NARCHICON 2022

15th World Congress
23rd Indian Conference
28th Annual Conference (Delhi Chapter)

23rd - 25th September | The Lailt, New Delhi

Organised by: NARCHI Delhi, LHMC & SSK Hospital, New Delhi

Quality RCH Care: Strengthening Linkages, Bridging Gaps

NARCHI DELHI
दिल्ली का हर माँ बच्चा, र हे सुरक्षित, स्वस्थ और अच्छा

SOUVENIR

NATIONAL ASSOCIATION FOR REPRODUCTIVE & CHILD HEALTH OF INDIA
ICMCH

Welcome Message

Greetings from the Organising Committee of NARCHICON 2022,

Theme: Quality RCH Care: Strengthening Linkages Bridging Gaps.

We are delighted to welcome each one of you to Delhi to be a part of the prestigious **Narchi World Congress 2022** to be held from **23rd - 25th September.**

The conference aims to ideate, analyse and share inventive, feasible and implementable ways to encourage and disseminate knowledge, education and research to make high-level of care available to women. The Organizing Committee is working hard to put together an educational and scientific program for what will be an academic extravaganza.

We look forward to meeting and greeting you physically at the conference and exchanging ideas, experiences and skills. Stay tuned for all updates.

Regards,

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DIRECTOR GENERAL OF HEALTH SERVICES

सत्यमेव जयते

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स्वास्थ्य सेवा महानिदेशालय
Government of India
Ministry of Health & Family Welfare
Directorate General of Health Services

MESSAGE

I am happy to be part of NARCHICON 2022 and I feel honoured to be gracing the inaugural ceremony as Chief Guest. It is even so delightful to be back among medical fraternity where one belongs to.

I have been a medical teacher for nearly 35 years and I feel that a teacher has to be a keen student for his growth as a teacher. It is in this context that continuing medical education in the form of conferences become important. Although, I must confess that I have purposefully stayed away from conferences for reasons close to my heart; I feel they do have a place if optimum balance can be maintained between academics, socialization and commercialization. An imbalance between these three aspects sometimes defeats the very purpose of such activities.

There was a time such activities were conducted in Government Medical Teaching Institutions. Over a period of time, they have shifted base towards, venues outside institutions, perhaps for the ease of organization.

NARCHI is a unique organization. It is multidisciplinary and invites all those who are involved in providing reproductive and child health care as its members. This includes obstetricians, nurses, paediatricians, neonatologists, anaesthetists, graduates in medicine, interns, etc.

I am sure the three day bonanza of academics in the form of Workshops, CME's; Lectures, Orations, Panel Discussions; Debates and Quiz will be likely enough and open in terms of interaction and discussion; not to say of the cultural feast of the inaugural by 1160 + members of NARCHI.

I wish the event all success

Regards and Best Wishes.

(Atul Goel)

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Affiliated to Delhi University, Delhi

सत्यमेव जयते

MESSAGE

It is a indeed great pleasure for me to write this message and convey my heartiest congratulations to Dr Manju Puri and all her team members of department of Obstetrics and Gynaecology, Lady Hardinge Medical College for organizing 15th World congress (23rd Indian Conference, 28th Annual Conference, Delhi Chapter) of NARCHICON 2022 FROM 23rd TO 25th SEPTEMBER, 2022 at The Lalit, New Delhi.

The theme of this conference – "Quality RCH Care: Strengthening Linkages, Bridging Gaps" is very inspiring and reflects the vision and commitment of organizing team for continued endeavour towards bringing quality improvement spanning across the field of Obstetrics and Gynaecology.

The masterly designed conference with deliberations from highly renowned national speakers from different parts of country will truly envisage an opportunity to disseminate and update everyone on a current advances in women's health and challenges faced in imparting highest level of quality care in the field of Obstetrics and Gynaecology.

Well-designed Pre -conference workshops aiming at hysteroscopy, obstetrics emergencies and many others, will provide an exceptional learning experience to our budding obstetricians and gynaecologists. It is a matter of great pride for me to see the present team carrying forward legacy of NARCHI in a most planned and orderly manner. I am sure that this academic and clinical bonanza by experienced faculty will be an enjoyable and useful learning experience for all our postgraduates,

I wish the conference a great success.

Dr. Virendra Kumar
Director

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Dr. Vandana Bagga
Director, Family Welfare

सत्यमेव जयते

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With sincere pleasure, I congratulate the team of NARCHI Delhi, LHMC & SSK Hospital, New Delhi, for organizing this 15th World Congress 'NARCHICON 2022' on 23rd-25th September. The theme for this conference **"Quality MCH care: Strengthening linkages bridging gaps"** aligns thoroughly with the objectives of DFW, to provide quality and accessible Maternal and Child Health services to every beneficiary in a dignified and respectful manner, to identify the gaps and continuously improve quality of services to attain internationally acceptable standards, to provide patient-centric care based on available scientific evidence in a socially acceptable manner.

The thoughtful selection of topics, to be delivered by distinguished faculty is sure to benefit the delegates immensely and shall enable them to overcome the challenges on their path to achieve targets. The workshops targeted at different stakeholders including ASHAs, ANMs, nursing officers and doctors is a wonderful initiative by NARHI in encouraging teamwork among all levels of service providers.

I feel truly happy about strengthening bond of NARCHI-Delhi with Directorate of Family Welfare, GNCTD-Delhi, their common goals and objectives and the aligned strategies to continuously improve the quality of RCH services and to reduce maternal and neonatal mortality and morbidity.
On behalf of DFW, I wish great success to the conference.

"Quality is never an accident;
it is always the result of high intention, sincere effort, intelligent direction, and skillful execution;
it represents the wise choice of many alternatives." -William A. Foster

(Dr. Vandana Bagga)

From the Desk of National President, NARCHI

Respected Seniors, my dear NARCHIans,

It is with a sense of immense humility, privilege and responsibility that I assumed the office of The National President of NARCHI. This tenure, full of activities and achievements, would not have been possible without all the love, friendship and support of all the NARCHI members through the length and breadth of our vast and beloved country. I am lucky to have been blessed by the greatest of teachers and supported by fellows and colleagues throughout the country. Indeed, I will always be indebted to you all for the faith and trust you have instilled in me to lead NARCHI as we march towards 2023, with the sole and determined mission that 'No mother should die during childbirth and provide healthcare services by primary and preventive care.' This is the ultimate mission of NARCHI with the vision of 'Helping save lives by training MBBS doctor'.

Though I have carried out my journey in the field of Minimally Invasive Surgery in Gynaecology, I have been deeply attached to our organization NARCHI at the grass root level since 1987. This organization disseminates knowledge and training to doctors from basics to cutting edge technology by esteemed faculties and fellow guides. The thought of protecting and providing utmost care to mothers stayed instilled in my mind. With these aspirations, I worked to boost maternal health throughout the country during my tenure. The last 2 years of pandemic taught us to explore new possibilities to maintain our teaching, training and organize various programs online. I am extremely happy that with lots of difficulties, this time the 15th World Congress, 23rd Indian Conference and 28th Annual Conference of NARCHI is being held offline with untiring efforts by organizing committee.

I extend my warm wishes to the organizing Committee of NARCHICON 2022. The theme of NARCHICON, 2022 is Quality RCH Care: Strengthening Linkages Bridging Gaps, is being held from 23rd-25thSeptember. The conference aims to ideate, analyze and share inventive, feasible and implementable ways to encourage and disseminate knowledge, education and research to make high-level of care available to women. The Organizing Committee has worked hard to put together an educational and scientific program for what will be an academic extravaganza. I am sure that, with all the efforts, hard-work and intelligence, being put by the committee, this conference is going to be appreciated by one and all and will have a great success.

Success is not final, Failure is not fatal; It is the courage to continue that counts!

Let us all strive for the best!
Best Wishes,

Prof KK Roy

Message from Secretary General, NARCHI

Message from Secretary General, NARCHI

It is a great pleasure for me to send a welcome message to all of you who are attending the 15th World Congress & 23rd National Conference of NARCHI to be held from 23rd to 25th September 2022 at Delhi. The participants in the conference will enjoy a great scientific programme that will address the relevant issues confronting women's health in India. I am sure it will become an academic feast.

NARCH – ICMCH is the pioneer in the post graduate teaching and training of doctors who will be serving the rural and urban population of this vast country.

Dr Achla Batra and Dr Manju Puri with their able team will do their best for the successful out come of the conference.

My very best wishes for this conference to be a grand success.

Dr Subrataa Dawn
Secretary General, NARCHI

Dr. Veena Acharya
Dean ICMCH

DR. VEENA ACHARYA
Dean OF ICMCH (Indian college of maternal and child health) NARCHI
PAST NATIONAL PRESIDENT OF NARCHI
HOD Gynae & Obst Department Rajasthan Hospital, Jaipur
Ex Prof. & Unit Head, Dept of Gynae & Obst.
SMS Medical College & MGM College, Jaipur.

