic reproductive medicine, cryopreservation of oocytes, embryos and ovarian tissue and preimplantation genetic diagnosis. He has many research papers in reproductive medicine, such as Human Reproduction, Fertility and Sterility, and Journal of Clinical Endocrinology and Metabolism, and gets lots of research awards. He is also the reviewer of these well-known journals and the member of editorial board of the Journal of Formosan Medical Association. He had been the president of Taiwanese Society of Reproductive Medicine. Now he is professor and director of National Taiwan University Hospital and the president of Taiwan Association of Obstetrics and Gynecology.

Elective oocyte freezing for non-medical reasons

Shee-Uan Chen, MD
President, Taiwan Association of Obstetrics and Gynecology
Professor, Department of Obstetrics and Gynecology, National Taiwan University Hospital, Taiwan

Lack of a suitable partner and incomplete self-accomplishment are the most frequent reasons prompting reproductive-aged women to defer childbearing. Pregnancy potential declines significantly in women after 35 years of age. An increased rate of aneuploidy of oocytes and diminished ovarian reserve are two significant risk factors. Social/elective oocyte freezing is a strategy for women who wish to preserve their oocytes from age-related fertility loss.

Therefore, we started the oocyte cryopreservation program for unmarried healthy women with non-medical reasons. A total of 645 women with 840 cycles from our center (2002-2020) were reported in the recent literature. The mean age of oocyte freezing was 37 years. The median number of oocytes frozen was 12. Fifty-four women thawed their oocytes at our hospital. The usage rate in Taiwan was 8.4%. Fifteen women (2.3%) transported their frozen oocytes abroad. The median storage duration was 3.0 years for those who thawed oocytes. The median age of thawing was 42 years. The survival rate was 76.8% and fertilization rate was 66.3%. There were 18 live births with 21 babies. The live birth rate for age less than 35 years was 63.6%, 36-39 years, 30.8%, and $\geq$ 40 years 17.6%. The cumulative live birth per thawed case was 33%.

In Taiwan, the practice of IVF is restricted between a licensed married heterosexual couple. Sperm donation is not available for single women. That may partly explain the lower usage rate. However, the use of transported oocytes abroad may underestimate the actual usage rate. Nevertheless, the oocyte freezing of single woman with non-medical reasons provides an important opportunity to own biological children. Oocyte cryopreservation in the age before 35 years old is more effective. The ask for oocyte cryopreservation in women is increasing in the recent years.

Jeanne Conry
(P2)

CURRICULUM VITAE

Jeanne Ann Conry, MD, PhD

President, The International Federation of Gynecology and Obstetrics

Past-President, American College of Obstetricians and Gynecologists

Employment/Leadership Positions

2017-present	President, CEO and founder Environmental Health Leadership
2021-2024	The Partnership for Maternal, Newborn and Child Health (PMNCH) ,WHO
2016-2026	Chair, Women’ s Preventive Services Initiative
2013-2014	Past-President of the American College of Obstetricians and Gynecologists (ACOG).

Education

1982-1986	Medical Degree, University of California, Davis

Awards and Fellowships

2018-present	Honorary Fellow, Taiwan Association of Obstetrics and Gynecology

Leadership, Collaboration and Advocacy

Jeanne A Conry, MD PhD
President The International Federation of Gynecology and Obstetrics

The International Federation of Gynecology and Obstetrics is the global voice for Women’s Health. We are comprised of over 135 Member Societies, divided into five major regions of the world. We collaborate and work closely with the Asia Oceania Federation of Obstetrics and Gynecology, and count Taiwan as an important member society. Taiwan is a leader in obstetrics and gynecology care. FIGO relies on four pillars as we describe our strong foundation of leadership: Research Interpretation and Implementation, Education of our Colleagues, our Patients and our Health Leaders, Advocacy to improve women’s health and Capacity Building to provide the work force our world needs I will provide an overview of leadership opportunities in our lives and describe four of the steps I believe are essential. The most important and first step is to recognize yourself as a leader right now, in your current stage in life. Leaders change, leaders evolve, but it is that first step in recognition that you are a leader is most critical. Second, we must say Yes to all opportunities that arise before us, because quite often we do not appreciate where our work will take us. By saying YES to opportunities, we broaden our horizons and achieve much more. Third, we must follow our passions. If we have an innate interest in one area of medicine, we should follow that path. We then engage our energy and our interests more fully. And, we will accomplish much more personally and professionally. Finally, we must appreciate that leadership paths are not linear, and each time we take a path to the side or on a different direction it contributes to our growth. Leaders must be flexible and help those around them grow. I will discuss FIGO and its strategic plan, that relies on Member Societies and Regional Federations to guide global health. I will close my remarks with what it means for FIGO and TAOG to be global leaders in women’s health. This role will require more than just a diverse perspective, it will require partnerships, it will require focus, and it will require collaboration around the world.

Pisake Lumbiganon
(P3)

CURRICULUM VITAE

Pisake Lumbiganon

Pisake Lumbiganon is a Professor of Obstetrics and Gynecology, Convenor of Cochrane Thailand and Director of the WHO Collaborating Centre on Research Synthesis in Reproductive Health based at Faculty of Medicine, Khon Kaen University, Thailand. He is currently the President of the Asia Ocenia Federation of Obstetrics and Gynecology. He has received research grants from many international organizations including IDRC, WHO, Wellcome Trust, European Comission, Thailand Research Fund. He has published more than 150 papers in various international journals including many Cochrane reviews. He was a dean of the Faculty of Medicine at Khon Kaen University from 2009 to 2013 and the President of the Royal Thai College of Obstetricians and Gynecologists from 2016 to 2018. In 2019 he received Fellow ad eundum from the Royal College of Obstetricians and Gynaecologists. His main areas of interest include maternal and perinatal health, evidence based practices, systematic review and meta-analysis.

WHO recommendations Intrapartum care for a positive childbirth experience

Pisake Lumbiganon, MD, MS(Penn), FRCOG (ad eundem)
President, Asia Oceania Federation of Obstetrics and Gynecology

This guideline addresses these issues by identifying the most common practices used throughout labour and delivery to establish norms of good practice for the conduct of uncomplicated labour and childbirth. The guideline recognizes a "positive childbirth experience" as a significant end point for all women undergoing labour. The WHO technical consultations led to 56 recommendations on intrapartum care: 26 of these are newly developed recommendations and 30 are recommendations integrated from existing WHO guidelines.

Recommended cares throughout labour and delivery include:

1) Respectful maternity care,
2) Effective communication,
3) Companionship during labour and childbirth.

For the first stage of labour, the following definitions and interventions are recommended:

1) The latent first stage is a period of time characterized by painful uterine contractions and variable changes of the cervix, including some degree of effacement and slower progression of dilatation up to 5 cm for first and subsequent labours,
2) The active first stage is a period characterized by regular painful uterine contractions, a substantial degree of cervical effacement and more rapid cervical dilatation from 5 cm until full dilatation.
3) Women should be informed that a standard duration of the latent first stage has not been established and can vary widely from one woman to another. However, the duration of active first stage (from 5 cm until full cervical dilatation) usually does not extend beyond 12 hours in first labours, and usually does not extend beyond 10 hours in subsequent labours.
4) Digital vaginal examination at intervals of four hours is recommended for routine assessment of active first stage of labour in low-risk women.
5) Parenteral opioids, such as fentanyl, diamorphine and pethidine, are recommended options for healthy pregnant women requesting pain relief during labour, depending on a woman's preferences.
6) For women at low risk, oral fluid and food intake during labour is recommended.
7) Encouraging the adoption of mobility and an upright position during labour in women at low risk is recommended.

For the second stage of labour, the following definitions and interventions are recommended:

1) The second stage is the period of time between full cervical dilatation and birth of the baby, during which the woman has an involuntary urge to bear down, as a result of expulsive uterine contractions.
2) Women should be informed that the duration of the second stage varies from one woman to another. In first labours, birth is usually completed within 3 hours whereas in subsequent labours, birth is usually completed within 2 hours.
3) For women without epidural analgesia, encouraging the adoption of a birth position of the individual woman' s choice, including upright positions, is recommended.
4) Routine or liberal use of episiotomy is not recommended for women undergoing spontaneous vaginal birth.

For the third stage of labour, the following interventions are recommended:

1) The use of uterotonics for the prevention of postpartum haemorrhage (PPH) during the third stage of labour is recommended for all births.
2) Oxytocin (10 IU, IM/IV) is the recommended uterotonic drug for the prevention of postpartum haemorrhage (PPH).
3) In settings where oxytocin is unavailable, the use of other injectable uterotonics (if appropriate, ergometrine/ methylergometrine, or the fixed drug combination of oxytocin and ergometrine) or oral misoprostol (600 μg) is recommended.
4) Delayed umbilical cord clamping (not earlier than 1 minute after birth) is recommended for improved maternal and infant health and nutrition outcomes.

For newborns the following interventions are recommended:

1) Newborns without complications should be kept in skin-to-skin contact (SSC) with their mothers during the first hour after birth to prevent hypothermia and promote breastfeeding.
2) All newborns, including low-birth-weight (LBW) babies who are able to breastfeed, should be put to the breast as soon as possible after birth when they are clinically stable, and the mother and baby are ready.
3) All newborns should be given 1 mg of vitamin K intramuscularly after birth (i.e. after the first hour by which the infant should be in skin-to-skin contact with the mother and breastfeeding should be initiated).


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Tadashi Kimura
(P4)

CURRICULUM VITAE

Tadashi KIMURA MD,PhD.

