# IMCAS ASIA 2019



INTERNATIONAL MASTER COURSE ON AGING SCIENCE BALI - JULY 5<sup>th</sup> - 7<sup>th</sup>, 2019

# **Speaker Certificate**

The IMCAS Asia 2019 Scientific committee certifies that

Dr Ago HARLIM MARS

Dermatologist Indonesia

## presented the following lectures:

S089, S090 - IMCAS Alert - Injectables complication cases - How I correct silicon granuloma in chin S084 - Open stage talks: lasers & EBD - The comparison between Er:Yag and CO2 laser for male circumcision

### Honorary president

SOEBONO Hardyanto Dermatologist, Indonesia

### **Course Coordinators**

ASCHER Benjamin Plastic surgeon, France

HUANG Po Han Patrick Dermatologist, Taiwan

LISTIAWAN Muhammad Yulianto Dermatologist, Indonesia

> PRASETYO Adri Dwi Dermatologist, Indonesia

## Associate Course Coordinators

CARTIER Hugues Dermatologist, France

GARSON Sebastien Plastic surgeon, France

## Scientific Secretaries

PRASETYONO Theddeus O H Plastic surgeon, Indonesia

WIDIANSYAH Andreas Dermatologist, Indonesia

# SPEAKER

## Ago HARLIM MARS

MARKET IN MILLION 2018

Which sensions can Lacters?



CONTINUE YOUR LEARNING ON ACADEMY IMCAS.COM International Master Course on Aging Science



# SCIENTIFIC PROGRAM

# A 3-DAY UPDATE IN PLASTIC SURGERY, DERMATOLOGY & AESTHETIC SCIENCE

## **EDITION N°13**



ENDORSED BY PERDOSKI INDONESIAN SOCIETY OF DERMATOLOGY



BPPD BALI TOURISM PROMOTION BOARD









**INDONESIA - JULY 5 TO 7** BALI INTERNATIONAL CONVENTION CENTRE - THE WESTIN RESORT NUSA DUA IMCAS ASIA 2019

# 4

PROGRAM BY DAY

7

FACULTY LIST

10

SCIENTIFIC PARTNERS

12

IMCAS ACADEMY

# 14

FOCUS ON LIVE ANATOMY ON CADAVER WORKSHOP

# 15

FOCUS ON IMCAS SURGERY

# 16

FOCUS ON THREADS

# 17

FOCUS ON YOUNG PHYSICIANS

# 18

FOCUS ON GENITAL TREATMENTS

# 19

HIGHLIGHTS

SCIENTIFIC PROGRAM

20

# 34

SCIENTIFIC PROGRAM Saturday

# 50

SCIENTIFIC PROGRAM

# 59

CME & CERTIFICATE OF ATTENDANCE

# 61

SPONSOR LIST

# 62

SPONSORED ACTIVITIES

# 74

GENERAL INFO

77 CIRCULATION MAP

# 79

REGISTRATION GUIDELINES



# TABLE OF CONTENT

### ADVERTISEMENTS

# adoderm 60

- CHAMEDITECH 62
- COLLAGEN LIFT<sup>®</sup> PARIS 63
  - DELEO 64
  - gcs co., ltd. 65
- LABORATOIRES VIVACY 66
  - PT MAZTA FARMA 67
    - REGEN LAB SA 68
- REGENBOGEN CO., LTD. 69
  - ILOODA CO., LTD 70
    - SESDERMA 71



Suatu kehormatan bagi IMCAS untuk menyambut Bapak / Ibu kembali pada acara IMCAS ASIA 2019 di Bali.

Kami berharap Bapak / Ibu dapat menikmati tiga hari yang penuh dengan pembelajaran dalam acara ini, dan pulang dengan keahlian serta pengetahuan yang lebih meningkat.

Terima kasih telah bergabung bersama kami.

# SELAMAT DATANG

Welcome to the 13th edition of IMCAS Asia in Bali, Indonesia!

IMCAS is proud to present yet another new and exciting edition that brings together prominent dermatologists, Plastic surgeons and aesthetic practitioners from all over the world.

At every one of our congresses, we have the honor of witnessing the greatest minds in dermatology, plastic surgery and aesthetic science gather to showcase their passion in the field. We have the privilege to observe in proximity the synergy the attendees create, and how it all culminates to another progressive step forward.