Message

It is a pleasure to congratulate the organizing team of NARCHICON 2022 for making this conference a reality, with a wonderful theme of ***"Quality RCH care: strengthening linkages, bridging gaps".*** It's aimed at improving the overall health of women. Eminent Doctors and academicians from all over the country will provide their valuable inputs and enrich the existing knowledge. The organizing committee has meticulously planned a rich scientific program that will enhance interaction with healthcare provider, newer research and updates. This conference will promote interaction between delegates and experts. Hope you all enjoy this academic feast and get benefited.

I wish this conference a great success.

Dr. Veena Acharya

Message from the Patron

I am delighted to learn that Delhi Unit of NARCHI is organising NARCHI World Congress 2022 at Delhi during 23-25 September 2022.

The Theme of the Conference,"Quality RCH Care: Strengthening Linkages Bridging Gaps",is very appropriate as it meets the aims and objectives of NARCHI.

The carefully prepared Scientific Program is very interesting and educative which the participating delegates will find very useful.

Wish the Congress a grand success.

Dr S.N Mukherjee

Prof. (Dr.) Yatish Agarwal
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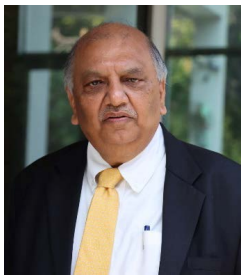

It gives me immense joy to know that the National Association of Reproductive and Child Health of India, Delhi, is organizing a Word Congress between September 23–25, 2022 in the capital city of Delhi. With a mission-oriented central theme of *Quality Reproductive and Child Health Care: Strengthening Linkages, Bridging Gaps*, the ideation, analysis and presentation of inventive, feasible and implementable ways for inspired dissemination of knowledge, education and research and creating a fertile ground for high level of care for women and children deserves the highest accolade and a big salute for the organizing team.

Women in the reproductive age group and children are the greatest demographic dividend of the country. They make the future, and their health deserves to be safeguarded at all cost. In a country as large as India, marked by difficult terrains and geographic conditions, where health posts are far and few, and challenges are many, a think-tank as robust as what National Association of Reproductive and Child Health of India constitutes, can only accomplish the tall mission of reaching out to the final post and the end of line beneficiary. Bridging gaps requires ingenuity, and strengthened linkages are a surefire way.

The deliberations at this Word Congress will open new thought lines, and I pray that the realm of Reproductive and Child Health in India will be many times richer and healthier following the scientific meetings.

I wish the participants a wonderful time. They will take back with them happy memories with much to think, act and implement.

(Dr. Yatish Agarwal)

Message from The Presidents Pen

Greetings!

We on behalf of the organizing team of NARCHICON 2022 are honoured to welcome you all to this academic event the 15th World Congress, 23rd Indian Conference and 28th Annual Conference (Delhi Chapter). The theme of this conference is Quality RCH care: Strengthening linkages bridging gaps.The scientific programme has been put together in accordance with this. We have aimed to bring together various stakeholders with dedicated sessions and workshops carefully crafted to delibrate on their fields of impact and interest.There are 10 preconference workshops focussing on skill and knowledge enhancement. These include Basic obstetric care and Cervical and breast screening for ASHAs , Essential labour room care for nursing officers and ANMs, Basic newborn care for interns, Safe abortion values, evidence and respect for nursing officers and doctors, Caesarean section evidence based technique and audit, Honing up skills for cervical cancer elimination, Maternal Collapse, Medicolegal issues in obsgyn practice and Fetal medicinefor obstetricians.To take forward Government of India Anaemia Mukt Bharat programme a public forum will be held as a part of this conferenceto sensitize masses to this important public health problem.

We have a galaxy of national and international experts to delibrate on various RCH related subjects in 2 day main conference. This will be an occasion where many new Fellows will be inducted in the Indian college of maternal and child health. This much awaited megaevent shall provide an opportunity to our faculty,delegates from various streams and fellowsto interact, share their experiences and go back enriched and motivated to work towards providing quality care to the women and children of our country. This is what NARCHI stands for!

Achla Batra
Manju Puri

Message from The Secretary's Desk

On behalf of the organizing committee, it gives us an immense pleasure to welcome the esteemed delegates to the NARCHICON 2022, 15th World Congress, 23rd Indian Conference and 28th Annual Conference (Delhi chapter) from 23rd to 25th September, 2022at Hotel Lalit organized under the leadership of our chairpersons Dr. Manju Puri and Dr. AchlaBatra

It is through the efforts of a visionary and stalwart Dr. C.S Dawn that our society of NARCHI took birth. Subsequently by the efforts of many obstetricians and Neonatologists NARCHI has reached to a great heights. The main aim of our society is to improve the health of pregnant women and her unborn baby. This is possible only by bringing obstetricians, gynecologists and neonatologists under one roof and review our progress periodically.

The theme of the conference is aptly chosen as "Quality RCH Care: Strengthening Linkages, Bridging Gaps".

The conference is aimed at obstetrician, gynecologists, oncologists, neonatologists, critical care specialists as well as fetal medicine specialists together with educating our nurses, ANMs and ASHA workers for basic neonatal care and labor care.

Each session is knitted for the representative of different specialties. This will ensure that the scientific deliberation should interest obstetricians, gynecologists, perinatologists and neonatologists.

The program is carefully tailored to the recent advances and current topics in high risk pregnancy, pregnancy in special situations with special emphasis on protocols and guidelines in obstetrics.

Exciting times are here again. This is the opportunity where we meet our friends exchange thoughts and share new ideas with our peer for the ultimate goal of better outcomes of our patients. We have all the experts from different fields who will be presenting their experience in a crisp manner.

There are six workshops. Evidence Based Workshop on Cesarean Section, Medico Legal Aspects in Obstetrics & Gynaecology, Elimination of Cervical Cancer-Hands On Workshop on Honing Your Skills in Colposcopy One Stop Treatment of CIN, Fetal Medicine, WHO, and Maternal Collapse.

There are also workshops for nurses and ANM, ASHAs on Essential Labor Room Care: Nursing Officers and ANMs and Strengthening linkages-Bridging Gaps On Basic Obstetric Care, Cervical and Breast Cancer.

The highlights of the conference are various keynote addresses delivered by eminent speakers. There are panel discussions on the burning topic which will really enrich our delegates.

The icing on the cake is Six orations Dr. CS Dawn oration, Dr. Manjula Rohtagi Oration, Conference oration, P.D Baweja oration, Dr S N Mukherjee oration and Dr B Mukherjee Oration, which will be delivered by renowned, global speakers.

There are poster competition for the Post graduate students, interns, sisters, ANMs and ASHAs.

I am sure everybody will cherish the memory of this world congress for a long time. We also hope that each one of us goes back richer in knowledge at the end of this scientific program.

Long Live NARCHI!

Message from The Editorial Board

Editorial Team

Greetings from the Editorial Team!

With the world finally openingup post COVID-19 pandemic,we cordially invite our distinguished faculty and all delegates to 15th World congress /23rd Indian Conference/ 28th Annual Conference, Delhi Chapter of NARCHICON 2022 from 23rd TO 25thSeptember 2022 at The Lalit, New Delhi.

It is our proud privilege and a great responsibility to bring forth this souvenir issue of NARCHICON 2022 centred around the theme – "Quality RCH Care: Strengthening Linkages, Bridging Gaps". Quality improvement in medical sciences is a continuous process which enhances standard of care and provide the best management to the patient. Our invited faculty belonging to various specialities are front runners in their respective fields and will update us with current guidelines, best practice, controversies, and recommendations in reproductive and child health with emphasis on quality care. We take this opportunity to convey our most sincere thanks to all the esteemed members of the society who devoted their precious time and efforts to give their deliberations in this conference.

This souvenir has been put together with wise inputs from our chairpersons, Dr Manju Puri and Dr. Acha Batra who are our dynamic and versatile team leaders. Office bearers and distinguished guest & faculty Dr. Atul Goel (DGHS), Dr. K K Roy (National president, NARCHI), Dr. S Dawn (Secretary General, NARCHI), Dr. Veena Acharya (Dean of ICMCH) , Dr. Virendra Kumar (Director, LHMC),Dr S.N.Basu (Patron), Dr Yatish Agarwal (Dean, GGSIP) and the diligent organising chairpersons and secretaries have sent in their congratulatory notes and messages.

Population has long been considered the bane of our nation, slowing down the fruits of progress. However, if the same is upskilled , it can turn into a huge asset. Enhancing the skills of our Nurses ,ground level ASHA workers will bridge the gap between the preventive care at primary level and clinical care at hospital. This conference has been designed to accommodate them along with clinicians to enhance their partnership in managing patients together as a team and strengthening knowledge through well designed preconference workshops, emergency life -saving obstetric drills and well-crafted scientific programme.

Compendium of manuscripts provided by the authors is a treasure trove of knowledge on the pertinent issues in the maternal and child health in our country. We thank our distinguished and eminent guest speakers for taking out their precious time and sending their write ups, enabling this publication.