Qualifications

1985	M.D. Osaka University Faculty of Medicine
1990	Specialist of the Board, Japan Society of Obstetrics and Gynecology
1993	Ph.D., Osaka University Graduate School of Medicine,
2005	Specialist of the Board, Japan Society of Reproductive Medicine
2007	Specialist of the Board, Japan Society of Gynecologic Oncology

Academic and Professional posts (held since graduation)

2023-	Auditor, JSOG
2019-2023	Chairperson of the Executive Board, JSOG (Japan Society of Obstetrics and Gynecology)
2020-present	Assistant to the hospital director, Osaka University Hospital
2018-2020	Director, Osaka University Hospital
2014-2018	Vice Director, Osaka University Hospital
2011-2017	Executive Board Member, FIGO (International Federation of Obstetrics and Gynecology)
2011-2017	Council member, AOFOG (Asia-Oceania Federation of Obstetrics and Gynecology)
2009-2023	Executive Board Member, JSOG
2006-present	Professor and Chairperson, Department of Obstetrics and Gynecology, Osaka University Graduate School of Medicine
2005-2006	Lecturer, Department of Obstetrics and Gynecology, Osaka University Graduate School of Medicine
1991-2006	Assistant Professor, Department of Obstetrics and Gynecology, Osaka University Graduate School of Medicine (1995-1997 Visiting Scientist, University of Hamburg)

How we could transfer our fruit from bench to bedside

Tadashi Kimura M.D.,Ph.D.
Auditor/Immediate Past Chairperson, Japan Society of Obstetrics and Gynecology
Professor and Chairperson
Department of Obstetrics and Gynecology, Osaka University Graduate School of Medicine

Among Japanese MDs, we often get trained in basic research works at the age of late 20' s and early 30' s. I believe a research which appears to connect directly to clinics is easy to be fade into oblivion. I deeply considered how we could get a fruit from my bench works (basic science) to improve our clinical practice.

My first theme was about the onset of labor because I wondered when I induced labor at term, effectiveness of oxytocin so varied among women and even among date. In 1979, Soloff et al., had already revealed H^3-oxytocin binding was drastically increased at the time of labor in rat myometrium. However, molecular background of this regulation was totally unknown. In order to elucidate the mechanism of the oxytocin receptor (OTR) induction in term myometrium, we cloned human OTR cDNA (Nature 1992), and its' gene (JBC 1994). We also established its monoclonal antibody and revealed its temporal and special expression in decidua (JCI 1994) and myometrium at term (Endocrinology 1996). We tested the existence of DNA binding protein on OTR gene upstream region in term myometrium (Mol Cell Endocrinol 1999) and cloned one cDNA encoding human *mafF* cDNA (BBRC 1999). However, this protein lacks transactivation activity and the mechanism of upregulation of this gene is still not clear. We cloned murine OTR gene (Mol Cell Endocrinol 1996) and established OTR knockout mouse (PNAS 2005). However, female OTR (-/-) mice revealed no phenotype on their parturition. I expect this cDNA, as well as crystal structure should help to develop novel selective antagonist/agonist, however until now no clinically effective ligand had developed.

My second theme was about implantation. We established *in vivo*/transient gene transfer system with HVJ (Haemaggulutinating virus of Japan)-E vector to mouse endometrium at opening of implantation window (Mol Hum Reprod 2003) and revealed stat-3 was the critical factor to open the window (FEBS let 2006). With these mice as implantation failure model, we applied physiological analysis (intrauterine oxidation-reduction potential (ORP; Reprod Fertil Dev 2017) and vaginal impedance (VZ; Hum Reprod 2018)). These two parameters clearly discriminate "implantable" (control) and "unimplantable" (stat-3 disturbed) mice, so that we applied these parameters to human. Recently Japanese authority (PMDA) approved our system to measure intrauterine impedance (not for diagnosis). I sincerely expect our collaborative clinical trial between Taiwan and Japan will be successful.

Our team is now dealing with labor with multichannel flexible dermal electrodes system to monitor uterine activity and fetal ECG. I believe when we get stuck in wet science such as molecular biology, it should be the time when "physiological method strikes back".

Joong-Shin Park
(P5)

C CURRICULUM VITAE

Joong Shin Park, MD, PhD

Vice President, Seoul National University Hospital,
Professor, Department of Obstetrics and Gynecology, Seoul National University College of Medicine
Chairman of the Board, Korean Society of Obstetrics and Gynecology

Education

Seoul National University College of Medicine (M.D.)
Seoul National University Graduate School (M.S.)
Seoul National University Graduate School (Ph.D.)
Residency, Dept. of Obstetrics and Gynecology, Seoul National University Hospital
Fellowship, Dept. of Obstetrics and Gynecology, Seoul National University Hospital

Postgraduate position

2012~2014	Director, Dept. of Education and Training, Seoul National University Hospital
2014~2016	Associate Dean for Public Relations, Seoul National University College of Medicine
2014~2016	Director of Medical Library, Seoul National University
2015~2018	Director of Graduate Medical Education, Korean Academy of Medical Sciences
2015~2017	President, Korean Society of Ultrasound in Obstetrics and Gynecology
2016~2017	Associate Dean for Academic Affairs, Seoul National University College of Medicine
2018~2021	Director of Specialty Examination, Korean Academy of Medical Sciences
2018~2020	Chair of Scientific Committee, Korean Society of Maternal Fetal Medicine
2018~2021	Chair of Scientific Committee, Korean Society of Obstetrics & Gynecology
2018~2023	Chairman, Department of Obstetrics & Gynecology, Seoul National University College of Medicine & Seoul National University Hospital
2019~2023	Director of Medical Museum, Seoul National University Hospital
2020~2023	Director of Headquarters of Research Administration & Coordination, Seoul National University Hospital
2020~2022	Vice President, The Korean Society of Medical Education
2021~2022	Chairman, Council for Graduate Medical Training, Ministry of Health & Welfare, Korea

Current position

1998~Present	Assistant Professor, Associate Professor, Professor, Department of Obstetrics & Gynecology, Seoul National University College of Medicine & Seoul National University Hospital
2020~Present	Vice President, Korean Society of Maternal Fetal Medicine
2021~Present	Vice President, Korean Academy of Medical Sciences
2021~Present	Chairman of the Board, Korean Society of Obstetrics & Gynecology
2022~Present	Treasurer, Asia & Oceania Federation of Obstetrics & Gynecology
2022~Present	President, The Korean Society of Medical Education
2023~Present	Vice President, Seoul National University Hospital

Early prediction of gestational diabetes mellitus

Joong Shin Park, MD, PhD
Department of Obstetrics and Gynecology
Seoul National University College of Medicine

Gestational diabetes mellitus (GDM) is a common complication of pregnancy characterized by glucose intolerances diagnosed for the first time during pregnancy. Its prevalence among Korean pregnant women is reported to range from 5.7% to 9.5%. GDM not only affects pregnant women but also has adverse outcomes for fetuses and newborns. With the increasing global incidence of obesity and metabolic complications, the prevalence of GDM is also rising. Therefore, it is crucial to accurately diagnose GDM early in pregnancy to minimize associated complications.

To achieve an accurate diagnosis of GDM, we compared the predictive performance between old criteria (based on five historical/demographic factors) and new criteria (consisting of 11 factors) defined by American College of Obstetricians and Gynecologists (ACOG). According to the old criteria, approximately 30% of women were classified as high-risk, while the new criteria classified around 16% as high-risk. Among women diagnosed with GDM, about 45% were incorrectly classified as not high-risk using the old criteria, and approximately 50% were incorrectly classified as not high-risk using the new criteria. Among women without GDM, about 28% were classified as high-risk by the old criteria, and approximately 14% were classified as high-risk by the new criteria. We concluded that the use of new criteria reduces the need for early GDM screening by reducing the number of cases identified as high-risk compared to the use of old criteria.

Additionally, a machine learning-based model was developed to predict GDM in early pregnancy and we evaluated whether prediction model including NAFLD-related factors showed improved performance. Ultrasound was performed on pregnant women at 10-14 weeks to evaluate NAFLD, and GDM was evaluated at 24-28 weeks. Clinical variables collected before 14 weeks were used to develop prediction models for GDM. Various machine learning methods, including logistic regression, random forests, support vector machines, and deep neural networks were utilized and the model that incorporated both clinical variables and NAFLD-related factors demonstrated the highest predictability.

Lastly, we conducted a study that compared the intestinal microbiota between pregnant women with GDM and those without GDM. The analysis revealed that pregnant women with GDM had lower levels of bacteria such as Agathobacter rectalis, Bifidobacterium longum group and Bacteroids plebeius compared to healthy non-GDM women. On the other hand, bacteria such as Firmicutes and Blautia were more abundant in women with GDM. These differences in the intestine microbiome suggest the possibility of developing a model for early detection of GDM.

In summary, we employed various approaches to predict GDM earlier such as comparing old and new criteria, developing predictive models using machine learning and analyzing the intestinal microbiome in pregnant wemen. By early prediction of GDM, we expect to reduce the complications related with GDM through early and proper management.

Verda J. Hicks
(P6)

CURRICULUM VITAE

Verda J. Hicks
President ACOG
Clinical Associate Professor, University of Missouri, Kansas City

Education
Medical School: University of Illinois, James Scholar
Residency: The Union Memorial Hospital, Baltimore, MD
Fellowship: a. Duke University, Gyn Oncology
b. Medical Education Research Fellowship, CGEA

Practice-related Activities
Site: Locum Tenens, Jersey Shore University Medical Center
a. Director Gyn Oncology
b. Sope: Full service Gyn-Oncology Division across a 7 hospital system providing medical, surgical, and oncologic care.

ACOG Activities
Prologue Advisory Committee, Gyn Oncology and Critical Care
ACOG Distinguished Service Award *
President-elect ACOG
President ACOG

The Obstetrician-Gynecologist as Leader

Verda Hicks, MD FACOG FACS
President, ACOG

As an Obstetrician-Gynecologist we are taught to use evidence-based medicine as foundation of the care that we provide our patients. Even though we may not consider ourselves as a leader, to our patients, their families, and their communities-- **We Are Leaders.** But, we are not trained in evidence-based leadership.

In addition, we must lead our profession to address the many challenges that are shared by us across the world that we practice in—maternal mortality, staffing shortages, challenges to reproductive rights, mental health, systemic racism and social determinants of health, equitable reimbursement, violence against providers, sexual assault/misogyny, and resultant burnout—as examples.

In this lecture we will address some examples of evidence-based leadership practice. The information and resources provided will be a starting point to accept the challenge to lead—**To Lead From Where You Are.**

We must lead in our practices, in our communities, and within our specialty or subspecialty. We can all lead around personal privacy protection and support evidence-based medicine. We can lead by calling out biases when we see than and recognize our own implicit biases. We can reach out to each other, communicate understanding of each other, help each other elevate each other, be kinder to each other—realizing that we are all living similar shared experiences in stressful times. We must respect and value those things that seem to apparently divide us, so that they do not permanently divide us.