IMCAS Asia brings to stage the leading experts of Asia who in turn provide a special insight specific to this congress. The scientific sessions feature an overarching look at Asian morphologies so that attendees may adapt the prevention, intervention and post-treatment procedures based on the ethnic morphology of the patient.

The scientific program is fully charged with the newest and most innovative content built around 14 key themes which include clinical dermatology, injectables, lasers & EBD, regenerative medicine, genital treatments, hair <image>

restoration, cosmeceuticals as well as face, breast and body surgery, subjects to underpin your development in the field.

The sessions of the program are presented in different learning formats to ensure that attendees retain the maximum amount of information. The ever-popular Anatomy on Cadaver workshop is an example of an IMCAS-original format, combining live broadcasts of cadaver dissections and live patient demonstrations so that you master safe procedures and avoid danger zones. Other dynamic teaching methods include IMCAS Alert sessions which introduce complication cases related to injectables, lasers & EBD, threads or surgery selected from real posts on the Alert section of IMCAS Academy. This format allows attendees to receive real advice on real clinical situations from experts in the field. The Video Courses also present a unique learning format that gives you the in-depth training on specific procedures through 2-hour lessons featuring consecutive videos that focus on practical techniques.

Delegates can also attend live patient demonstrations on lasers & EBDS, threads, and injectables. Each demonstration led by aesthetic companies gives you the chance to explore the products and inquire detailed information. To learn more about the innovations and developments from the participating companies from around the world, take a stroll through the exhibition hall, or attend the sponsored activities happening throughout the day.

Let the conversation continue after hours during the two social events. The Networking Cocktail on Friday and the exquisite Gala Dinner on Saturday are excellent opportunities to wind down with old friends and build new connections.

IMCAS Asia 2019 amounts to three days of education in one of the most spectacular destinations. Indulge in its stunning nature and exotic scenery, but most importantly, savor the fact that you are part of the world's leading plastic surgery, dermatology and aesthetic science conference.

We extend the warmest welcome to Bali.

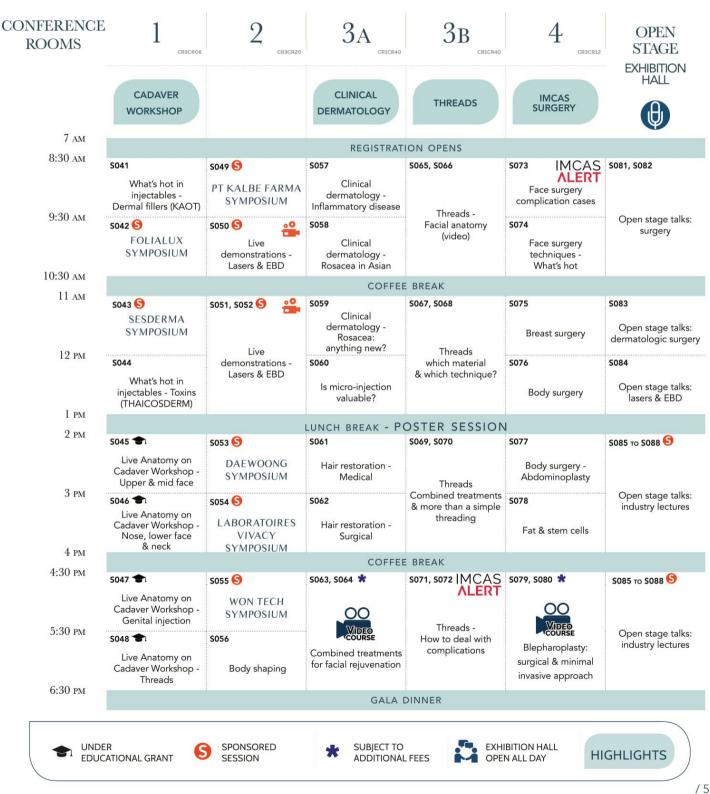
\_\_\_\_ IMCAS Asia 2019 Course Coordinators

Benjamin ASCHER Hugues CARTIER Sebastien GARSON Po Han Patrick HUANG Yulianto LISTIAWAN Adri Dwi PRASETYO