The Abstracts on the conference theme topics (Quality RCH care, Maternal and child health, Preventive oncology) bring about the energy, vitality and depth of research acumen of our budding Gynaecologists. We thank Dr Ratna Biswas and her team for compiling the abstracts.

We would like to thank all our sponsors and specially Mr Rakesh Ahuja and his entire team at Process and Spot, who have worked tirelessly with us, in bringing out this Books of Conference Proceeding & Abstracts

We hope you would cherish this souvenir issue as a memento of our world congress and annual conference.We look forward to your participation and feedback.

Happy reading to all,

We are sure you will enjoy this Scientific feast.

Knowledge exists, man only discovers it. *-Swami Vivekananda*

Scientific Program

24th September | Day 1 | Hall A

Time	Topic	Speaker
8:00 AM Onwards	**Registration**	
9:00 - 10:00 AM	**Perineum Preservation**	
	Chairpersons: Dr J B Sharma, Dr Amita Jain, Dr Geeta Mendiratta, Dr Jyoti Malik	
	Postpartum Perineal Strengthening	Dr Karishma Thariani
	Prevention of Perineal Trauma	Dr Anu Dua (UK)
	Revisiting Complications of Episiotomy	Dr Rekha Bharti
	Dealing with Complete Perineal Tear	Dr Manju Puri
10:00 - 11:00 AM	**Panel Discussion**	
	Critical Care Cases: Imperative Skills for a Safe Practice	
	Panelists: Dr Taru Gupta, Dr Kavita Bhatti, Dr Rachna Aggarwal, Dr Niharika Tyagi, Dr Uma Vaidyanathan	**Moderators:** Dr Jyotsna Suri Dr Ratna Biswas
11:00 - 12:00 Noon	**Keynote Address**	
Chairpersons: Dr SB Khanna, Dr Sunesh Kumar, Dr Renuka Sinha		
11:00 - 11:20 AM	Uterine Preserving Surgeries in UV Prolapse	Dr. Kazila Bhutia (Singapore)
11:20 - 11:40 AM	Decoding Surgical Site Infections	Dr. Shalini Malhotra (Dubai)
11:40 - 12:00 Noon	Save the Ovary	Dr Alka Kriplani
12:00 - 12:30 PM	**Dr CS Dawn NARCHI Oration**	
	Chairpersons: Dr Subrata Dawn, Dr Chandrawati, Dr Jaideep Malhotra, Dr Manju Shukla	
	Tailoring a Facility Specific Blueprint for Reducing Stillbirths	Dr Nuzhat Aziz
12:30 - 1:00 PM	**Dr Manjula Rohtagi NARCHI Oration**	
	Chairpersons: Dr Kamal Buckshee, Dr Manjula Rohtagi, Dr Nirmala Vaze	
	PPH:New Clothing for an Old Foe	Dr Ravinchandran R Jeganathan (Malaysia)
1:00 - 1:15 PM	**NARCHI - Affliation/Accreditation Conundrum** **Dr Dolon Dawn (Treasurer & ED, Narchi)**	
1:00 - 2:00 PM	**Lunch**	
2:00 - 2:30 PM	**NARCHI Delhi Chapter Oration**	
	Chairpersons: Dr Usha Sharma, Dr Sharda Jain, Dr Sunita Mittal, Dr Usha Gupta	
	Conundrum of Rising CS Rate- Indian Perspective	Dr Asmita Rathore
2:30 - 3:00 PM	**Dr D Baveja ICMCH Oration**	
	Chairpersons: Dr Ranjana Sharma, Dr Mala Arora, Dr Renu Arora	
	Acute Liver Failure in Pregnancy	Dr Tasneem Pirani (UK)
3:00 - 4:00 PM	**Panel Discussion**	
	Interconception Care: Missed Opportunity	
	Panelists: Dr Leena Sreedhar, Dr Indu Chugh, Dr Sumitra Bachani, Dr Garima Kachawa, Dr Kshama Kedar, Dr Priti Dhamija	**Moderators:** Dr Sangeeta Gupta Dr Pikee Saxena
4:00 - 5:00 PM	**Befriending the Internal Iliac Artery**	
	Chairpersons: Dr Harsha Khullar, Dr Reva Tripathi, Dr Sudha Prasad	
	Applied Anatomy & Selection of Cases	Dr Mitra Saxena
	Step by Step Dissection	Dr Shilpi Nain
	Extraperitoneal Approach	Dr Deepak Desai
	Tackling Challenges	Dr Kiran Guleria
	Ethics in Obstetrics & Gynecology	
	Chairpersons: Dr AG Radhika, Dr Alpana Singh, Dr Seema Prakash	
5:00 - 5:30 PM	Litigation in Medical Practice	Dr Girish Tyagi
6:00 PM Onwards	**Inauguration Followed by Cultural Program & Dinner**	

24th September | Day 1 | Hall B

Time	Topic	Speaker
8:00 AM Onwards	**Registration**	
9:00 - 10:00 AM	**Recent Advances**	
	Chairperson: Dr Archana Verma, Dr Bindu Bajaj, Dr Urvashi Sehgal	
	Dealing with the Transgender Patient	Dr Aruna Nigam
	ART & Surrogacy Act- An Update	Dr Sonia Malik
	Cosmetic Gynaecology - New kid on the block	Dr Narendra Malhotra
	Ultrasound in Labor Management	Dr Gigi Selvan
10:00 - 11:00 AM	**Panel Discussion**	
	Vexations of the Breast: What a Gynaecologist Must Know ?	
	Panelists: Dr Amita Suneja, Dr Prabha Lal, Dr Aditi Chaturvedi, Dr Vanita Kapur, Dr Mrinalini Mani, Dr Anuradha Singh	**Moderators:** Dr Sunita Malik Dr Madhu Goel
1:00 - 2:00 PM	**Lunch**	
3:00 - 4:00 PM	**Panel Discusssion**	
	Miseries of Premenstrual Syndrome & Peripartum Mood Disorders	
	Panelists: Dr Kanwal Gujral, Dr Kiran Agarwal, Dr Meenakshi Ahuja, Dr Kanika Jain, Dr Prerna Kukretti, Dr Kavita Aggarwal	**Moderator:** Dr Hafizur Rahman Dr Swati Agrawal
4:00 - 5:00 PM	**Honing the Surgical Skills in Endoscopy (Video Session)**	
	Chairpersons: Dr Sudha Salhan, Dr Malvika Sabharwal, Dr Sanjeevani Khanna	
	Cornual Ectopic Pregnancy	Dr Nisha Kapur
	Scar Ectopic Pregnancy	Dr Subhash Mallya
	Abdominal Cerclage	Dr Dinesh Kansal
	Hysteroscopic Management of RPOCs	Dr Jyoti Mishra

24th September | Day 1

Quorum 1 & 2 (3rd Floor) 9:00 AM - 5:00 PM - Free Papers
Quorum 3 & 4 (3rd Floor) 2:00 PM - 5:00 PM - E-Poster
Grill Hall (3rd Floor) **3:00 - 4:00 PM- Quiz: Final Round** **Quiz Masters:** Dr Monika Gupta, Dr Meenakshi Singh, Dr Kanika Chopra, Dr Neha Pruthi
4:00 - 5:00 PM **NARCHI Excutive Committe Meeting & GBM**

25th September | Day 2 | Hall A

Time	Topic	Speaker
8:00 AM Onwards	**Registration**	
9:00 - 10:00 AM	**Recent Advances in Obstetrics**	
	Chairperson: Dr Banashree Das, Dr Abha Singh, Dr Y M Mala	
	New WHO ANC Model	Dr Pushpa Chaudhary
	Labour Care Guidelines	Dr Pratima Mittal
	New MTP Act: Implementation Challenges	Dr Monika Gupta
	Changing Services in Twin Pregnancy	Dr Soma Mukherjee (UK)
10:00 - 11:00 AM	**Panel Discussion**	
	Contraceptive Prescriptions: Challenges & Solutions	
	Panelists: Dr Sunita Singhal, Dr Upma Saxena, Dr Jyoti Sachdeva, Dr Deepika Meena, Dr Swati Sinha, Dr Anupama Bahadur	**Moderators:** Dr. Reena Yadav Dr. Nishtha Jaiswal
11:00 - 12:00 Noon	**Obstetric Skills Synopsized (Video session)**	
	Chairpersons: Dr Nivedita Sarda, Dr Jayshree Sunder, Dr Anita Rajorhia	
	Shoulder Dystocia	Dr Vidhi Chaudhary
	Assisted Breech Delivery	Dr Vinita Gupta
	Forceps Application	Dr Muntaha
	Vacuum Application	Dr Shashi LK Maheshwari
	External Cephalic Version	Dr Meenakshi Singh
12:00 - 12:30 PM	**Dr S.N. Mukherjee Oration**	
	Chairpersons: Dr SN Mukherjee, Dr Swaraj Batra, Dr Sushma Chawla, Dr Anjali Dabral	
	Challenges Faced in Prevention of Cervical Cancer	Dr Veena Acharya
12:30 - 1:00 PM	**Dr Jagjit Singh Hans NARCHI Oration**	
	Chairpersons: Dr Neera Aggarwal, Dr SN Basu, Dr Ashok Kumar	
	Recurrent Pregnancy Loss	Dr PC Mahapatra
1:00 - 2:00 PM	**Lunch**	
2:00 - 2:30 PM	**NARCHI Conference Oration**	
	Chairpersons: Dr SS Trivedi, Dr Achla Batra, Dr Manju Puri	
	Operative Hysteroscopy: Addressing Challenges	Dr KK Roy
2:30 PM Onwards	**Convocation & Valedictory**	