No matter where we are on our career journey, we can lift up the mission of our profession as a first step in recognizing the leader in us.


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Young Doctors' Session (I)
Oncology & Gynecology

【Y1~8】

Szu-Yu Huang 黃思于
(Y1)

Pretreatment Carcinoembryonic Antigen Can Assist Cancer Antigen 125 in predicting lymph node metastasis in endometrial carcinoma

*Szu-Yu Huang[1], Hao Lin[1], Chen-Hsuan Wu[1], Shao-Chi Wang[1], Yu-Che Ou[2], Ching-Chou Tsai[1], Hung-Chun Fu[1]**
[1]Department of Obstetrics and Gynecology, Kaohsiung Chang Gung Memorial Hospital and Chang Gung University College of Medicine, Kaohsiung, Taiwan.
[2]Department of Obstetrics and Gynecology, Chia-Yi Chang Gung Memorial Hospital, Chia-Yi, Taiwan

Objective: To investigate the cost-effective pretreatment tumor markers CEA and CA125 to predict lymph node metastasis (LNM) in endometrioid endometrial cancer (EC) and to develop a prediction model.

Methods: We conducted this single-center retrospective study of endometrioid EC patients treated with complete staging surgery between January 2015 and June 2022. We attempted to identify optimal cut-off values of CEA and CA125 for predicting LNM using receiver operating characteristic (ROC) curves. Stepwise multivariate logistic regression analysis was used to identify independent predictors. A nomogram for predicting LNM was constructed and validated using bootstrap resampling.

Results: Based on the ROC curves, the optimal cut-off values of CEA and CA125 were 1.4 ng/ml (area under the ROC curve [AUC] 0.62) and 40 U/mL (AUC 0.75), respectively. Of the 405 patients evaluated, multivariate analysis showed that CEA (OR: 1.94; 95% CI: 1.01-3.74) and CA125 (OR: 8.75; 95% CI: 4.42-17.31) were independent predictors for LNM. Our nomogram showed good discrimination with a concordance index of 0.779. Calibration curves for the probability of LNM showed optimal agreement between the predicted and the actual probability. The risk of LNM for both markers below cut-off was 3.6%. The negative predictive value and negative likelihood ratio were 96.6% and 0.26, respectively, with moderate efficiency to rule out the possibility of LNM.

Conclusion: Here we reported a cost-effective method of using pretreatment CEA and CA125 levels to identify endometrioid EC patients at risk for LNM, which could be help in decision-making with regards to lymphadenectomy before surgery.

Shao-Chi Wang 王劭琪
(Y2)

Estrogen/Progesterone Receptor Expression and CA125 as Preoperative Predictors to Estimate Lymph Node Metastasis in Endometrial Endometrioid Cancer

Shao-Chi Wang[1] M.D.; Hung-Chun Fu[1] M.D. Ph.D.; Chen-Hsuan Wu[1] M.D.;
Yu-Che Ou[1,2] M.D.; Jui Lan[3] M.D.; Hao Lin[1] M.D.
[1]Department of Obstetrics and Gynecology, Kaohsiung Chang Gung Memorial Hospital and Chang Gung University College of Medicine, Kaohsiung, Taiwan.
[2]Department of Obstetrics and Gynecology, Chia-Yi Chang Gung Memorial Hospital, Chia-Yi, Taiwan.
[3]Department of Anatomic Pathology, Kaohsiung Chang Gung Memorial Hospital and Chang Gung University College of Medicine, Kaohsiung, Taiwan.

Objective: We aimed to evaluate whether the combination of estrogen/progesterone receptor (ER/PR) expression and CA125 could be used as a biomarker to predict lymph node metastasis (LNM) in endometrioid-type endometrial cancer (EC).

Materials and Methods: We retrospectively investigated endometrioid EC patients treated with complete staging surgery between January 2015 and December 2020. Of the 396 patients evaluated, the optimal cut-off values of ER/PR H-score and CA125 were 407 (AUC 0.645, p=0.001) and 40 U/mL (AUC 0.762, p<0.001), respectively. Multivariate analysis showed that CA125 ≥ 40 U/mL (OR: 8.03; 95% CI: 3.44-18.77) and ER/PR H-score <407 (OR: 5.22; 95% CI: 1.87-14.60) were independent predictors. A LNM predictive nomogram was constructed using these two variables. Calibration curves for the probability of LNM showed optimal agreement between the predicted and the actual probability with a concordance index of 0.807. Our model gave a negative predictive value and a negative likelihood ratio of 98.3% and 0.14, respectively.

Conclusion: ER/PR expression combined with pretreatment CA125 can help estimate risk of LNM and aid in decision-making with regards to the need of lymphadenectomy in endometrioid-type EC patients.

Yen-Fu Chen 陳彥甫
(Y3)

Maintenance chemotherapy in platinum-sensitive recurrent epithelial ovarian cancer

Yen-Fu Chen[1],MD
Chien-Hsing Lu[1], MD,PhD
[1]Department of Obstetrics and Gynecology, Taichung Veterans General Hospital, Taiwan.

Objective: To study whether maintenance chemotherapy lead to longer progression free survival in patients with platinum-sensitive relapsed epithelial ovarian cancer.

Materials & Methods: This is a retrospective cohort study with data from a tertiary medical center over a decade in Taichung city, Taiwan. A total of 72 patients who showed complete response or partial response after six cycles of second-line chemotherapy, based on the images of CT scan and incorporated the criteria of RECIST 1.1 and CA 125 Agreed by the Gynecological Cancer Intergroup (GCIG). They were divided into two groups according to the number of cycles of chemotherapy they received, which included a standard group (6 cycles) and a maintenance group (more than 6 cycles).

Results: Overall, 72 patients were included in this analysis: 41 in the maintenance group and 31 in the standard group. Of all patients, overall survival (OS) showed significant difference between standard and maintenance group (73.9 months v.s 35.7 months, p=0.031) favoring standard group. However, secondary cytoreduction surgery was performed less often in the maintenance group than in the standard group (17% versus 67.7%).

In patients without secondary cytoreduction surgery or radiotherapy, who received salvage chemotherapy alone (n=44), 29.5% (13/44) of patients received 6 cycles of chemotherapy and 70.5% (31/44) of patients received more than 6 cycles. There was no significant difference in OS and PFS between the two groups.

In subgroup analysis, patients who received salvage chemotherapy alone (n=44), there were 22 patients who presented partial response at the 6^{th} cycle, 13.6% (3/22) of them received standard 6 cycles of chemotherapy and 86.4% (19/22) of them received more than 6 cycles. The maintenance group showed significant improvement in PFS over standard group (3.6 v.s 6.7 months, p=0.007), but there was no significance in OS between two groups.

Chin-Tzu Tien 田謹慈
(Y4)

Clinical characteristics and a two-year follow-up of unsatisfactory conventional Pap smears: a retrospective case-control study

Chin-Tzu Tien[1], Pei-Chen Li[1], Chi-Jui Chen[2], Dah-Ching Ding[1,3]*
[1]Department of Obstetrics and Gynecology, Hualien Tzu Chi Hospital, Buddhist Tzu Chi Medical Foundation, and Tzu Chi University, Hualien 970, Taiwan.
[2]Department of Internal Medicine, Hualien Tzu Chi Hospital, Buddhist Tzu Chi Medical Foundation, and Tzu Chi University, Hualien 970, Taiwan.
[2]Institute of Medical Sciences, Tzu Chi University, Hualien 970, Taiwan.

Objective: The objective of this study was to follow up on 2-year of individuals having unsatisfactory reports of Pap smears and to analyze the contributing factors.

Methods: This was a retrospective study at Hualien Tzu Chi hospital that performed about 5,000– 6,000 Pap smears annually. Women who had unsatisfactory results due to scant cellularity between January 1, 2015– December 31, 2016, were included in this study. The control group comprised age-matched women with normal Pap smears at a 1:4 ratio during the same period. We followed the clinical characteristics and the two-year outcomes. Patients who were unavailable for follow-up assessments or had insufficient clinical information were excluded.

Results: A total of 887 Pap smears were included. 717 and 170 women had normal Pap and unsatisfactory Pap tests, respectively. After excluding women who were unavailable for follow-up, the final analysis included 248 and 67 women with normal and unsatisfactory Pap tests, respectively. The mean age was not significantly different between the two groups. Multivariate analysis revealed that premenopausal status and increased discharge were associated with the risk of unsatisfactory Pap tests. Of the 67 women with unsatisfactory Pap tests, all tested negative for malignancies at a two-year follow-up assessment.

Chien-Teng Liao 廖建滕
(Y5)

Evaluating Cervical Intraepithelial Neoplasia with Colposcopy Based on Artificial intelligence-assisted Model built by Convolutional Neural Network and Fuzzy Algorithm

Chien-Teng Liao[1], Yi-Hung Sun[1,2], Chih-Yu, Tsai[3], Kun-Da, Ho[1]
[1]Department of Obstetrics and Gynecology, Chimei Medical Center, Tainan, Taiwan
[2]Institutes of Medicine, Kaohsiung Medical University, Kaohsiung, Taiwan
[3]Institute of Electronic Engineering, National Kaohsiung University of Science and Technology, Kaohsiung, Taiwan

Objective: Cervical cancer is one of the most common cancers in Taiwanese women. Regular cervical cytology is necessary for detecting lesions that are not evident before it evolves into cancer. Colposcopy is used to identify the dysplastic lesions early and treat them. However, colposcopy alone is known to miss approximately one-third of high-grade CIN. Recent reports have revealed a lower sensitivity of colposcopy and colposcopy-based biopsies than was generally expected previously and have raised considerable concerns about the probability of missed CIN2+. Various reasons have been proposed to explain this low sensitivity, including insufficient experience of the colposcopist, inability to target the abnormal area with the biopsy forceps, and the occurrence of lesions not being visible on colposcopy. For the above reason, we introduced the deep learning method to judge the degree of CIN through images from colposcopy. The judgment for the degree of the lesion is assisted by the risk factors related to the patient's physical and the colposcopy profile.