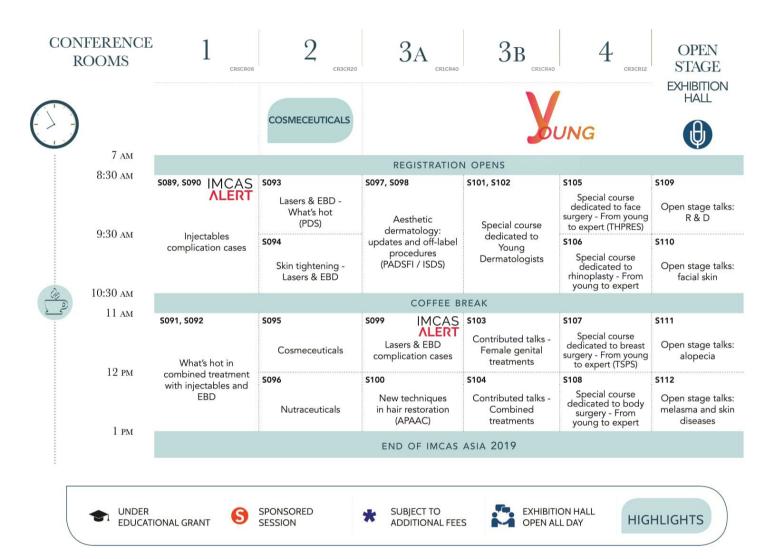


#### FRIDAY 2 CONFERENCE 3A 3b 1 4 ROOMS CRECROS CB3CB20 CP1CP40 CP1CP40 CD3CD12 GENITAL IMCAS TREATMENTS SURGERY 7 AM REGISTRATION OPENS 8:30 AM 5009 😒 5033 5001 5017 **S025** In-depth approach MERZ AESTHETICS to injectables: Lasers & EBD: Contributed talks -**IMCAS Surgery:** temple and forehead SYMPOSIUM Video - Face lift what's new Practice management (ACCS) 9:30 AM S002 S034 S010 S018 5026 😒 In-depth approach Lasers & EBD: challenging Contributed talks -**IMCAS Surgery:** to injectables: applications in dark skin/ New technologies Threads and fillers Video - Blepharoplasty midface and nose Asian patients (ESLD) 10:30 AM COFFEE BREAK 11 AM 5003 S011 S 5019 **S027** 5035 .0 Lasers & EBD In-depth approach Practice Live demonstrations pigmentation -IMCAS Surgery: to injectables: management -How to avoid the Video - Rhinoplasty Threads lower face and lip Clinic development complication(s) 12 pm -5004 5012 S .0 **S020 S028** S036 IMCAS Surgery: Female genital treatments Practice In-depth approach Live demonstrations to injectables: - Asian perspective and management -Video - Rhinoplasty Injectables jawline and neck vaginal tightening Marketing and digital (TAFPRS) 1 PM LUNCH BREAK 2 PM S005 S S013 S 5021 1 S029 S037 IMCAS Surgery: Female Laser for port wine **BTL AESTHETICS** APYX MEDICAL genital treatments stains and vascular Video -SYMPOSIUM SYMPOSIUM EBD and injectables lesions Breast augmentation 3 PM 5022 5030 5038 S006 S S014 S IMCAS Surgery: Female PROSTEMICS BIOSTIMOLOGY Video - Mastopexy genital treatments -Melasma SYMPOSIUM SYMPOSIUM (TSAPS) Labiaplasty (ISAGSS) 4 PM COFFEE BREAK 4:30 PM 5039, 5040 🛣 5007, 5008 🛣 S015 😒 5023 1 S031 Female genital treatments Complication and NEAUVIA Hymenoplasty and management of post SYMPOSIUM $\cap C$ combined treatments surgical scars (PSCAG) 5:30 pm 5024 S016 S 5032 VIDE Complication and Injectables: management of post dermatological scars LASEROPTEK danger zones Male treatments Rhinoplasty & facelift SYMPOSIUM (SAARC AAD) (PERDOSKI) 6:30 pm NETWORKING COCKTAIL SPONSORED **EXHIBITION HALL** UNDER SUBJECT TO HIGHLIGHTS EDUCATIONAL GRANT SESSION ADDITIONAL FEES OPEN ALL DAY

# SATURDAY 🗳









Up: Live dissections during the Cadaver Workshop at IMCAS Annual World Congress 2019.