25th September | Day 2 | Hall B

Time	Topic	Speaker
8:00 AM Onwards	**Registration**	
9:00 - 10:00 AM	**Tackling the Siblings- Endometriosis & Adenomyosis**	
	Chairpersons: Dr NB Vaid, Dr Renu Misra, Dr Leena Wadhwa	
	Enhancing Skills in Fertility Sparing Surgeries for Adenomyosis	Dr Nikita Trehan
	Recurrent Endometriosis: The Way Forward	Dr Manju Khemani
	Managing the Woes of Adolescent Endometriosis	Dr Anjila Aneja
	AI in Obstetrics & Gynaecology	Dr Vaishali Waradkar
10:00 - 11:00 AM	**Mixed Bag**	
	Chairpersons: Dr Vijay Zutshi, Dr Raksha Arora, Dr Jyothi GS	
	Approach to Ovarian Mass	Dr Sharda Patra
	Vulvar Intraepithelial Neoplasia	Dr Seema Singhal
	Cervical Cancer Screening in Pregnancy	Dr Neerja Bhatla
	Haemostasis in Endoscopic Surgery	Dr Biswa Bhushan Dash
11:00 - 12:00 Noon	**Addressing the Needs of Cancer Survivors**	
	Chairpersons: Dr Saritha Shamsunder, Dr Maninder Ahuja, Dr Lisa Sharma	
	HRT : What, When, How & How Long	Dr Bindiya Gupta
	Fertility Concerns	Dr Surveen Ghumman
	Care During Pregnancy	Dr Mala Srivastava
	Enhancing the Quality of Life	Dr Sushma Bhatnagar
1:00 - 2:00 PM	**Lunch**	

25th September | Day 2

Quorum 1 & 2 (3rd Floor) 9:00 AM - 1:00 PM - Free Papers
Quorum 3 & 4 (3rd Floor) 9:00 AM - 12:00 Noon - E-Poster
Grill Hall (3rd Floor) **12:00 - 1:00 PM- Slogan Competition** **Coordinator-** Dr Kanika Jain

Scientific Proceedings

Dr. S.N. Mukherjee Oration

Cervical Cancer 'Elimination in India' "Challenges"

Veena Acharya
Dean ,ICMCH (Indian college of maternal and child health)
HOD Gynae & Obst Department Rajasthan Hospital, Jaipur

Cervical cancer is a major public health problem all over the world. In India it is the second most common cancer in women and a major cause of morbidity and mortality. There were 1, 33,907 new cases of cervical cancer reported at globicon in 2020 where as 60078 females died because of it, despite the fact that Cervical Cancer is the only preventable and curable disease.

In November 2020, World Health Organization launched a Global Strategy for the elimination of cervical cancer as a public health problem. The Strategy proposes an elimination threshold of 4 cases per 100,000 women, achieved by implementing the triple intervention targets by 2030:

- 90% of girls fully vaccinated with the HPV vaccine by age 15.
- 70% of women screened with a high performance test (such as the HPV test) by 35 years of age, and again by 45 years.
- 90% of women identified with cervical pre cancer or invasive cancer receive adequate treatment and care.

In India, Cervical Cancer elimination has many challenges. The first strategy proposed by WHO is that 90% girls should be vaccinated by 15 years of age. The challenges we are facing in this regard are: first and foremost is growing population: In India we have the largest adolescent population in the world i.e. 253 million. Second is poor knowledge about the HPV vaccine. The third problem is the accessibility of HPV vaccines which are not available at various geographical locations. The fourth challenge is variation in acceptability of HPV vaccine in all groups of society due to many cultural and social barriers.

To make the first strategy of WHO successful in our country following are the recommendations:

- First step: incorporation of the HPV vaccine into the National Immunization Program.
- Second step: it should be a compulsory vaccination in the adolescent group.
- Third step: to secure sufficient and affordable HPV vaccines for the rural population

In India, all three types of HPV vaccine are available as prophylactic vaccines. In Australia HPV vaccine coverage is very high (almost 71.2%) and in United Kingdom it is 60.4% and in United states 33.4%, but in India we have very limited data about HPV Vaccination coverage as there is a different situation in different state.

The Drug Controller General of India (DCGI) allowed market authorization to Serum Institute of India (SII) on 12 JULY 2022 to manufacture the indigenously developed India's first qHPV (quadrivalent) vaccine against cervical cancer. WHO SAGE recommended updating dose-schedules for HPV Vaccination. One-dose Human Papillomavirus (HPV) vaccine offers solid protection against cervical cancer. We hope that very soon we will cover a large population of adolescent girls in India with our own HPV Vaccine with single-dose regime. Single does regime could alleviate financial and logistical barrier and achieve higher coverage in our current country scenario.

To execute the second strategy of WHO, we are also facing many challenges. Cervical cancer screening plays a very important role in early diagnosis of precancerous lesions for timely intervention and management. In India we do not have uniform health system like in other parts of the world. We have multilayered healthcare infrastructure. The screening program is not uniformly organized at national level. To overcome these challenges the screening program could be integrated in the existing health services with due stress on it. It is very important to understand the social and cultural barriers and to create awareness among the women through key opinion leaders regarding the importance of screening program.

Regarding the third strategy of WHO i.e. the timely intervention and management of cervical cancer, there is a need to take diligent steps, in healthcare system of our country. Due to poor awareness about the seriousness of the precancerous lesions women are not taking proper treatment as a result they come in the advanced stages. To overcome this challenge, the establishment of strong referral system for all aspects of the cancer care is essential to ensure the timely management of patients and reduce loss-to-follow-up.

To achieve our goal of the elimination of cervical cancer by 2030 we must have a multipronged approach which will not only increase the life expectancy of women but also improve their quality of life.

Our mission is to say no to cervical cancer. The oncology committee of FOGSI launched the SSNPP app for cervical cancer screening on 12th of July 2022. This app will be of great help for the uniform collection of data of our country. The IMS is working for HPV DNA test to become a primary screening test at an affordable price. The ISCCP, AOGIN, AOGI all are doing tremendous work by organizing CME training programs for uplifting and enriching the knowledge about the proper management of cervical cancer.

In Rajasthan, we have PCCP RAJ (Prevention of Cervical Cancer Program in Rajasthan) and association with other societies. We are continuously doing various activities at different levels: Awareness about the HPV vaccine in the schools, Outreach screening program by mobile van which has all facilities regarding the mammography and screening and Sensitizing workshops with media people, schools, colleges and with key opinion leaders.

If we all join hands together, we can eliminate cervical cancer from India.

To summarise, the Elimination Implementation Checklist for cervical cancer includes:

- **First and foremost is the commitment of policymakers.**
- **Proper planning of public outreach programs.**
- **Correct strategy for health care workers to integrate screening test with healthcare routine checkup and its coverage by insurance company.**

Finally

I propose to take this oath by everyone on their birthday; to vaccinate at least one girl child free of cost. I also request everyone to vow that on their marriage anniversary; five women will be taken for screening for precancerous lesions.

Dr. Veena Acharya
Dean, ICMCH, NARCHI

NARCHI Delhi Chapter Oration

Conundrum of Rising CS Rates : Indian perspective

Asmita Muthal Rathore
Director Professor & HOD, Obstt &Gynae, Maulana Azad Medical College, New Delhi

Cesarean Section (CS) is a life-saving intervention when medically indicated but there is no evidence to show its benefits when not required. The short-term and long-term Health effects of CS for current and future pregnancies and Babies are well known. Apart from that rising CS rates are concern for medical education and training as young medics are becoming expert in CS but losing the skill of obstetrics and vaginal assisted deliveries. Beyond the numbers, critical role is played by quality of care especially the short term intraoperative complications in setups with limited facilities with resultant serious maternal adverse outcomes and long term like rupture uterus in future pregnancy as the access to labour care and repeat CS can not be taken for granted.

The controversy about Ideal CS rate continues. WHO in 1985 stated that there is no justification for CS >15% for any region. However there is significant improvement in Obstetric & Neonatal care , over last 3 decades and there is need to revisit recommended CS rates . WHO in 2015 issued a statement that CS should undertaken when indicated without specific emphasis on any particular rate, focussed for CS for all women in need CS rates should be monitored in meaningful, reliable and action oriented manner instead of focussing on a specific rate.