Materials and methods: In this study, we enrolled 3,000 colposcopy images from 1,000 patients from the department of obstetrics and gynecology of Chimei medical center as the research data. And we use the convolutional neural network to carry out the training and learning of feature extraction from these colposcopy images and then organize them through the images of designated cases. The changing profile is evaluated for similarity, and finally, the similarity and the patient's physical profiles, includes age, body mass index, and gravidity are evaluated through a fuzzy algorithm to strengthen the probability of determining the cervical intraepithelial neoplasia level. In this study, we used colposcopy images as training data according to three categories of CIN I, CIN II, and CIN III, and the colposcopy images in the three categories were randomly captured as test data.

Result: According to the experimental results, the verification accuracy of our model is at highest as 85.38% when the iteration = 250 while judging the possibility of CIN grade.

Conclusion: Through the analysis of the probability of lesion classification by the convolutional neural network model, combined with the patient's physical data, the prediction of the degree of the lesion is enhanced. So, doctors can avoid the subjective experience when computer-aided AI model can provide a diagnostic reference to physicians, to achieve auxiliary diagnosis and give the most suitable treatment to the patients.

Peng-Hsuan Huang 黃芃瑄
(Y6)

Predictors of Surgical Outcomes of Laparoscopic Myomectomy with Barbed Sutures

Peng-Hsuan Huang[1#], Hsin-Fen Lu[1#], Wan-Hua Ting[1], Hui-Hua Chen[1], Ho-Hsiung Lin[1,2], Sheng-Mou Hsiao[1,2,3]*
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Peng-Hsuan Huang and Hsin-Fen Lu contributed equally in this work.

Objective: Our study is aimed to identify predictors of surgical outcome of laparoscopic myomectomy with two different barbed sutures (i.e., V-Loc™ versus Quill™).

Methods: All consecutive women with symptomatic uterine myomas who underwent laparoscopic myomectomy were reviewed.

Results: Surgical outcomes did not differ between the V-Loc™ and Quill™ groups. Multivariable regression analyses revealed that the number of removed myoma (coefficient=6.7 minutes) and the diameter of the dominant myoma (cm, coefficient=4.5 minutes) were predictors of surgical time. Similarly, the number of removed myoma (coefficient=23.8 mL) and the diameter of the dominant myoma (cm, coefficient=48.6 mL) were the predictors for blood loss. The number ≥ 3 of removed myoma and the diameter ≥5.7 cm of the dominant myoma were the cutoff values to predict ≥240 minutes of surgical time. The number ≥3 of removed myoma and the diameter ≥8.0 cm of the dominant myoma were the cutoff values to predict ≥1000 mL of blood loss.

Conclusion: The number of removed myoma and the diameter of the dominant myoma can be used to predict surgical time and blood loss. In addition, the surgical outcome of laparoscopic myomectomy with the use of Quill™ suture seems similar to that of V-Loc™ suture.

Angel Hsin-Yu Pai 白欣玉
(Y7)

Unraveling the Epithelial Microarchitecture of the Endometrium in Patients with Adenomyosis

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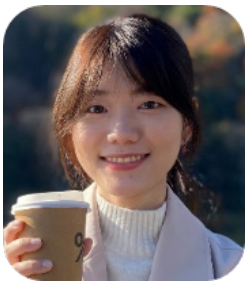
Objective: As the first maternal layer of cells that an embryo comes into contact and communicates with, the endometrial luminal epithelium (LE) plays a crucial role in determining receptivity and embryo-endometrial crosstalk. Clinically, patients with adenomyosis often present with suboptimal reproductive outcomes, which suggests possible underlying disparities to normal population. The objective of this study is to investigate the morphological differences of the endometrial LE during window of implantation (WOI) in patients with adenomyosis.

Materials and Method: Biopsies of eutopic endometrium from patients with and without adenomyosis were collected throughout the menstrual cycle. After *in vitro* culturing, the endometrial glandular cells (EGCs) were first grown into a 3D spheroid of organoid then underwent treatment, fixation, and slicing into ultra-thin sections (60-70nm). Observed with both transmission electron microscopy (TEM) and scanning electron microscopy (SEM), the ultrastructure of LE and 3D spheroid of EGCs organoid were analyzed and compared. Additionally, immunohistochemistry (IHC) staining with primary monoclonal mouse anti-human acetylated α Tubulin antibody (Santa Cruz) was performed to localize the expression of surface cilia on the LE.

Results: SEM analysis identified four cell types with varying characteristics in the endometrial LE, which included microvilli-rich cells, pinopode cells, vesiculated cells, and ciliated cells. Meanwhile, TEM evaluation revealed notable differences between EGC of adenomyotic samples and control. Significantly less amount of microvilli and shorter primary cilia were observed on the cell surface of LE from patients with adenomyosis when compared to control samples. In addition, besides more scantily dispersed, the cilia of cultured EGCs from patients with adenomyosis were markedly shorter in length (200-600nm vs 500-1200nm) and slimmer in width, when compared to those of control.

Conclusion: This study has identified pronounced morphological differences in the LE of patients with adenomyosis that could have potentially affected their reproductive outcomes. Alteration or disruption of this histoarchitecture during WOI may impair the LE-embryo interaction and be detrimental to the process of implantation in patients with adenomyosis.

Chen-Ti Wang 王貞棣
(Y8)



Exploring the Endometrial Expression of Alpha1-Antitrypsin Isoforms in Patients with Endometriosis

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[Background and Objective] Alpha-1 antitrypsin (AAT) is a single-chain glycoprotein belonging to the serpin superfamily, with several isoforms of posttranslational glycosylation (isoAAT). IsoAAT functions as an endogenous protease inhibitor and plays a crucial role in safeguarding tissues against inflammatory cell-released enzymes. Serum isoAAT levels have been proposed as a potential marker for extrauterine endometriosis, with a higher sensitivity and specificity than CA-125. This study aimed to assess the endometrial expression of isoAAT in patients diagnosed with endometriosis.

[Materials and Methods] A retrospective laboratory analysis of surgical specimens obtained from endometrioma patients with age < 42 years during 2009/07-2013/12 was conducted. Paired endometrial tissue biopsies from the eutopic endometrium, ovarian endometriosis, and pelvic endometriosis, in the proliferative and secretory phase, were included. Immunohistochemistry (IHC) staining using primary monoclonal mouse anti-human AAT antibody (V-Check, Taiwan) was performed to localize the expression of isoAAT. HSCORE ranging between 0 - 300 was used to assess staining quantity and intensity. Mean±SD was used to express the data.

[Results] The study included 24 patients, with 12 patients in the proliferative phase (mean age: 34.3±4.3 years) and 12 patients in the secretory phase (mean age: 33.2±5.6 years). IHC staining showed isoAAT expression in both the eutopic and ectopic endometrial tissue. Notably, isoAAT expression was predominantly observed in the endometrial stromal cells rather than in the glandular cells. Furthermore, isoAAT expression was substantially increased during the secretory phase compared to the proliferative phase. In specimens of ovarian endometrioma, isoAAT expression was exclusively observed in the ectopic endometriotic tissue, while the fibrotic capsule and ovarian parenchyma had various staining intensities.

[Conclusion] The findings imply that isoAAT expression manifests in both eutopic and ectopic endometrial tissues in patients of endometriosis. The discerned expression pattern of isoAAT, characterized by heightened expression in the endometrial stromal cells and the secretory phase, insinuates a plausible application for the diagnostic and therapeutic management of endometriosis. Extensive studies are undergoing.

Young Doctors' Session (Ⅱ)
Reproduction

【Y9-16】

Hao Ting Lien 連顥庭
(Y9)

The association between ovarian reserve and organophosphate flame retardants in women of childbearing age

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Objective: To evalaute the association between organophosphate flame retardants (OPFRs) exposure and ovarian reserve.

Materials and Methods: In this prospective cohort study, total of 99 participants were recruited from August 2021 to October 2022 at the outpatient department of Obstetrics and Gynecology in Chang Gung Memorial Hospital, Kaohsiung Medical Center in Taiwan. The inclusion criteria were as follows: adult women of childbearing age were eligible to participate. Old age (>50 years old), patients using antidepressants and antipsychotics for over months were excluded. The urinary concentrations of 10 OPFR compounds were measured to evaluate the exposure patterns. Clinical and urinary OPFR profiles were compared among subgroups to identify whether the OPFR compounds were independently correlated with AMH, FSH and LH level. Additionally, lifestyle factors were compared among subgroups stratified by median concentrations of urinary OPFR compounds associated with AMH level.

Results: After adjusting for covariates, the urinary concentration of BDCPP was identified as an independent predictor of lower AMH level (low vs. high AMH (cut-off value: 1.5ng/mL), odds ratio (OR) (95% confidence interval (CI)), 5.714 (1.435– 22.727), p = 0.007). Moreover, less urination per day was postively correlated with urinary BDCPP concentration (high vs. low BDCPP (cut-off value: 2.3μ g/g Cr), OR (95% CI), 6.750 (1.569– 29.032), p = 0.018). FSH and LH were not significantly associated with 10 OPFR compounds in our study.

Conclusions: Increasing exposure to OPFRs (especially bis(1,3-dichloro-2-propyl) phosphate (BDCPP)) have been associated with lower AMH level.

Yu-Li Chuang 莊羽豐
(Y10)

Aberrant MiRNA Expression in Repeat Post-receptivity Endometrium in MiRNA-based Endometrial Receptivity analysis (MIRA) Predict Recurrent Implantation Failure: Case Series

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Objective: Those recurrent implantation failure patients with shifting window of implantation and post-receptivity endometrium at 120hrs examination under miRNA-based Endometrial Receptivity analysis (MIRA) may consider reassessing at 96hrs post progesterone exposure. However, the result of repeat post-receptivity endometrium is rarely found and confuses the physician about suitable embryo transferring timing. Three cases had repeated implantation failures after adjusting the transferring time based on the results of the initial MIRA examination, whom received MIRA reassessment and found repeat post-receptivity endometrium at 96hrs. The aim of the study elucidates the clinical meaning of similar aberrant miRNA expression in these cases.