Left: Live Demonstrations - Injectables at IMCAS Annual World Congress 2019

# FACULTY LIST\*

## HONORARY PRESIDENT

SOEBONO Hardyanto, Dermatologist, Indonesia

# COURSE COORDINATORS

ASCHER Benjamin, Plastic surgeon, France



HUANG Po Han Patrick, Dermatologist, Taiwan



LISTIAWAN Muhammad Yulianto, Dermatologist, Indonesia



PRASETYO Adri Dwi, Dermatologist, Indonesia



# ASSOCIATE COURSE COORDINATORS

CARTIER Hugues, Dermatologist, France GARSON Sebastien, Plastic surgeon, France

## SCIENTIFIC SECRETARIES

PRASETYONO Theddeus O H, Plastic surgeon, Indonesia WIDIANSYAH Andreas, Dermatologist, Indonesia

## SCIENTIFIC COMMITTEE

CHEN Chien Tzung, Plastic surgeon, Taiwan CHEN Shyi Gen, Plastic surgeon, Taiwan CHUANGSUWANICH Apirag, Plastic surgeon, Thailand GOH Chee Leok, Dermatologist, Singapore KIM Beom Joon, Dermatologist, South Korea LAM Chuk Kwan Stephanie, Plastic surgeon, Hong Kong SAR China OEIRIA David Sudarto, Dermatologist, Indonesia OHARA Kuniaki, Dermatologist, Japan RUMMANEETHORN Paisal, Cosmetic Surgeon, Thailand SUNDARAM Hema, Dermatologist, United States SUWANCHINDA Atchima, Dermatologist, Thailand The faculty is comprised of internationally renowned physicians and researchers, esteemed for their expertise in the fields of dermatology, plastic surgery and aesthetic science. They have traveled to Bali from all parts of Asia and the world to share their knowledge at the 13th IMCAS Asia.

# FACULTY

AHN Gun Young, Dermatologist, South Korea ALCARAZ PUYAT Maria Cristina, Dermatologist, Philippines BENZAQUEN Michael, Dermatologist, France BUNMAS Pichansak, Plastic surgeon, Thailand CATALDO Daniel, Plastic surgeon, Italy CHANG Kuang Cheng, Plastic surgeon, Taiwan CHEN Pao Jen, Gynecologist, Taiwan CHIU Pin Chi, Dermatologist, Taiwan CHIU Yu Hsun Tony, Facial Plastic surgeon, Taiwan CLATICI Victor Gabriel, Dermatologist, Romania COTOFANA Sebastian, Anatomist, United States CUI Haiyan, Plastic surgeon, China DATUIN DELEON Maria Suzanne L, Dermatologist, Philippines DAVALBHAKTA Ashish, Plastic surgeon, India DESAI Viral Ramesh, Plastic surgeon, India DIM JAMORA Krisinda, Dermatologist, Philippines DUNCAN Diane Irvine, Plastic surgeon, United States ESERDAG Suleyman, Gynecologist, Turkey ESPINOZA THAEBTHARM Maria Agnes, Cosmetic Surgeon, Philippines FARIA CORREA Marco Aurelio, Plastic surgeon, Singapore FERRARIZ Teresita Santillan, Dermatologist, Philippines FLYNN John Hinton, Cosmetic Surgeon, Australia FUJIMOTO Takahiro, Dermatologist, Japan GAFOOR Abdul Mubarak, MD, Malaysia **GENTILE** Pietro, Plastic surgeon, Italy GOMEZ BRAVO Francisco, Plastic surgeon, Spain GONDOWARDOJO Jane Ratna Maitridewi, Dermatologist, Indonesia GUPTA Amit, Plastic surgeon, India HAN Xuefeng, Plastic surgeon, China HAYASHI Tomoko, Plastic surgeon, Japan HEDDING GARCIA Uriel Alfredo, MD, Mexico HONGCHARU Wichai, Dermatologist, Thailand HSU Ying Che, Facial Plastic surgeon, Taiwan INSALACO Chiara, Plastic surgeon, Italy KAPOOR Krishan Mohan, Plastic surgeon, India KESTEMONT Philippe, Facial Plastic surgeon, France KHAN Umar Daraz, Plastic surgeon, United Kingdom KIM Jong Seo, Plastic surgeon, South Korea KIM Jisoo, Cosmetic Surgeon, South Korea KIM Jung Chul, MD, South Korea KIM Jun Young, Dermatologist, South Korea KO Hyung Seok, Cosmetic Surgeon, South Korea KONO Taro, Plastic surgeon, Japan KWON Hye Seuk, MD, South Korea