The Drivers of High CS rates are complex interrelated factors comprising of medical risk factors, factors related to health professionals, women and society related factors and health care system related factors. We need to address the challenges and solutions in all these areas.

Changing population profile with increasing maternal age, ART pregnancies, Obesity, GDM, HT along with significant improvement in clinical obstetric neonatal care & Evolving evidence based guidelines are contributing to higher CS rates. The evidence based practices, good woman counselling, second opinion from colleagues, judicious use of technology and Individualised Care in view of access to care, Social circumstances, wishes of woman is important.

Obstetrician is often central to choice of delivery and clinicians attitude and experience are important determinants of mode of delivery. As per one survey the specialists who were <10 years from qualification more likely to agree for Cesarean delivery without medical reasons [CDMR] and 31% Obstetrician would choose CS for themselves in uncomplicated pregnancy.

Many times Logistics and Convenience, Inherent challenges with monitoring of labour and foetus in overcrowded understaffed units without one to one care, Financial incentives, Fear of litigation and defensive medicine to avoid medicolegal hassle are the reasons why obstetricians may choose CS.

Sometimes women demand CS without medical reasons [CDMR] . The common reasons are tocophobia, fear of labour pain, safety concerns as they perceive CS to be safer for themselves or baby. Access to biased info- fashion and media and Superstitions are responsible for CDMR. Previous negative experiences of vaginal birth and of care, inadequate professional support contributes to CDMR. In such situation, apart from Clinical evaluation and risk assessment, reasons should be explored in context of personal and cultural values. Directed Counselling with reassurance, Prenatal childbirth education, Analgesia for labor, Emotional support in labor and respectful maternity care can give positive birth experience to women and reduce CS rate.

Women can be encouraged for normal labour if health care systems provide adequate infrastructure, staffing, protocols.Birth companion is another intervention with clinically meaningful benefits like shorter labour, increased rate of SVD, decreased use of intra-partum analgesia, increased satisfaction during the birthing experience, early initiation of breasfeeding, [Cochrane review 2017]. The Birth companions remain with woman during labour and provide Emotional support, Comfort measures like soothing, touch, message and help women to communicate with HCW with resulting humanization of labour.

The fear of labour pain is another important reason for

CDMR and increasing availabilty of labor analgesia as HOSPITAL Policy of Mother Friendly Hospital similar to Baby Friendly Hospital with 100% Labour Analgesia Coverage and Provision of Basket Of options like Entonox, Epidural Analgesia, Opioids, Alternative Methods can help woman.

WHO, GOI recommend use of "TGCS-Ten Groups Classification System" or the "Robson Classification" Classifies all women admitted for delivery in a specific setting into one of 10 groups It is mutually exclusive and totally inclusive, Simple, Robust, Reproducible, Clinically relevant, Prospective. It is useful for Assessing and comparing CS rates within healthcare facilities over time and between facilities.

Its regular use to formulate interventions Will help healthcare facilities to optimize CS. NARCHI Delhi in Collaboration with Directorate of Family Wefare, Govt of Delhi started an collaboration to Introduce Robsons classification and provide feedback to facility for focussed intervention with aim to Optimising CS rates in delivery facilities of Delhi.

Thus to summarise, Time has come to put the debate on right cs rate on hold and focus on monitoring cs rates and outcomes in each robsons group than on population level and Generate data and evidence that will lead us to actions to improve care.

Keynote Address

Save Ovaries

Namita Jain, Alka Kriplani
Consultant Obs & Gynae at Paras Hospitals, Gurugram

Ovaries are the vital organ where eggs develop and mature and where female hormones are made. Ovaries play a key role in a female's general and reproductive health. In the normal female, the undifferentiated gonad can be identified histologically as an ovary by 10-11 week of gestation. At birth, the ovaries contain approximately 1 million active follicles, which decrease to 0.5 million by menarche. Thereafter, they decrease at a rate of 1,000/month, and at an even higher rate after the age of 35 yr.

Reserve of ovary is important for female fertility outcome and it can be measured by anti-mullerian hormone (AMH) and antral follicle count (AFC). A number of factors affecting AFC or AMH levels have been reported.

Saving ovaries- Lifestyle and environmental factors:

A committee opinion indicated that smoking has some potential deleterious effects on female fertility by delaying conception, impairing ovarian follicular dynamics, inducing gamete mutations, and increasing the risk of early miscarriages and adverse assisted reproductive technology outcomes. Alcohol was considered to be a risk factor of female fertility through altering endogenous hormone concentrations, hindering ovum maturation, and disturbing ovulation, early blastocyst development, and implantation. Animal studies have shown increased number of follicles and reduced apoptosis with use of natural antioxidants like Resveratrol (obtained from Reynoutria japonica, wines and grapes), Quercetin (bioactive flavonoid found in Gingko biloba, apples , berries), Curcumin(rhizome of Curcuma longa), Crocin (carotenoid compound). Metaanalysis of 45 studies concluded that ovarian reserve markers are lower in obese than in non obese women and body mass index (BMI) is negatively correlated with AMH in all study populations. In contrast, a metanalysis by Oldfield et al concluded that negative impact of obesity on AMH levels, in otherwise normal healthy women with regular menstrual cycles is uncertain. In a cross sectional study adjusted with age, smoking and physical activity, dietary pattern were not associated with ovarian reserve in normal weight women. However, in overweight and obese woman (BMI >= 25 kg/ m2), increased adherence to a profertility diet (whole grains, soy, seafood, supplemental folic acid , B12 and vitamin D) was associated with a significantly higher AMH. 1 degree celsius increase in temperature during the 90 days was associated with a 1.6% lower AFC. Exposure to higher temperatures was associated with lower ovarian reserve. These results raise concern that rising ambient temperatures worldwide may result in accelerated reproductive aging among women. 80% premature ovarian insufficiency (POI) patients had personal and familial history with another autoimmune disease. 50% of patients presented highly elevated anti-thyroid antibodies (ATA). Antiovarian antibodies were detected in 20% of patients with POI. Authors concluded that the result might represent the involvement of an autoimmune mechanism in idiopathic POI. Ovarian reserve function was not significantly affected in patients with up to 4 ovarian stimulation cycles. Effect of repetitive follicular aspirations on the donor's future ovarian reserve is yet unknown.

Saving ovaries at surgery:

Oophorectomy at the time of hysterectomy occurs in 40-50% of patients in the United States. Revised Markov model found survival till age 80 years was similar for those undergoing hysterectomy alone or with concurrent bilateral salpingo-oophorectomy (BSO) at or after 50 years of age. They argued to consider concurrent BSO at hysterectomy at >= 50 years and advised HRT if BSO done before 50 to mitigate increased mortality. In women with benign ovarian cysts (endometriotic and non-endometriotic cysts), ovarian cystectomy is preferred and is ovary sparing. Most studies suggest non-endometrioma cystectomies result in a similar AMH decline as endometrioma cystectomies. Detorsion and preservation of adnexal structures regardless of the appearance of the ovary has been suggested in women with ovarian torsion. In a study of 45 detorsions, irrespective of grade of ischaemia, all ovaries showed follicles and vascularity

at follow up ultrasound. Sufficient therapeutic effect might be achieved without extensive excision of ovarian tissue by laparasoscopic surgery in women with ovarian ectopic pregnancy.

Women with bilateral tubal occlusion showed decreased AMH level, suggesting that chronic pelvic inflammation may diminish ovarian reserve by affecting the blood supply and dysfunction of steroidogenesis in granulosa cells. Also women with latent genital tuberculosis were found to have low AMH and AFC while post anti-tubercular therapy higher pregnancy rates were observed with ovulation induction and in-vitro fertilization (IVF). More caution should be paid when evaluating an effect of pelvic inflammatory disease (PID) on fertility and it should be adequately treated.

Saving ovaries in cancer patients:

Offer fertility sparing surgery in women with borderline ovarian tumor (BOT) who are desire to conceive, even if peritoneal implants are discovered at the time of initial surgery. Women with mucinous BOT should undergo initial unilateral salpingo-oophorectomy (ULSO) whereas cystectomy is acceptable for women with serous BOT. Artificial reproductive techniques (ART) can be initiated in patients with Stage I BOT if infertility persists after surgery. One should consider fertility sparing in women with epithelial ovarian cancer (EOC) after staging for women with stage IA grade 1 (& probably 2, or low-grade) serous, mucinous or endometrioid tumors, patients with stage IC grade 1 (or low-grade) disease, patient with serous, mucinous or endometrioid high-grade stage IA or low-grade stage IC1 or IC2 EOC, BSO and uterine conservation could be offered to allow pregnancy by egg donation. Fertility sparing surgery should also be offered to patients with non-EOC, and particularly women with malignant ovarian germ cell tumors. Ovarian preservation in young patients with early stage cervical adenocarcinoma is safe and has no significant effect on overall survival and progression free survival while preserving ovaries in patients with FIGO stage IIB cervical cancer seems not reasonable because of the high rate of ovarian metastasis. Ovarian preservation can be considered in premenopausal patients aged <45yrs with low-grade endometroid endometrial ca with < 50% myometrial invasion and no other obvious ovarian or extra-uterine disease. In cases of ovarian conservation, salpingectomy is recommended. It is not recommended for patients with family history involving ovarian cancer risk. Prophylactic salpingectomy deferring oophorectomy (PSDO)- deferring oophorectomy till 45 years in BRCA1 till 50 years in BRCA2 is a potential option. Further studies needed to establish recommendations. RRSO may be delayed until age of 40-45yrs of age for BRCA 2 if patient has had a bilateral mastectomy.