Materials and Methods: These patients had MIRA at 120hrs after progesterone use and at 96hrs after progesterone use again. All the patients' endometrial specimens were collected by endometrial aspiration sampling. All these specimens received total RNA extraction and quantified. Isolated RNA was reverse-transcripted to cDNA, and consequently, qPCR was performed utilizing NextAmp Analysis System and MIRA PanelChip with preprinted microRNA-specific primers. The result of miRNA expression was quantified, and obtained the Cq level. Specific miRNAs which are Cq value difference greater than 1.5 were collected and received MicroRNA enrichment analysis with the miRDB database (https://mirdb.org/) and analyzed microRNA target interaction (MTI) in miRTarBase (https://miRTarBase.cuhk.edu.cn/).

Result: After analyzing these patients' endometrial specimens, those upregulated miRNAs include miR-1972, miR-1973, and miR-663a. Downregulated miRNAs include miR-484, miR-193a-3p, miR-19b-3p, and miR-335-5p. These miRNAs are analyzed and found most target genes are related to endometrial receptivity, including ERB2 and mTOR. Similarly, pathway analysis with the KEGG database reveals the miRNAs involved MAPK, ErB, PI3K-Akt, FoxO, and TGF-β 1 pathways. These signaling pathways regulate cell proliferation, apoptosis, cellular senescence, adherent junction, and epithelium-to-mesenchymal transition, so that modify the endometrial receptivity.

Conclusion: In our study, three cases with implantation failure history had rarely repeat post-receptivity endometrium results under MIRA examination. These patients' endometrial sampling revealed similar aberrant expression miRNAs, which may predict poor endometrial receptivity. Therefore, these seven miRNAs have potential strength in clinical interpretation about personalized embryo transfer protocol.

Wei-Ting Lee 李瑋婷
(Y11)

Do ectopic pregnancy only has negative impact on subsequent pregnancy outcome: A Nationwide Population-Based Retrospective Cohort Study in Taiwan

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Objective: To evaluate subsequent pregnancy outcomes in Asian women following ectopic pregnancy.

Materials and Methods: Using the Taiwan National Health Insurance database, we designed a retrospective study that included 12 to 50-year-old women who had experienced ectopic pregnancy between 2000 to 2013. We selected a 1:3 age-matched control group of non-ectopic-pregnant women. The endpoint was any episode of recurrent ectopic pregnancy or normal pregnancy; otherwise, the patients were tracked until 31 December 2013. With the use of a multivariate Cox proportional hazard regression analysis, we calculated the hazard ratio (HR) with a 95% CI and compared it with that of the control group. The difference in re-ectopic pregnant rate and the incidence of pregnancy between the two groups was estimated by using the Kaplan-Meier method along with the log-rank test. The results were considered statistically significant if two-tailed p values were less than 0.05.

Results: During the follow-up period, women with ectopic pregnant history were more likely to have recurrent ectopic pregnancy (0.074% V.S. 0.015%; P < 0.001). Multivariate Cox regression analysis demonstrated that the case group had a 5.496-fold increased risk of recurrent ectopic pregnancy (HR = 5.496; 95% CI = 4.655 – 6.488; P < 0.001). On the other hand, our study revealed women with previous ectopic pregnancy had higher normal pregnant rate compared to the control group (0.41 % V.S. 0.37%; P < 0.001).

Conclusion: Our study provided evidence of an increased risk of recurrent ectopic pregnancy. But, interestingly, our study showed that subsequent pregnant rate increased.

Chih-Wei Lin 林智偉
(Y12)

Quality of life among infertile women undergoing in vitro fertilization-embryo transfer in Taiwan

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[5]Department of Obstetrics and Gynecology, College of Medicine, National Cheng Kung University, Tainan, Taiwan

Objectives: to assess the quality of life among Taiwanese infertile women undergoing in vitro fertilization-embryo transfer.

Materials and Methods: The study enrolled infertile women who sought treatment at the Assisted Reproductive Technology Center of National Cheng Kung University Hospital. The clinical characteristics, laboratory exams, and pregnancy outcomes of these women were reviewed. We utilized the internationally validated FertiQoL tool to assess the quality of life of women undergoing infertility treatment and to analyze the correlation between clinical variables and pregnancy outcomes.

Result: This study found that there was a significant association between the FertiQoL scores and pregnancy outcomes. For every unit increase in the emotional domain score, the probability of ongoing pregnancy and live birth significantly increased by 2.4% and 2.6%, respectively. Patients affected by endometriosis had significantly lower FertiQoL scores compared to women without endometriosis.

Conclusion: The FertiQoL tool is associated with pregnancy outcomes of infertile women undergoing in vitro fertilization-embryo transfer. High-risk patients, such as those with endometriosis, may present with lower FertiQoL scores. FertiQoL can be a useful measure to assess the quality of life of women undergoing infertility treatment, and can potentially be used to identify patients who may require additional support or interventions to improve their treatment outcomes.

I-Le Hsu 徐以樂
(Y13)

Assessment of female cryopreservation of oocyte in KMUH

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Kaohsiung Medical University, Kaohsiung, Taiwan.

Objective: To assess the assisted reproductive outcome in females underwent cryopreservation of oocyte.

Materials and methods: Females with or without malignancy underwent controlled ovarian hyperstimulation, oocyte retrieval, and cryopreservation of the oocytes in our hospital were included. Baseline characteristics, ovarian stimulation protocol, and assisted reproductive results were collected and analyzed.

Result: There were 89 females underwent cryopreservation of oocyte in KMUH. Among 28 cancer patients, breast cancer account for 75%. Nineteen of 28 (67.86%) were aged 35 or younger while oocyte retrieval. Sixty-one females underwent social freezing since 2015, 35 of them (57.37%) were older than 35 while oocyte retrieval. There was older age while oocyte retrieval, higher baseline FSH, and decreased number of cryopreserved oocytes in social group. However, there was no difference among number of cryopreserve oocyte between onco- or social group while divided into different age subgroup. Two females in social group returned for embryo transfer. One breast cancer patient returned for embryo transfer after cancer treatment. Another breast cancer patient transferred frozen oocyte to another institution with live birth delivery.

Conclusion: There was significant younger age distribution among cancer patients. Age while oocyte retrieval remains strong predictor of further reproductive outcome.

Kuan Sheng Lee 李冠昇
(Y14)

The Live Birth Rate of Vitrified Oocyte Accumulation for Managing Diminished Ovarian Reserve: A retrospective cohort study

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Objective: Vitrified M-II oocyte accumulation for later simultaneous insemination has been used for managing POR. Our study aimed to determine whether vitrified oocyte accumulation strategy improves live birth rate (LBR) for managing diminished ovarian reserve (DOR).

Materials and Methods: A retrospective study included 440 women with DOR fulfilling Poseidon classification groups 3 and 4 from January 1, 2014, to December 31, 2019, in a single department. Patients underwent accumulation of vitrified oocytes (DOR-Accu) and embryo transfer (ET) or controlled ovarian stimulation (COS) using fresh oocytes (DOR-fresh) and ET. Primary outcomes were LBR per ET and cumulative LBR (CLBR) per intention to treat (ITT). Secondary outcomes were clinical pregnancy rate (CPR) and miscarriage rate (MR).

Result: Two hundred eleven patients underwent simultaneous insemination of vitrified oocyte accumulation and ET in the DOR-Accu group (maternal age: 39.29 ± 4.23 y, AMH: 0.54 ± 0.35 ng/ml), and 229 patients underwent COS and ET in the DOR-fresh group (maternal age: 38.07 ± 3.77 y, AMH: 0.72 ± 0.32 ng/ml). CPR in the DOR-Accu group was similar in the DOR-fresh group (27.5% vs. 31.0%, p = 0.418). However, MR was statistically higher (41.4% vs. 14.1%, p = 0.001), while LBR per ET was statistically lower (15.2% vs. 26.2%, p < 0.001) in the DOR-Accu group. There is no difference in CLBR per ITT between groups (20.4% vs. 27.5%, p = 0.081). The secondary analysis categorized clinical outcomes into four groups regarding patients' age. CPR, LBR per ET, and CLBR did not improve in the DOR-Accu group. In the group of 31 patients, accumulated vitrified metaphase II (M-II) oocytes reached a total number of ≥ 15, and CPR improved among the DOR-Accu group (48.4% vs. 31.0%, p = 0.054); however, higher MR (40.0% vs. 14.1%, p = 0.03) resulted in similar LBR per ET (29.0% vs. 26.2%, p = 0.738).

Conclusion: Vitrified oocyte accumulation for managing DOR did not improve LBR. Higher MR resulted in lower LBR in the DOR-Accu group. Therefore, the vitrified oocyte accumulation strategy for managing DOR is not clinically practical.

Chi-Huan Tsai 蔡奇桓
(Y15)

Comparing cumulative ongoing pregnancy rate between the progestin-primed ovarian stimulation protocol and GnRH-antagonist protocol in hyper-responder attending IVF/ICSI cycles

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[2]Department of Medical Research, National Taiwan University Hospital, Taipei, Taiwan

Objective: The study focused on comparing pregnancy outcomes between the progestin-primed ovarian stimulation (PPOS) and conventional antagonist protocol in hyper-responder.

Materials and Methods: 314 women attending in vitro fertilization (IVF) cycles which stimulated ovary with PPOS protocol and antagonist protocol (age-matching was made to average effect of age) and further implantation was included in the study, which pregnancy outcomes were assessed. Several groups of people were excluded including non-hyper responder (retrieved oocyte<16), oocyte donor, social freezing patient and patient without implantation course. We chose cumulative ongoing pregnancy rate as primary outcome and also comparing secondary outcomes including fertilization rate, biochemical pregnancy rate… etc between both groups.

Result: The preliminary data about primary outcome of the study showed similar cumulative pregnancy rate between two groups (82% (88/107)) in PPOS group, 81.3% (87/107) in antagonist group)

Conclusion: The cumulative ongoing pregnancy rate (primary outcome) between PPOS and conventional antagonist protocol in hyper-responder does not show statistical significance.