# FACULTY LIST\*

# FACULTY

LAI Wei, Dermatologist, China LAPIDOTH Moshe, Dermatologist, Israel LEE Jennifer Poning, Gynecologist, Taiwan LEE Sang Ju, Dermatologist, South Korea LEGIAWATI Lili, Dermatologist, Indonesia LEYLEK Ozgur Ridvan, Gynecologist, Turkey LIAO Han Tsung, Plastic surgeon, Taiwan LIAO Yuan Li Grace, Dermatologist, Taiwan LIM Ting Song, MD, Malaysia LIN Shang Li, Dermatologist, Taiwan LIN Tong, Dermatologist, China LIN Jeng Hsien, Dermatologist, Taiwan LUTHRA Amit, Dermatologist, India MAGLAYA Hermie F, Gynecologist, Philippines MAGON Navneet, Gynecologist, India MAO Liting Alice, Professional association, China MAWARDI Prasetyadi, Dermatologist, Indonesia MEHTA Vivek, Dermatologist, India MIYATA Nariaki, Plastic surgeon, Japan MOCHTAR Fransiska, Gynecologist, Indonesia MOHMAND Mohammad Humayun, Plastic surgeon, Pakistan MOON Hyoung Jin, Facial Plastic surgeon, South Korea MOUFARREGE Richard, Plastic surgeon, Canada MUTALIK Sharad, Dermatologist, India NOVIAWATI SAPTONO Emmy, Industry representative, Indonesia OH Seungmin, Cosmetic Surgeon, South Korea OMI Tokuya, Dermatologist, Japan PAVICIC Tatjana, Dermatologist, Germany PENG Hsien Li Peter, Dermatologist, Taiwan POLEVA Irina, Dermatologist, Italy PRAHARSINI I Gusti Ayu Agung, Dermatologist, Indonesia RAMAS Rain, Marketing, Philippines RASPALDO Herve, Facial Plastic surgeon, Switzerland ROBREDO VITAS Irene Gaile, Dermatologist, Philippines RYU Min Hee, Plastic surgeon, China SARI Maylita, Dermatologist, Indonesia SHAGOV Evgeniy, Dermatologist, Ukraine SHI Chengfang, Dermatologist, China SHIN Nala, Dermatologist, South Korea STERODIMAS Aris, Plastic surgeon, Greece SUDHARMONO Sri Aryani, Dermatologist, Indonesia TANG CHEN Phoebe Yueh-bih, Plastic surgeon, Taiwan

## **\*UPDATED LIST ON IMCAS.COM**

TANGLERTSAMPAN Chuchai, Dermatologist, Thailand TIWARI Anurag, Dermatologist, India TSAI Yun Ta Derek, Plastic surgeon, Taiwan TURKEVYCH Alexander, Dermatologist, Ukraine UCHMAN MUSIELAK Malgorzata, Gynecologist, Poland WANG Cheng Kun, Dermatologist, Taiwan WARDHANA Made, Dermatologist, Indonesia WARDHANI BATAN Putu Nila, Dermatologist, Indonesia WINTER Cecile, Facial Plastic surgeon, France XU Haisong, Facial Plastic surgeon, China