GnRh agonist during chemotherapy should be offered as an option for ovarian function protection in pre-menopausal breast cancer patients receiving chemotherapy; however limited evidence exists on their protective effect on the ovarian reserve and the potential for future pregnancies. In malignancies other than breast cancer, GnRh agonists should not be routinely offered as an option for ovarian function protection and fertility preservation without discussion of the uncertainty about its benefit. Oocyte and embryo cryopreservation should be offered as an established option for fertility preservation while ovarian tissue cryopreservation should be offered in patients undergoing moderate/ high risk gonadotoxic treatment where oocyte/embryo cryopreservation is not feasible.

Ovarian rejuvenation for ovarian reserve:

Ovarian rejuvenation in form of platelet rich plasma or stem cell (SC) treatment may offer some promise in assisting pregnancy (natural and IVF-related), especially in women with reduced oocyte quality due to advanced maternal age. BMSC are a type of adult stem cell with low immunogenicity, proliferative and pluripotent potential. Notable results have been proven in humans, and it may bring hope to many patients in the future. Larger clinical trials are needed to confirm these findings.

To summarize, ovarian function is crucial for women's fertility and hormonal needs. One must keep in mind that lifestyle and surgery may have a long term impact on the health of the women. No matter how complicated is the surgery, the goal is that fewer ovaries are removed unnecessarily, improving the lives and reproductive outcomes in women. Surgery should be balanced between aggression and conservation. Reproductive aged women diagnosed with cancer should be counseled about fertility sparing surgeries and fertility preservation options. Preliminary data suggests promising role of PRP and SC therapy in women with poor ovarian reserve.

Complete Perineal Tear

Manju Puri
Director Professor, Department of Obstetrics & Gynaecology LHMC New Delhi

Introduction

Injury to the anal sphincter complex is the most common cause of postpartum anal incontinence. Incidence of clinical complete perineal tears varies between 0.6%–9.0% after vaginal deliveries with mediolateral episiotomy.[1] Occult injuries can be detected in postpartum women on endoanal ultrasound [2] In a meta-analysis of studies using endoanal ultrasonography, the incidence of anal sphincter defects was found to be 26.9% in primiparous women and 8.2% new sphincter defects in multiparous women.[3]

Pertinent surgical anatomy of perineum and anal canal

The perineal body is the central point of perineum. It is a pyramidal muscular structure formed by decussation of bulbocavernosus muscles, transverse perineal muscles, and external sphincter ani muscle. It is 3 cm long and 2 cm thick and extends between posterior fourchette and anterior border of anal opening.

The anal incontinence is maintained by anorectal sphincter comprising of an external sphincter and internal sphincter. External anal sphincter is circular and formed by straited muscles and innervated by pudendal nerve. It maintains anal continence to flatus and stools (both liquid and solid) at rest and when there is rectal distention. Internal anal sphincter is condensation of the longitudinal smooth muscle fibres of rectum extending 1 cm above external sphincter. It is under involuntary control and maintains continence at rest. In addition, puborectalis part of levator ani muscle also plays a role in anal continence.

Classification of complete perineal tears

3rd degree: Anal sphincter tear

3a - < 50% external anal sphincter thickness

3b - > 50% external anal sphincter thickness

3c - Internal anal sphincter torn

4th degree: Anal epithelium torn

Aim:

To restore the continuity of both external and internal sphincters and construct a thick perineal body and rectovaginal septum to provide muscular and structural support between anorectum and vagina. The goal is to reconstruct a muscular cylinder 2 cm thick and 3 cm long between anorectum and vaginal mucosa.

Key surgical principles:

These include proper identification of layers, proper anatomic re-approximation of all disrupted tissue layers for restoring faecal continence and meticulous haemostasis.

Preoperative preparation:

Pack the area with a pad to prevent blood loss. Call for an experienced obstetrician. Inform OT staff, and anaesthesia team. Inform and counsel the patient and relatives and take informed consent for repair under anaesthesia. Ask the patient to remain nil per oral. Give preoperative antibiotic shot as per protocol within 30 min before repair and shift the patient to OT

Surgical steps:

Assessment of extent of injury: This is the first step and includes visual examination and palpation. The obstetrician inspects the wound, palpate it with fingers and then put a finger in the anal canal and ask the woman to squeeze around the finger and feel for the sphincter between the thumb and index finger in the anal canal by pin rolling movement. The various muscles and tissues are identified by the direction of their muscle fibres and colour. The external anal sphincter is beefy red compared to internal sphincter which is pale pink in colour.

Repair the tear in layers:

Under appropriate anaesthesia and proper aseptic conditions, a multi-layered repair in the following sequence is done, rectal mucosa, internal anal sphincter, external anal sphincter, vaginal mucosa, perineal muscles, and skin. The anaesthesia can be a regional block spinal, epidural or saddle block. General anaesthesia is not indicated. It cannot be repaired under local anaesthesia as it will prevent the edges of external sphincter to be brought in the midline and approximate without tension.

Anal mucosa is closed by a continuous nonlocking

stitch or interrupted stitches with knots towards the lumen of anorectal canal. The suture material used is 3-0 or 4-0 delayed absorbable braided polyglactin 910 on a taper cut needle or 3-0 delayed absorbable monofilament poliglecaprone 25.

Internal anal sphincter appears pale pink shiny thick tissue over rectal mucosa. It retracts laterally and upwards and is stitched by interrupted vertical mattress or continuous non locking stitch with 2-0 delayed absorbable braided polyglactin 910 on a taper cut needle or 3-0 monofilament polydioxanone

External anal sphincter is beefy red in colour and is approximated with 2-3 interrupted end to end or overlapping stitches with 2-0 delayed absorbable braided polyglactin 910 or 3-0 delayed absorbable monofilament Polydioxanone. In the absence of clear evidence favoring one technique over the other, the choice of overlap or end-to-end repair should be based upon the surgeon's preference and experience. Usually if the external anal sphincter is partially disrupted it is approximated by interrupted stitches where as overlapping technique is preferred in complete disruption.

Perineal muscles are approximated next followed by skin. This is the last step to rebuild the distal rectovaginal septum and perineal body. Interrupted stitches are used for muscles. Skin can be approximated by interrupted or subcuticular stitch. The suture used is delayed absorbable braided 2-0 polyglactin 910 on cutting needle.

Postoperative care

This entails use of broad-spectrum antibiotics for 5-7 days. The self-retaining catheter can be left in for 12-24 hrs. Adequate pain control with analgesics is prescribed. Graduated diet from being nil orally for a few hours to oral liquids for 24 hours followed by a soft diet for 3-4 days and full diet there after especially if rectal mucosa is involved. Consider stool softeners and oral laxatives from day 2-3 to reduce pain at the time of first bowel movement and possibly to reduce the risk of wound dehiscence.

It is important to do debriefing of the team involved in the management of this patient and of the patient and her family. Physiotherapy and pelvic floor exercises are advised after 6-12 weeks of repair.

Follow up

Patient is called for follow up after 6-8 weeks. The woman should be asked for any symptoms suggestive of anal incontinence. The perineum is inspected, and a vagina and rectal examination are carried out to assess the tone of external sphincter. She is advised to continue perineal exercises and counselled regarding subsequent pregnancies and births. Vaginal delivery may be offered to asymptomatic women with a risk of 3-5% recurrence. Caesarean section is indicated for symptomatic and those with 2 or more repairs

Key Messages

- Thorough assessment for extent of damage is important following all the three steps see, palpate, squeeze with finger in the anal canal
- Proper identification of all structures is important for correct apposition
- CPT must be repaired in OT under anaesthesia
- Informed consent must be obtained prior to repair
- The goal is to reconstruct a perineal body 3 cm long and 2 cm thick
- A layered closure in the following sequence is desirable rectal mucosa, internal sphincter, external sphincter, vaginal mucosa, perineal muscles, and skin
- Follow up with perineal exercises and advice regarding future birth is important

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Artificial Intelligence in Health Care-What we Need to Know

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Human evolution has been a gradual process of change over a period of approximately six million years.Evolution is an ongoing process.In the quest to achieve more ,technology has played a major role.In this context, ARTIFICIAL INTELLIGENCE is the new kid on the block.

What is Artificial Intelligence?