Chi-Ting Lai 賴祈廷
(Y16)

Does low progesterone level on trigger day influence the reproductive outcomes of fresh embryo transfer in poor responder?

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[1] Department of Obstetrics and Gynecology, National Taiwan University Hospital, National Taiwan University, Taipei, Taiwan.

Objective: To assess the influence of low progesterone level on trigger day on the reproductive outcomes of fresh embryo transfer in poor responder.

Materials and Methods: Three hundred and fifteen women classified as poor responder by Bologna criteria had underwent fresh embryo transfer after standard controlled ovarian stimulation at our hospital from 2018/1 to 2021/12. The included patients were separated into two groups(low progesterone: P4≦ 0.5 ng/dL, normal progesterone: 0.5 < P4 <1.5 ng/dL) according to the progesterone level on trigger day by the cut-off value reported in previous literatures. A retrospective chart review was conducted to compare the demographic characteristics and the reproductive outcomes between the low progesterone level and normal progesterone level groups.

Result: Total 137 and 178 women were identified in the low progesterone level and normal progesterone level groups respectively. The average number of oocytes retrieved per person was higher in the normal progesterone level group (4.23 vs. 5.25), but the maturation rate and fertilization rate (82.2% vs. 81.4%), as well as clinical pregnancy rate (14.6% vs. 18%) all showed no significant difference between the two groups.

Conclusion: In poor responders, low progesterone level on trigger day does not negatively impact the reproductive outcomes of fresh embryo transfer.

Young Doctors' Session (Ⅲ)
Urogynecology

【*Y17-24*】

Huan-Ka Chiung 蔣奐巧
(Y17)

The impact of pre-operative Maximum Urethral Closure Pressure (MUCP) on Mid-urethral sling (MUS) outcomes

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Objective: to assess the surgical outcomes of patients with pure urodynamic stress incontinence (USI) following one of the 3 generations synthetic mid-urethral slings (MUS) in differing range group of pre-operative maximum urethral closure pressure (MUCP). Secondary objective is to delineate the risk factors associated with MUS failure in pre-operative MUCP groups with inferior outcomes.

Materials and Methods: A total of 688 patients records who underwent MUS procedure in January 2004 until April 2017 were evaluated. All patients completed pre- and post-operative urodynamic studies, 1-hour pad test and validated quality of life (QOL) questionnaires at 1 year follow up. The objective and subjective cure of MUS outcomes were analysed in 4 different groups of pre-operative MUCP which were >60 cmH_20, ≤60 cmH_20 & ≥40 cmH_20, <40 cmH_20 & ≥20 cmH_20 and <20 cmH_20.

Results. All 3 generations of MUS showed good overall outcomes of both objective and subjective cure rate at 1 year; MUS-r 89.9% and 87.6%, TOT 89.5% and 87.9% and SIS 86.8% and 83.9%). Aging factor was significantly related to low MUCP. Intrinsic sphincter deficiency (ISD), functional urethral length <2 cm and bladder neck angle $<30^0$ were demographic parameters related significantly with MUCP <40 cmH_20 ($p < 0.001$ for each parameter). 48 patients with ISD were found only in pre-operative MUCP <40 cmH_20. Inferior outcomes were identified in two groups; MUCP <40 cmH_20 & ≥20 cmH_20 (76.5%, $p < 0.001$, 72.3% $p < 0.001$) and MUCP <20 cmH_20 (43.8%, $p < 0.001$ both objective and subjective cure) as compare to MUCP >60 cmH_20 (92.7% and 91.0%). ISD [OR 2.51 (1.62-4.32)], functional urethral length (FUL) <2 cm [OR 1.4 (1.13-2.09)] and bladder neck angle $<30^0$ [2.29 (2.02-4.23] were three independent risk factors associated with higher odds of MUS failure for women with pre-operative MUCP < 40 cmH_20.

Conclusions. We conclude that the lower the pre-operative MUCP value is, the poorer the MUS outcomes. MUCP <40 cmH_20 is a better cut-off level to predict inferior objective and subjective MUS cure outcomes of USI patients particularly with ISD. Overall, MUS procedure still has good surgical outcomes independent of its generation.

I-Chieh Sung 宋怡潔
(Y18)

Tape-releasing Suture with "Long Loop" on Mid-urethral Sling: a novel procedure for management of Iatrogenic Urethral Obstruction

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Objective: To report our experiences of a tape-releasing suture with "long-loop" in women with iatrogenic urethral obstruction following the mid-urethral sling procedure.

Methods: A total of 149 women underwent a tape-releasing suture with "Long Loop" during operation. Post-void residual volume was evaluated after Foley removal. Lower urinary tract symptoms and urodynamic studies were assessed before and six months postoperatively.

Results: Nine women out of 149 who underwent mid-urethral sling surgery were found to have iatrogenic urethral obstruction post-operatively based on their urinary symptoms and ultrasound findings. There was no apparent difference between tested groups in mid-urethral sling products and concomitant procedures. 77.8% had successful releases after the first Long-loop manipulation procedure, and 22.2% required two or more releases. However, the SUI cure rate is similar in groups receiving the Long-loop manipulation or not (88.9% and 87.1%, respectively).

Conclusions: We are convinced of the practicability and efficacy of the tape-releasing suture "Long-loop." We adopted subjective and objective means to evaluate both groups before and after a six-month follow-up. The Long-loop manipulation procedure can successfully resolve the iatrogenic urethral obstruction without compromising the effectiveness of mid-urethral sling for treatment of SUI.

Chieh-Yu Chang 張介禹
(Y19)

Urethral mobility is associated with postoperative de novo stress urinary incontinence following transvaginal mesh surgery

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Purpose: We aim to identify pre-operative ultrasound parameters related to de novo SUI following transvaginal mesh (TVM) surgery.

Materials and Methods: Medical records of 696 continent women with POP stage II to IV who received TVM surgery from January 2012 to December 2017 in our hospitals were recruited. Those who had concomitant mid-urethral sling surgery or incomplete medical records were excluded. Urinalysis, pelvic examination with POP quantification system (POP-Q), urodynamic study, personal interview using validated questionnaires (OABSS, UDI-6, and IIQ-7), and perineal ultrasound were all performed before and six months after TVM surgery.

Results: Of the remaining 92 continent women, 34 (36.9%) experienced de novo SUI after the operation. Women with the proximal urethral rotational angle > 20° (22.4% vs. 61.8%, p = 0.009) and the levator urethral gap at straining > 45 mm (58.6% vs. 82.4%, p = 0.027) reported a higher rate of de novo SUI postoperatively.

Conclusions: We found that women with proximal urethral rotational angle > 20° and the levator urethral gap at straining > 45 mm are associated with post-operative de novo SUI following TVM.

Yi-Chun Chou 周怡君
(Y20)

The mechanical property and tissue reaction of degradable hybrid Polycaprolactone mesh/drug-eluting Polycaprolactone nanofibers prolapse mats

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Introduction: An ideal mesh for POP repair should fulfill the following criteria: (1) have the adequate mechanical strength to support the pelvic floor; (2)possess favorable flexibility to assist implantation and fixation; (3) convey appropriate drug/growth factor concentrations to the target site for pain relief and infection control, as well as the formation of connective tissues; (4) be resorbable after fulfilling its function and be biocompatible such that the material degradation procedure would not lead to any tissue irritation. We developed hybrid degradable mesh/drug-eluting nanofibrous membranes for the repair of POP. Polycaprolactone (PCL) mesh was fabricated using a lab-developed solution-extrusion 3D printer, while estradiol-, lidocaine-, metronidazole-, and connective tissue growth factor (CTGF)-loaded poly (lactic-co-glycolic acid) (PLGA) core-shell nanofibers were prepared by employing electrospinning and coaxial electrospinning techniques.

Objective: We aim to observe the mechanical properties of 3D-printed meshes, the structure of the drug-loaded sheath-core nanofibers and profiles of pharmaceuticals/ biomolecules from the nanofibers.

Methods: The mechanical properties of 3D-printed meshes were determined by a tensile tester. The structure of the drug-loaded sheath-core nanofibers was evaluated using scanning electron microscopy (SEM), transmission electron microscopy (TEM), and laser scanning confocal microscopy (LSCM). The release profiles of pharmaceuticals/biomolecules from the nanofibers were also assessed utilizing high-performance liquid chromatography (HPLC) and enzyme-linked immunosorbent assay (ELISA). In Vivo Animal Test were using ten Sprague-Dawley rats with implantation of PCL mesh/nanofibrous membranes. Five were sacrificed at 30 days for tensile properties. Another five were sacrificed at days-1, -4, -7, and -28 days for histological examination.

Results: The experimental results suggest that 3D-printed PCL meshes exhibited comparable strengths to commercial POP meshes and survived 2 through 10,000 cycles of fatigue test without breakage. Hybrid PCL meshes/PLGA nanofibrous membranes provided a sustainable release of metronidazole, lidocaine, and estradiol for 4, 25, and 30 days, respectively, in vitro. The membranes further liberated high levels of CTGF for more than 30 days. The animal tests show that the mechanical property of PCL mesh decreased with time, mainly due to degradation of the polymers post-implantation. No adverse effect of the mesh/nanofibers was noted in the histological images.

Conclusion: The mechanical properties of degradable meshes were compared to those of commercial non-degradable PP knitted macroporous ultra-lightweight implants, clinically employed for POP repair. The drug release behaviors of the mesh suggest that the meshes could sustainably release effective levels of estradiol, lidocaine, and metronidazole for 30, 25, and 4 days, respectively, in vitro. Meanwhile, the mesh also released high concentrations of connective tissue growth factor for over 30 days. Therefore, 3D-printed mesh/multi-drug-loaded nanofibrous membranes may provide advantages in terms of reduced postoperative complications as well as improved POP therapies.

Chia-Hsuan Yang 楊佳璇
(Y21)

Comparison between anterior-apical mesh (Surelift) and anterior mesh (Surelift) in transvaginal pelvic organ prolapse surgery: Surgical and Functional Outcomes at 1 Year

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Introduction: The goal of this study is to evaluate the incidence of de novo/persistent USI of implanted mesh in women treated with anterior-apical mesh (Surelift-A) and the anterior mesh with sacrospinous ligament fixation (SSF, Surelift+SS) in extensive pelvic organ reconstruction surgery.