## CONTRIBUTING

AHMAD Zahruddin, Dermatologist, Indonesia AHMED Muhammad Zeeshan, Plastic surgeon, New Zealand AKERMAN Lehavit, Dermatologist, Israel ANEJA Jyoti, Dermatologist, India ASHOUR ELSAIED MOHAMED Mahran, Industry representative, UAE ASTAFEVA Evgeniia, Gynecologist, Russia BARAN Matus, Plastic surgeon, Czech Republic BORDIANU Anca, Plastic surgeon, Romania CHAN Kwin Wah, MD, Hong Kong SAR China CHAN Kwok Keung, MD, Hong Kong SAR China CHEN Xiangdong, Dermatologist, China CHEN Sissy, MD, Indonesia CHRISTIE Andrew R, MD, Australia DHARMANA Shuba, Cosmetic Surgeon, India DHARMASAMITHA Indira, Dermatologist, Indonesia DIAN PUTRI Maria Patricia, Dermatologist, Indonesia DIDAR Faramarz, Dermatologist, United Kingdom DOLLIE Shahien, MD, South Africa EZELDEEN Al Sorori Ahmad, Dermatologist, Yemen GOTAMA Dewi, MD, Indonesia GUJJAR Sagar, Dermatologist, India HARLIM MARS Ago, Dermatologist, Indonesia HUSSAIN Syed Nazim, Dermatologist, India JAISWAL Seepika, Dermatologist, India KARAALI Farah, MD, Lebanon KAWILARANG Monica Rosalind, Dermatologist, Indonesia KHERAJANI Hina, Dermatologist, India KIM Javier, Industry representative, South Korea KOROMOHARA Kumiko, MD, Japan KOU Seiko, MD, Japan KUKUL Umut Ayberk, Dermatologist, Turkey

# COURTYARD

S81, S82	OPEN STAGE TALKS: SURGERY
⊕	FACE, BREAST, BODY & GENITAL SURGERY 8:30 AM to 10:30 AM
9:00 AM	Single stage body contouring: is it safe? Muhammad Zeeshan AHMED (88030 / 15 min)
9:15 AM	Day stay breast reduction superomedial pedicle using diluted LA infiltration and lateral pillar suture tightening technique: 200 consecutive reductions Muhammad Zeeshan AHMED (87975 / 15 min)
9:30 AM	Update on postbariatric plastic surgery patient safety Marisa MANZANO (84179 / 15 min)
9:45 AM	Strategies in breast asymmetry surgery Marisa MANZANO (83267 / 15 min)
10:00 AM	Surgical vaginal rejuvenation: different techniques and does it make a difference? Navneet MAGON (85576 / 15 min)
10:15 AM	Correction of columellar-labial angle (CLA) in Asian female patients with autologous grafts Mingjie YANG (94598 / 15 min)

## S83 OPEN STAGE TALKS: MINIMAL INVASIVE TREATMENTS

CLINICAL DERMATOLOGY & DERMATOLOGICAL SURGERY

θ	11:00 AM to 12:00 PM
11:00 AM	Novel minimally invasive subcision technique for acne scars Stephen Akihiro WIRYA (87001 / 12 min)
11:12 AM	Technique of tissue reset by fiber folding and its clinical application Zongxue ZHANG (94615 / 12 min)
11:24 AM	The possibility of botulinum toxin treatment for jawline contouring Kumiko KOROMOHARA (94658 / 12 min)
11:36 AM	The MUST LIGHT thread lift with non- surgical atraumatic undermining in jawline and neck contouring Max Adam SCHERER (87419 / 12 min)
11:48 AM	Smoothing the lid-cheek junction: personal technique Peter M PRENDERGAST (94596 / 12 min)

S84	OPEN STAGE TALKS: LASERS & EBD LASERS & EBD
Ð	12:00 PM to 1:00 PM
12:00 PM	A combination of non-ablative fractional Q-switched 1,064-nm with focused depth controlled technology and quasi long pulse 1064mn YAG for improvement Lehavit AKERMAN (84639 / 12 min)
12:12 PM	Dermoscopy facilitates laser treatment of pigmented lesions in patients with darker skin types Kwok Keung CHAN (87909 / 12 min)
12:24 PM	The effect of cold therapy and transepidermal nerve stimulation on weigh loss and inch loss Ariel S TORRES (86903 / 12 min)
12:36 PM	The comparison between Er:Yag and CO2 laser for male circumcision Ago HARLIM MARS (84291 / 12 min)
12:48 PM	Treating acne vulgaris patients who are resistant to oral isotretinoin with intense pulsed light (IPL) Kwin Wah CHAN (86826 / 12 min)



Sponsored session <sup>★</sup> The content is under the sole responsibility of the sponsoring company.