Artificial Intelligence(AI),also called Machine Intelligence is defined as the simulation of human intelligence processes by machines especially computer systems that are programmed to think like humans and mimic their actions which mainly include learning and problem solving. In simple words it is the ability of machines to replicate and enhance human intellect such as reasoning and learning from experience.

Historical Overview of Artificial Intelligence in Medicine

Artificial Intelligence is neither a new word nor a new technology for researchers. This technology is much older than we could imagine. There are certain myths of mechanical men in Ancient Greek and Egypt. The first work now recognized as AI was donein 1943 when a model of artificial neurons was proposed.

The beginning of modern AI can be traced to attempts by researchers to describe human thinking as a symbolic system. It was in 1956….American computer scientist John McCarthy formally coined the term "Artificial Intelligence" at the Conference of Dartmouth College,Hanover in New Hampshire.This gave succeeding generations of scientists their first sense of the potential for Information Technology to be of benefit to human beings in a profound way.

Timeline of Artificial Intelligence in Health Care

1. 1960-1970:Produced first problem solving program or expert system known as Dendral assisting to identifying bacteria and recommending antibiotics.
2. 1980s—1990s:Growth of microcomputer and new levels of network connectivity.AI systems in health care was designed to accommodate the absence of perfect data and build on the expertise of physicians.
3. 2010-2019:Genomic sequencing databases, AI in electronic health record systems, natural language processing and computer vision, Robot assisted surgery.
4. 2019 & onwards: Discovery and development of drugs,preclinical research, personalized health care.

Integration of AI with Medicine has transformed the health care delivery in a big way. It is no longer a science fiction but a reality.AI is shaping the future of Modern Medicine.

Ai Technology Used In Health Care :

A. Machine learning
B. Machine vision
C. Natural language processing
D. Robotics

Applications of ai in Health Care :

AI applications are expanding the frontiers into areas that were previously thought to be the domain of human experts.AI has a role in the following sectors…

1. Radiology
2. Dermatology
3. Pathology
4. Cardiology
5. Neuroscience
6. Chronic diseases
7. Oncology
8. Drug development
9. Digital consultation
10. Robotic surgery
11. Training—Customized and Automated teaching
12. Research on molecular epidemiology

13. Public Health-In screening
    - In epidemic prediction
    - In disease surveillance
    - In water treatment

Benefits of Artificial Intelligence

1. Increased efficiency of diagnosis process
2. Make treatment decisions faster
3. Reduces overall treatment cost
4. No of hospital visits reduced
5. Easy information sharing
6. Enhanced patient care
7. Better preventive care
8. Safer surgery
9. Helps to reduce human errors

Limitations of Artificial Intelligence in Medicine

1. Need human supervision
2. Lack of compassion and emotional connect
3. May overlook social variables
4. Inaccuracy may be possible
5. Susceptible to security risk
6. May render some jobs redundant

Challenges for Artificial Intelligence in Health Care

1. Gathering data
2. Maintaining compliance
3. Identifying use cases
4. Eliminating Black box
5. Educating staff and patients

Future of Artificial Intelligence in Health Care

AI is shaping the future of modern medicine. The future of AI in health care could include tasks that range from simple to complex----everything from answering the phone to medical record review, population health trending and analytics, therapeutic drug and device design,reading radiology images, making clinical diagnoses and treatment plans and even talking with patients.

Next….the big question is….

Will Artificial Intelligence actually replace humans?

The answer is simply NO

AI cannot have EMPATHY

At the core of empathy is:

1. Process of building trust
2. Listening to other person
3. Paying attention to their needs
4. Expressing feeling of compassion
5. Respondingsuch that the other person feels they were understood

Conclusion

1. The potential of AI for making health care better is indisputable.
2. Successful integration of AI in the health care system is a big challenge
3. In its current form AI is designed to augment human capabilities and not replace them.
4. AI assists the doctors by speeding up the diagnosis and treatment, so that doctors can focus on tasks that matter
5. Human oversight will continue to be needed to verify the accuracy of AI outputs and ensure that clinical decisions are appropriately tailored as per the needs of the patient.
6. NEED OF THE HOUR: Health care institutions should embrace AI….EXPLORE & EXPLOIT the full potential of AI
7. The ultimate future perception could be walk thru scanners and we are able to diagnose certain diseases

Asthetic & Regenerative Gynaecology

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Introduction

Asthetic, Regenerative and Cosmetic Gynaecology are procedures which are done to alter the appearance and structure of normal healthy female external & internal genetalia for non medical indications.

The specialty of cosmetic gynaecology is relatively new in many countries including India (Indian Society of Asthetic & Regeneratively gynaecology) established 2019.

The asthetic & cosmetic procedures included in the definition are vaginal tightening correction of labia majora & minora, clitoral hood corrections monspubis enhancement or reduction, procedures on perineum, vulva, vagina, hymen and abdomen.

Women today are unhappy and insecure about their bodies due to peer pressures dressing ups and various fantasies, this has led to a demand of cosmetic procedures on normal external & internal gentalia. These procedures are also now hyped in the media and social platforms.

The common procedures done on Labioplasty, clitoral hood reduction, hymenoplasty, vaginoplasty, perineoplasty and G-Spot augmentation.[1,2,3,4,5] A combination of above procedures is being offered on "VAGINAL REJUVINATION" post vaginal delivery. The various energy sources being used for non invasive vaginal tightening include RF and different types of lasers.[6]

The procedures above are used both for functional and anatomical restoration of pelvic support defects and also as cosmetic (on demand procedures)[7]. The cosmetic gynaecological procedures have shown to enhance and improve self esteem and sexual function.[8] All the above procedures are now being classified as FGCS(Female Gynaecological Cosmetic Surgery). A comprehensive review by brain explores all aspects of FGCS.[9]

Concerns have been raised against FGCS and these are viewed as female genital mutilation. Various societies of ObGyn including ACOG, RCOG, Austration and New Zealand College and Malaysaian Society are now putting forwards recommendations (1-4) and policy for its members.

The InSARG (Indian Society of Asthetic & Regerative Gynaecology) is also in process of forming policy and guidelines for Indian Obstetricians & Gynaecologists and Indian patients.

Table 1 - Shows Variability of Female Genitalia

	Mean (in mm)	Standard Deviation	Minimum (in mm)	Maximum (in mm)
Width of clitoris	4.62	2.538	1	22
Length of clitoris	6.89	4.965	0.5	34
Distance clitoris–urethra	22.63	7.661	3	65
Introitus opening	27.91	10.36	6	75
Length of perineum	21.34	8.544	3	55
Length of labia majora (right)	79.71	15.25	12	180
Length of labia majora (left)	79.99	15.44	20	180
Length of labia minora (right)	42.1	16.35	6	100
Length of labia minora (left)	42.97	16.29	5	100
Width of labia minora (right)	13.4	7.875	2	61
Width of labia minora (left)	14.15	7.643	1	42

*Measurements were taken of the clitoral gland, distance from the base of the gland to the urethral orifice, length of introitus, length of perineum, length of labia majora, and length and width of labia minora. Measurements outside of these ranges do not indicate abnormal anatomy.
Modified from Kreklau A, Vaz I, Oehme F, Strub F, Brechbuhl R, Christmann C, et al. Measurements of a 'normal vulva' in women aged 15–84: a cross-sectional prospective single-centre study. BJOG 2018;125:1656–61.

Anatomy & Physiology

Female gentalia shows a very diverse spectrum of normal anatomic variation.

Fig 1 : The Great vulval wall

Both urinary tract and reproductive structures form the female external gentalia, collectively call as VULVA.

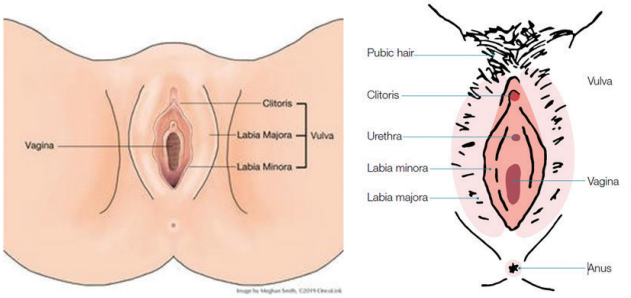

Fig 2a & 2b : Anatomy of Female Genitalia

The vulva is made up of-

a. Mons Pubis

b. Labia Majora

c. Labia Minora

d. Clitens
e. Urethra
f. Vestibule
g. Vestibular bulb
h. Bartholin's gland
i. Skene's glands
j. Vaginal opening
k. Hymen

The female external gentalia varies in almost all females in shape, size & color but despite of the estrogen dependent anatomical variations the functions of these structures remain same in all women[10] with female ageing and fall in estrogen levels these structures undergo atrophy and the functions also decrease[11,12]