Material and Methods: The retrospective study conducted between April 2018 and February 2019 at Chang Gung Memorial Hospital. Patients had symptomatic anterior or apical prolapse with stage Ⅲ or more and received Surelift+SS with modifications and Surelift-A were enrolled. 3-day voiding diary, validated quality-of-life questionnaires, undergone urodynamic study, real-time ultrasonography prior to the intervention as well as 12-month follow-up was completed. Primary outcome was the aspect of postoperative de novo SUI. Secondary outcomes were POP recurrence, QoL sexual function and major and minor complications. We defined cure of POP both subjectively and objectively. The POP-Q staging ≤1 indicated the subjective cure. Negative feedback to POPDI-6 questions 2 and 3 represented objective cure.

Result: 137 patients undergoing Surelift-A placement and 128 patients with Surelift+SS were enrolled. Demographics and clinical characteristics were compatible between groups. Overall prolapse correction were 97.1% and 97.7% for Surelift-A and Surelift+SS, respectively. Anterior and Apex compartment cure were 98.5%, 99.3% versus 98.4%, 99.2%. The subjective success were 92% in Surelift-A and 93.8% in Surelift+SS group. There was a significant difference at de novo USI/SUI with 28.8% for Surelift-A and 9.1% for Surelift+SS at one 1 year follow up. A lower MUCP in Surelift-A (50.4 cmH20) than Surelift+SSF (55.2 cmH2O) were observed. Concurrent MUS showed good outcomes for USI in both groups. Both BOO and DU were significantly improved postoperatively among the two groups. Mesh exposure is less in Surelift+SS (0.8%) than Surelift-A (4.4%).

Conclusion: The efficacy and safety both the pelvic reconstructive surgery using Surelift-A and Surelift+SS method for POP at one year were comparatively effective and safe. However, Surelift-A has higher incidence of de novo USI (28.8%) than using Surelift with SSF. In addition, mesh exposure is lower in Surelift+SS.

Yi-Ting Chen 陳怡婷
(Y22)

Rotational vaginal flaps in posterior vaginal wall prolapse reconstruction

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Objective: To assess the anatomical and functional outcome of a new surgical technique with rotational vaginal flaps to correct the posterior vaginal wall fascial defect.

Methods: The rotational vaginal flap for posterior compartment contained three entities from the fascia component of levator ani and perineal body. We named these fascia flaps by tissue origin or targeted tissue site. We called fascia of levator ani by trans-coccygeal flaps (pubo-coccygeal flap and ilio-coccygeal flap), which was named by the tissue origin. While we call fascia from the perineal body as the uterosacral flap (so-called USL flap), which means this rotational vaginal flap would finally target the position of the uterosacral ligament. All of the above flaps were assembled to the Ting-Chen flaps complex (TC flaps complex).

We retrospectively analyzed patients who underwent transvaginal pelvic reconstruction with native tissue repair for ≥ stage II and symptomatic posterior vaginal wall prolapse between January 2018 and December 2022. In posterior reconstruction with flaps group, we plicated the fascias of levator ani or repaired the posterior fascia defect with uterosacral flap and trans-coccygeal flap. Anatomical and functional outcomes were evaluated with clinical stage of POP-Q system and bowel incontinence assessment questionnaire in 2 months after operation. Analysis was done using Chi-Squared Test and Fisher exact test to assess the recurrence rate among each group. A p-value of 0.05 or lower is generally considered statistically significant.

Results: A total of 275 patients who underwent posterior reconstruction were included in this study. There were 2 groups according to different methods of posterior vaginal wall repair: Group A (traditional posterior colporrhaphy, 72 cases) and Group B (posterior reconstruction with rotational flaps, 203 cases). The median follow-up duration of each group was 29.4, 21.2 months. There were separately 14, and 11 patients who had recurrence of stage 2 posterior vaginal prolapse. Recurrence rate of each group is 19.44%, and 5.42%, the p-value is 0.000375. Further analysis to stage 2 prolapse, the recurrence rate of stage 2 prolapse in each groups is 14.58% and 1.89%, p-value is 0.0043. The recurrence rate of stage 3 or 4 prolapse in each group is 29.17 % and 9.28%, p-value =0.010015. No matter the severity of pre-operative stage, the rotational flaps had better anatomical outcomes than traditional posterior colporrhaphy.

In subgroup analysis, we divided group B into group B1 (posterior reconstruction with transcoccygeal flaps, 79 cases) and group B2 (posterior reconstruction with TC flaps complex, 124 cases). In anatomical outcome analysis, the recurrence rate of TC flaps complex was 2.42%, and recurrence rate of transcoccygeal flaps alone is 10.13%. p-value is 0.0252.

In bowel function assessment, we used questionnaires before operation and post-operative 2 Months to assess the constipation or incontinence condition. Both traditional posterior colporrhaphy and rotational flaps can make bowel function improved.

Conclusion: Posterior reconstruction with rotational flap seemed to have better anatomical and functional outcome than traditional posterior colporrhaphy, but more cases and longer follow-up time were needed.

Yu-Ting Lu 呂羽婷
(Y23)

The impact of biofeedback and electrostimulation-assisted pelvic floor muscle training on the change of sexual function in women with stress urinary incontinence

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Objective: To evaluate the impact of biofeedback and electrostimulation-assisted pelvic floor muscle training on the change of sexual function in women with stress urinary incontinence (SUI).

Materials and Methods: This retrospective cohort study was conducted at a single center in Taiwan from 2014 to 2021. We recruited 61 sexually active patients with urodynamically proven SUI in our study before the treatment. The short form of of the Pelvic Organ Prolapse/Urinary Incontinence Sexual Questionnaire (PISQ-12) was used to evaluate sexual function. Besides, the quality of life assessed by the Urogenital Distress Inventory (UDI-6) and Incontinence Impact Questionnaire (IIQ-7) and pelvic electrophysiological condition were compared before and after the treatments.

Results: Among 61 patients recruited, 47 patients completed those questionnaires. The sexual function measured by PISQ-12 revealed no significance after the last session of treatment ($p = 0.752$). Similarly, no improvement in sexual function were observed comparing the 6th, 12th, and 18th session with the baseline ($p = 0.357$, $p = 0.434$, $p = 0.236$, respectively). In contrast, the incontinence-related symptoms of distress, including the UDI-6 and IIQ-7 demonstrated significance comparing the 6th, 12th, 18th and the last treatment session to the baseline (UDI-6, all $p < 0.05$ and IIQ-7, all $p < 0.05$). Electrophysiological parameters of vaginal squeezing pressure, difference of vaginal resting and squeezing pressure, maximal voluntary contraction and duration of contraction were increased from the baseline to the last session ($p = 0.022$, $p < 0.001$, $p < 0.001$ and $p < 0.001$, respectively). However, for the vaginal resting pressure, there was no difference before and after the last treatment session ($p = 0.061$).

Conclusions: The treatment biofeedback and electrostimulation-assisted pelvic floor muscle training did not enhence the sexual function in women with stress urinary incontinence.

Pei-Chen Li 李佩蓁
(Y24)

Comparison of Er:YAG and CO2 laser therapy for women with stress urinary incontinence

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Objective: We compared the efficacy of Er:YAG and CO2 laser therapies for female stress urinary incontinence (SUI).

Materials and Methods: This retrospective study comprised 139 women divided into four groups: those who underwent two therapy sessions with the Er:YAG laser (group 1); two therapy sessions with the CO2 laser (group 2); one therapy session with the Er:YAG laser (group 3); and one therapy session with the CO2 laser (group 4). Each patient completed three questionnaires, which were used to assess SUI symptom severity at baseline, 1 month, and 3 months after laser therapy.

Results: Compared to the baseline results, urinary incontinence symptoms significantly improved in groups 1 (Er:YAG laser) and 2 (CO2 laser) at the 1- and 3-month follow-up evaluations ($p<0.001$). Symptoms improved after one therapy session for groups 3 (Er:YAG laser) and 4 (CO2 laser) at the 3-month follow-up ($p<0.001$). The Er:YAG laser showed better SUI symptoms improvement (Urogenital Distress Inventory 6 and Incontinence Impact Questionnaire 7) than the CO2 laser 3 months after treatment, regardless of the number of sessions. There was no significant difference in the overactive bladder symptom score of those who underwent treatment with the Er:YAG laser and CO2 laser. Two sessions of laser therapy were more effective than one.

Conclusion: Vaginal laser therapy could be an alternative treatment for mild to moderate SUI. The Er:YAG laser was more effective than CO2 laser therapy, with results lasting for at least 3 months. Further large-scale, randomized, controlled trials are required to confirm our results.

Young Doctors' Session (IV)
Obstetrics & Others

【Y25-30】

Yi-Ting Hsu 許伊婷
(Y25)

Preliminary results of COVID-19 vaccination among Taiwanese pregnant women: A single-center, prospective, case– control study

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Objective: To evaluate the impacts of messenger RNA coronavirus disease 2019 (COVID-19) vaccines in Taiwanese pregnant women in terms of obstetrical and neonatal outcomes.

Methods: The authors prospectively followed up 450 pregnant women receiving vaccination at a single center. Patients recorded prespecified adverse reactions via a mobile application up to 30 days after the first and second doses. Obstetrical and neonatal outcomes were compared with those of pregnant women, during the same period, who did not undergo vaccination.

Results: Among the 387 women who received the first dose and were followed up for 30 days, injection site pain, fatigue, injection site swelling, muscle ache, and headache were the most prevalent side effects. There were 4.7-,5.7-, 7.1-, and 9.3-fold increases in fatigue, injection site swelling, muscle ache, and headache, respectively, among the 231 women who received the second dose. Most of the side effects resolved by 14 days and all resolved by 30 days after each dose. There were no significant differences ($P > 0.05$) in obstetrical and neonatal morbidity or mortality between the vaccinated and unvaccinated cohorts.

Conclusion: No serious adverse reactions were noted among pregnant women receiving messenger RNA vaccinations with comparable obstetrical and neonatal outcomes to unvaccinated pregnant women.