/ 48

SATURDAY

# THE COMPARISON BETWEEN ER:YAG AND CO2 LASER FOR MALE CIRCUMSISION

Ago Harlim IMCAS, 2019

## Abstract

## Objectives

How to do Male Laser Circumcision using 2940 nm Er:YAG Laser and the benefit of Er: Yag laser for circumcision

## Introduction

Male circumcision is the surgical removal of the foreskin (prepuce) from the penis. The word 'circumcision' comes from the Latin circumcidere, meaning 'to cut around'. Infant male circumcision dates back more than 6000 years as indicated in pharaonic drawings and circumcised Egyptian mummies. Some historians even suggest that the procedure started some 15,000 years ago.

## Materials / method

The method of circumcision used was similar to the manual guillotine technique, but instead of a scalpel the Er:YAG laser (2940 nm). Using the R08 handpiece with a pulse duration of MSP (100 us), 50 Hz and 140 mJ, we could remove the preputial skin with minimal surrounding tissue damage. For the more vascularized parts we used the R08 with a pulse duration of LP (600 us), 20 Hz and 180 to 200 mJ, which cuts and coagulates at the same time.

## Results

The Er:YAG laser is an ideal device to remove epithelium of the glans penis without risk of scarring and faster healing than manual or CO laser

## Conclusion

An alternative for circumcision: We can use Er:YAG laser as a low risk, replacing more thermally destructive CO2 laser.

Keyword: Laser, circumcision, CO2, Er:Yag

### I. INTRODUCTION

Male circumcision is the surgical removal of the foreskin (prepuce) from the penis. The word 'circumcision' comes from the Latin *circumcidere*, meaning 'to cut around' [1]. Infant male circumcision dates back more than 6000 years as indicated in pharaonic drawings and circumcised Egyptian mummies [2]. Some historians even suggest that the procedure started some 15,000 years ago [3]. Recent findings suggest a global male circumcision prevalence of 37.7%, varying from country to country significantly. The prevalence of male circumcision in the United States is around 71%, compared to 15% in France, around 92% in Indonesia, and 26% in Australia. In the UK 20.7% of men are circumcised [4]. Therapeutic circumcision represents only 2.5% of neonatal circumcisions, which are performed for patients with inflammation in the foreskin, such as phimosis, balanitis, and localized diseases of the foreskin [5]. The benefits of male circumcision include a reduced risk of urinary tract infections in childhood, a reduced risk of cervical cancer in female sex partners, and prevention of balanitis, posthitis, phimosis and paraphimosis [6].

There are many techniques for performing circumcision. In recent years, circumcision procedures using auxiliary devices have become popular [7, 8]. However, the use of these devices increases the recovery time [9]. Besides scalpels, electrocautery and Nd:YAG or CO<sub>2</sub> lasers are also frequently used in circumcision for skin and mucosal excisions [10, 11, 12]. In this case report we present the use of the Er:YAG (2940 nm) laser for circumcision with the aim to reduce downtime.

### II. CASE

A healthy 23-years-old male patient presented to our office in Jakarta, Indonesia and wanted to undergo circumcision to achieve better personal hygiene. He reported no significant past medical history and was not using any routine medications. The surgical area was cleaned and sterilized. We used dorsal penile nerve block anesthesia with lidocaine HCl (20 mg/ml) combined with epinephrine (0.0125 mg/ml). We used about 3 ml.

The method of circumcision used was similar to the manual guillotine technique, but instead of a scalpel the Er:YAG laser (2940 nm) was used (SP Dynamis, Fotona, Slovenia). Using the R08 handpiece with a pulse duration of MSP (100 us), 50 Hz and 140 mJ, we could remove the preputial skin with minimal surrounding tissue damage. For the more vascularized parts we used the R08 with a pulse duration of LP (600 us), 20 Hz and 180 to 200 mJ, which cuts and coagulates at the same time. Afterwards, simple lateral sutures (Vicryl 3.0) with interrupted stitches were placed where needed. Post-treatment care consisted of antibiotic ointment (Otogenta®) dressing for 5 days. After 5 days, only ointment was suggested. The patient also received oral antibiotic (cefadroxil) 500 mg BID. We also recommended that the patient clean the area with sterile saline, as tap water in Indonesia is often contaminated with bacteria. Removal of the sutures was not necessary because we used absorbable materials, although we sometimes cut the rest of the sutures for patient comfort about 10-14 days after surgery. The recovery period lasted for about 7 to 10 days, however, the patient could return to his normal daily routine 2 days after the operation.



Fig.1. Operational details of the Er:YAG circumcision procedure: a), b) and c) phases of cutting the foreskin using the R08 handpiece and guillotine method. d) detached foreskin immediately after the laser intervention.

### **III.DISCUSSION**

Circumcision methods can be classified into one of three types or combinations thereof: dorsal slit, shield and clamp, and excision [13, 14]. Many of the methods in use today fall into one of these major classes and each of them has its advantages and drawbacks [9,15]. Newer methods involving electrocautery, CO<sub>2</sub> and Nd:YAG laser are used to achieve hemostasis, therefore eliminating the need for suturing after circumcision [10, 11, 12]. However, the use of cautery has been shown to cause electrical burns [16]. Both Nd:YAG and CO<sub>2</sub> have been shown to cause a relatively large area of thermal damage surrounding the incision [17]. We have previously used a CO<sub>2</sub> laser for circumcisions and the healing time was longer (10 to 14 days for CO<sub>2</sub> compared to 7 to 10 days for Er:YAG). We have also observed less hematoma, inflammation and practically no necrotic tissue due to the cold ablation of the 2940 nm laser compared to 10600 nm. The only drawback of the Er:YAG laser was the need for a few sutures of the bigger blood vessels in adult patients.



Fig. 2. Result of Er:YAG laser circumcision (5 days after the procedure)

## REFERENCES

- 1. Oxford University Press. Oxford English Dictionary. Available from: http://www.oxforddictionaries.com/definition/english/circumcise
- 2. Totaro A, Volpe A, Racioppi M, Pinto F, Sacco E, Bassi PF. [Circumcision: history, religion and law]. Urologia 2011; 78: 1-9. Italian.
- 3. Dunsmuir, W.D. Gordon, E.M. The history of circumcision. BJU International, Volume 83, Suppl. 1: p 1-12. January 1, 1999.
- 4. Morris et al. Estimation of country-specific and global prevalence of male circumcision. Population Health Metrics 2016, 14:4.
- 5. Malone P, Steinbrecher H. Medical aspects of male circumcision. Brit Med J 2007; 335: 1206-1209.
- 6. WHO/UNAIDS/JHPIEGO. Surgical Manual for Male Circumcision under Local Anaesthesia Geneva: World Health Organisation, 2008.
- Bitega JP, Ngeruka ML, Hategekimana T, Asiimwe A, Binagwaho A. Safety and efficacy of the PrePex device for rapid scale-up of male circumcision for HIV prevention in resource-limited settings. J Acquir Immune Defic Syndr. 2011;58:e127-34.
- 8. Lagarde E, Taljaard D, Puren A, Auvert B. High rate of adverse events following circumcision of young male adults with the Tara KLamp technique: a randomised trial in South Africa. S Afr Med J. 2009;99:163-9.
- 9. Cheng YZ, Su X, Fang H, Hu J, Wu K, Su R, Ma J. A clinical comparative study of Chinese Shang Ring circumcision versus conventional circumcision. Chin J Urol 2011;32:333-5.
- 10. Arslan D, Kalkan M, Yazgan H, Ünüvar U, Şahin C. Collective circumcision performed in Sudan: evaluation in terms of early complications and alternative practice. Urology. 2013;81:864-7.
- 11. Vaos G. Circumcision with the Nd:YAG laser contact technique compared with conventional surgery. Photomed Laser Surg. 2004;22:318-22.
- 12. How AC, Ong CC, Jacobsen A, Joseph VT. Carbon dioxide laser circumcisions for children. Pediatr Surg Int. 2003;19:11-3.
- 13. Gerharz EW, Haarmann C. The first cut is the deepest? Medicolegal aspects of male circumcision. BJU Int. 2000;86:332-8.
- 14. Kaplan GW. Complications of circumcision. Urol Clin North Am. 1983;10:543-9.
- 15. Abdullahi Abdulwahab-Ahmed and Ismaila A. Mungadi. Techniques of Male Circumcision. J Surg Tech Case Rep. 2013 Jan-Jun; 5(1): 1–7.
- 16. Gearhart, J.P. and Rock, J.A. (1989). Total ablation of the penis after circumcision with electrocautery: a method of management and long-term follow-up. J. Urol. 142, 799–801.
- 17. S. Parker. Laser-tissue interaction. British Dental Journal 2007; 202: 73-81.