Ting-Yi Chu 朱庭儀
(Y26)

Serologic features and dynamics of serum antibodies in Taiwanese pregnant women and infants after COVID-19 vaccination: a longitudinal observational study

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Objective: To establish a prospective cohort of pregnant women receiving COVID-19 vaccination to evaluate immunogenicity in different vaccine platforms, duration of antibody waning, efficacy in fetal-maternal antibody transfer, and safety profile in Taiwanese women.

Materials and Methods: We prospectively collected mother-infant pairs who received at least one dose of any COVID-19 vaccine during pregnancy. Pregnant women without any COVID-19 vaccination or with natural infection were enrolled as the negative and positive controls. Maternal sera were collected before delivery, two and six months postpartum, respectively. Blood samples from umbilical vein after clamping the cord and from neonatal peripheral venous circulation at six months old were obtained. Breast milk was collected in breastfeeding mothers. Anti-spike protein antibody was measured by ELISA and neutralization test. T-cell responses were assessed by ex vivo stimulating peripheral blood mononuclear cells with the Human IFN-gamma ELISpot Kit.

Result: A total of 88 mother-infant pairs (74 vaccinated, 14 unvaccinated, two infected) and 29 women of reproductive age (18 vaccinated, 11 vaccinated followed by infection) were included. Most mothers received the Moderna COVID-19 vaccine during pregnancy, and no severe adverse event was recorded. Anti-spike protein IgG level in sera remained detectable in vaccinated mothers two months after delivery, and antibody titer could be boosted after receiving the 3rd dose. Sera from umbilical vein in infants of vaccinated mothers generally showed a high level of anti-spike protein IgG, indicating effective placental transportation. However, neonatal anti-spike protein IgG level declined significantly over time. T-cell responses at birth and six months old showed no reactive INF-gamma secreting T cells after stimulation with the whole S protein of SARS-CoV-2.

Conclusion: Our results indicate that COVID-19 vaccine, mostly Moderna vaccine, induced a robust humoral response in pregnant women with the efficient placental transportation. However, neonatal anti-S protein IgG levels waned gradually after birth and remained low at six months old. Therefore, a vaccination strategy for neonates after six months warrants attention to achieve effective protection against COVID-19 infection.

Yu-Hao Chen 陳昱豪
(Y27)

First-trimester cervical elastography, cervical length and endocervical canal width of pregnant women with cervical insufficiency

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Objective: To investigate changes in first trimester cervical elastography, cervical length and endocervical canal width in pregnant women with a history of cervical insufficiency, and further discuss the possibility of using these markers as predictors of cervical insufficiency in early pregnancy.

Materials and Methods: This was an observational ultrasound study of first trimester cervical changes in singleton pregnancies between January 2016 and June 2018. Cervical elastography, cervical length and endocervical canal width were measured during the first trimester. Strain elastography was used to estimate the softness of anterior and posterior cervical lips and was expressed as percentages (strain rate).

Result: Of the 339 pregnant women enrolled, 24 had a history of cervical insufficiency. The anterior cervical lip was significantly softer in the cervical insufficiency group (strain rate: 0.19% ± 0.05% vs 0.11% ± 0.04%; P < .001). Cervical length was significantly shorter in the cervical insufficiency group (36.3 ± 4.8 mm vs 38.3 ± 3.8 mm; P = .014). Endocervical canal width was significantly wider in the cervical insufficiency group (5.7 ± 1.1 mm vs 5.2 ± 0.7 mm; P = .001). Receiver operating characteristic curve analyses revealed that the optimal cut-off values of anterior cervical lip, cervical length and endocervical canal width to confirm the diagnosis of cervical insufficiency were 0.15%, 35.5 mm and 5.75 mm, respectively. In multivariate logistic regression analysis, significant differences were still observed in anterior cervical strain rate (adjusted odds ratio [OR] 53.78, 95% [confidence interval [CI] 11-270; P < .001) and endocervical canal width (adjusted OR, 5.41, 95% CI,1.2-24.7; P = .029).

Conclusion: First trimester cervical elastography is a valuable tool in the assessment of women with a history of cervical insufficiency. The anterior cervical lip was significantly softer in women with a history of cervical insufficiency, and the sensitivity and specificity of anterior cervical lip strain were better than that of cervical length and endocervical canal width.

Meng-Syuan Lin 林孟萱
(Y28)

A 20-years retrospective study of postnatal surgery for open vs closed spinal dysraphism and introduction the first clinical trial of fetoscopic repair in Taiwan

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Objective: To find out the clinical outcome of open spinal dysraphism (open SD) including myelomeningocele (MMC) and closed spinal dysraphism (closed SD) including meningocele, lipomyelomeningocele, intradural lipoma and filum terminale lipomas after postnatal surgery in the last 20 years. Also, the clinical trial of fetoscopic repair for MMC will be introduced.

Material and methods: From 2000 to 2020, all the surgical methods for neural tube defects were searched and analyzed in Chang Gung Memorial Hospital. Maternal and neonatal outcome were recorded after surgery. Clinical outcome including central neural system, urinary tract, bowel function and motor function were demonstrated between open vs closed SD groups.

Results: A total 358 cases for relative neural surgeries were selected initially, and 296 cases were excluded due to trauma, tumor, bleeding and other diseases. Furthermore, 4 cases of encephalocele and 6 VACTERL association were also excluded. Postnatal outcome of open versus closed SD were compared (12 versus 40 cases). The average follow-up period was 4.6 years (2 months to 20 years). In open SD group, they had lower birth weight, shorter body length, smaller head size. The timing of surgery for open vs closed SD was 1.5 vs 130 day-old, and 2.7 vs 6.4kg, respectively. In all aspects of neurological, motor function, urological and bowel outcome between two groups, closed SD had better prognosis. The earlier timing for open SD surgery also showed the better parameters then later surgery. Our first prenatal fetoscopic repair for open SD is 2 year-old without developmental delay.

Conclusion: We encouraged closed SD to receive postnatal repair due to favor clinical outcome instead of termination the pregnancy. In the open SD group, earlier timing for surgical approach was suggested. For those cases fit into fetoscopic repair criteria, prenatal surgery would have better results compared to postnatal surgery.

Yu-Ju Hsiao 蕭郁儒
(Y29)

The impact of hysterectomy for benign non-prolapse uterine tumors on subsequent ovarian reserve, lower urinary tract symptoms and sexual function: a multi-directional prospective analysis

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Objective: To assess the impact of hysterectomy for benign non-prolapse uterine tumors on subsequent ovarian reserve, sexual function and lower urinary tract symptoms.

Materials and Methods: This study was a prospective longitudinal analysis that recruited patients younger than 45 years old who underwent simple hysterectomy without oophorectomy for symptomatic benign uterine tumors without pelvic prolapse from 2015 to 2019. Anti-müllerian hormone (AMH) and serum sex hormone profile including FSH, LH, E_2, progesterone, total testosterone were obtained for measurements at four time points: preoperative (baseline), 3 , 6 and 12 months postoperatively. Questionnaires including the Urinary Distress Inventory (UDI-6), the Incontinence Impact Questionnaire (IIQ-7), the short form of the Pelvic Organ Prolapse/Urinary Incontinence, and Sexual Function Questionnaire (PISQ-12) were completed preoperatively and during each postoperative follow-up to investigate lower urinary tract symptoms and sexual function. This study was approved by the Institutional Review Board of Chang Gung Memorial Hospital (IRB No. 104-5640B).

Result: A total of 36 patients completed the study. Hysterectomy was performed through laparoscope in 31 and laparotomy in 5 patients The mean of age was 40.8 (rage 31-45). Serum AMH level declined significantly in 3, 6, 12 months after hysterectomy compared with preoperative level ($P<0.01$), but there was no significant regain or further decreasing from 3 month to 12 month after the surgery. The UDI-6 and IIQ-7 both showed significantly decreased at 3, 6, and 12 months after hysterectomy compared to preoperative status ($P<0.01$). Although serum AMH, UDI-6 score, IIQ-7 score showed obvious declining respectively, there were no significant correlations in between. There were no differences in serum FSH, LH, E_2, Progesterone and testosterone concentrations between preoperative and 3, 6, 12 months respectively after hysterectomy ($P>0.05$). No significant differences were found in the short form of PISQ-12 at 3 time-points after hysterectomy ($P>0.05$).

Conclusion: In patient with benign non-prolapse uterine tumors, serum AMH level was significantly lower 3 months following hysterectomy compared with the pre-operative level, and the low level without further declining was observed in one year after the surgery. Lower urinary tract symptoms improved after hysterectomy. Hysterectomy did not appear to have an obvious impact on female sexual function.

Tzu-Tsen Shen 沈姿岑
(Y30)

Implementation of a machine learning model in acute coronary syndrome/acute stroke risk assessment for women with lower urinary tract symptoms

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Introduction: Previous studies have reported Lower urinary tract symptoms (LUTS) may be the predispose subjects to cardiovascular disease. This study aimed to identify the factors that potentially increase the risk of having acute coronary syndrome (ACS) and acute stroke, and build a machine learning-based artificial intelligence prediction models for women with LUTS.

Material and methods: We retrospectively collected the electronic medical records of 1799 patients with LUTS from Chi Mei Medical Center and its 2 branch hospitals in Tainan City, Taiwan. Data were randomly separated into training group for model building (70%) and testing group for model validation (30%). 19 features were identified and 8 features with case numbers > 10 were imported into 6 machine learning algorithms. Study outcomes include ACS and acute stroke.

Results: Age, systemic blood pressure, diastolic blood pressure, Creatinine, HbA1c, Hypertension, Diabetes Mellitus and Hyperlipidemia are the most relevant features that affect the outcome. Based on the AUC value, our optimal model was built by MLP (AUC =0.803) in prediction of ACS or Acute Stroke events within 3 years.

Conclusion: Our study successfully integrate important features with machine learning algorithms to build a good AI prediction model. It can not only used as a prediction model to achieve time-saving, highly specific, personalized risk evaluation, but also can be used to offer warning, enhance patient compliance, earlier intervention and better health care outcome.


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