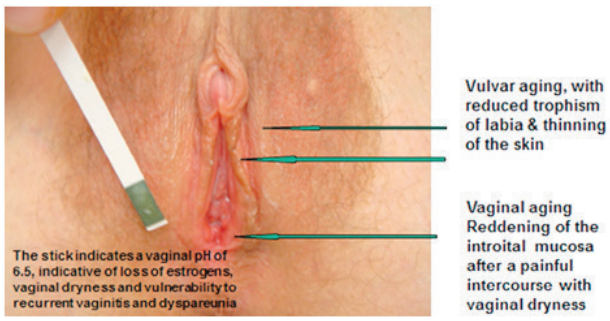

Fig 3. Progressive vulvovaginal ageing after menopause

As these organs are endocrine dependent, a defect in the hormonial secretions can lead to altered anatomy and physiology which may need medical treatment (ERT, Androgens, cortisol, etc) or even need surgical correction (FCGS) like labian fusion, clitoral hood reduction and others.[13,14] (Fig-4)

Fig 4- Clitoral hood enlargement at 12 years age

Fig 5a,b - Posterior vaginal wall old tears

PROCEDURES & TECHNIQUE

Surgical procedures under FGCS are (1-5)

1. Labiaplasty
2. Clitoral hood reduction
3. Hymenoplasty
4. Vaginoplasty
5. Perineoplasty
6. Vulval Lipoplasty
7. G-Spot Augumentation
8. Orgasm Shot (O-Shot)

Table shows cosmetic genital procedures[14,15]

Table 2 - Cosmetic Genital Procedures

Type of Procedure	Purported Benefit*	Procedures Used	Reported or Potential Complications
Surgical Procedures			
Clitoral hood reduction	To improve sexual function by increasing sensitivity and allowing more direct clitoral contact	Hoodectomy Note: Often combined with labiaplasty to create labia minora symmetry and prevent clitoral hood sagging	• Scarring • Infection • Hematoma • Hypersensitivity • Damage to the glans
Labiaplasty	To eliminate unwanted tissue of the labia minora or labia majora	• Trim or edge resection • Wedge resection using a V-shaped or Y-shaped incision • Z-plasty • De-epithelialization	• Scarring • Infection • Hypersensitivity or loss of sensation • Dyspareunia • Wound dehiscence
Labia majora augmentation	To create a full, symmetric look	• Autologous fat transplantation • Injectable fillers (hyaluronic acid)	Palpable fatty cysts
Hymenoplasty	To recreate the virginal state of the hymen; has cultural roots in regions that place a value on an unmarried woman's virginity	Reconstruction of hymenal remnants, vaginal mucosal flaps, or both	Wound dehiscence
Vaginoplasty	To tighten vaginal contour and increase sexual satisfaction	• Anterior, posterior, or lateral colporrhaphy • Rugation restoration† • Energy-based devices	• Infection • Dyspareunia • Dehiscence • Fistula
Energy-Based Interventions			
Energy-based vaginal procedures†	To tighten vaginal contour and increase sexual sensation	Laser radiofrequency	• Burns • Scarring • Pain during sexual intercourse • Recurring or chronic pain
Injections			
G-spot amplification	To augment G-spot and heighten sexual satisfaction	• Autologous fat transfer • Hyaluronic acid	• Urinary tract infection • Infection

*This may not be the patient goal, but these procedures are often marketed with these outcomes.
†U.S. Food and Drug Administration. FDA warns against use of energy-based devices to perform vaginal 'rejuvenation' or vaginal cosmetic procedures: FDA safety communication. Silver Spring (MD): FDA; 2018. Available at: https://www.fda.gov/MedicalDevices/Safety/AlertsandNotices/ucm615013.htm. Retrieved August 26, 2019.

Labiaplasty - The most commonly performed FGCS procedure, this involves removal of tissue from labia minora that extends beyond the labia majora and/ or removal or increase tissue from the labia majora in order to achieve symmetry.

The procedure falls into two broad categories:

- Amputation technique, or labial trim, where the edge of the labium is cut out and the edges sewn over.[17]
- Removal of a section of the labia to preserve the natural contour, such as wedge resection and de-epithelialisation techniques.[18,19]

Clitoral hood reduction – Exposes clitoris and aims to increase sensitivity. This is sometimes combined with a labiaplasty procedure.

Perineoplasty – Undertaken to strengthen the pelvic floor and, in the FGCS setting, aimed at establishing penile pressure with coital thrust.[20] This procedure is technically similar to perineal reconstruction, in which the perineal length is restored following childbirth trauma or previous surgery. It is commonly performed as part of vaginal prolapse surgery. However, even in this setting there is no evidence that this procedure improves sexual function and, in fact, it may cause dyspareunia.

Vaginoplasty – The purpose of this procedure is vaginal creation in gender reassignment but, in the FGCS setting, it refers to tightening the vagina, which can be surgical or non-surgical – as in 'laser vaginal rejuvenation' or 'designer laser vaginoplasty'.

Hymenoplasty – Also called 'revirgination' and is designed to restore the hymen. It is often advertised as a 'gift' to one's partner.[14] This procedure is occasionally requested by women of certain cultural backgrounds in which premarital sex is forbidden and an intact hymen is considered evidence of virginity.[18]

Vulval lipoplasty – Removal of fat from mons pubis or augmentation of the vulva.

G-spot augmentation – Involves autologous fat or collagen transfer via injection into the pre-determined G-spot location. There is no existing scientific literature describing this procedure. Similar procedures include G-spot amplification and G-shot collagen injection into the region.[21]

Orgasm shot (O-shot) – Often described as a sexual and cosmetic rejuvenation procedure for the vagina using the preparation and injection of blood-derived growth factors into the G-spot, clitoris and labia.[18,20]

Terms such as 'vaginal rejuvenation', 'designer laser vaginoplasty', 'revirgination' and 'G-shot' are commercial in nature. The consumers at whom they are targeted can then mistakenly believe such official-sounding terms refer to medically-recognised procedures.[22,23]

Cosmetic surgery redefines the patient as a 'consumer', and uses advertising to promote the 'product'. Advertising for female genital cosmetic surgery tends to reflect and reinforce sociocultural messages about the vulva and vagina, potentially creating dissatisfaction among women who do not meet the narrow ideal of normality. Advertising suggests that FGCS procedures are simple, and offer high levels of satisfaction. It normalises surgical procedures and is likely to create demand among those women who experience genital dissatisfaction.[20, 21]

INDICATION & CONTRAINDICATIONS

There are as per say no clear indications of FGCS. It's usually the desire to alter the external genitalia appearance.

FGCS is non medically indicated cosmetic surgical procedures on healthy external (vulva) and internal (vagina)[24,25]

As these are done on normal healthy organs there is debate that these procedures come under female genital mutilation or cutting as described by W.H.O.

The World Health Organization (WHO) defines FGM/C as 'all procedures involving partial or total removal of the external female genitalia or other injury to the female genital organs for non-medical reasons'. It is generally performed on children or adolescents who are not able to provide informed consent. There are no known health benefits and it is known to be harmful to girls and women in many ways.[25]

There is some debate about whether FGCS is covered by legal definitions of FGM/C and, therefore, illegal under existing regulations. The adequacy of outcome data considered is central to informed consent for FGCS, as for all medical procedures.[26]

The common requests for performing FGCS are-

1. Adolescents wanting change in labial anatomy. There is only a woman's perception to what is normal because of the diverse appearance of the gentalia (the great vulval wall). Hence many adolescents young women wish a change to "desirable" rather them "normal" for many reasons
    a. Fashion trends
    b. Braizilian waxing
    c. Wearing tight fitting clothes and G-strings

Such fashions and grooming, drive these women to seek surgical / non surgical alterations in genital

appearances[25,26].

Fashion terms such as "camel toe" and "outie" and many women in fashion industry may feel uncomfortable with genital appearances and have a perception that the female external genitalia should be small an discrete.

2. Enhancement of sexual pleasure procedures like energy based vaginal tightening vaginal rejuvenation, G-spot augmentation, orgasm shot & even bleaching.
3. Some medical indications for FGCS are
   a. Mild degree of prolapse
   b. Cystocele
   c. Idiopathic vulva & vaginal itching
   d. GSM
   e. Dyspareunia
   f. Perinea / anal itching
   g. Perinea / anal itching
   h. Scar marks (Pregnancy stria / operative marks of episiotomy / c-section)
   i. Breast tightening
   j. Abdominal wall tightening
4. Fat reduction surgery on mons, lower abd, arms, breasts etc
5. Fat grafting and augument.

PRACTICAL TIPS

1. Women's requests need to be respected
2. Counseling is very important
3. FGCS should be done only by trained specialists (Gynaecologists or plastic surgeons)
4. Always a second opinion must be documented
5. Psychological counseling should be done
6. All the symptoms & concerns should be discussed and documented
7. Diagrammatically and photographically the procedures should be explained and what she wants should be documented and consented
8. Risks & complications should be explained including non healing, scarring etc
9. Women undergoing these procedure should be counseled regarding all anatomy, physiology and sexual function
10. Training in procedures and energy based devices & equipment is very–very essential. Some certification and membership of local organization (InSARG) (ESARG) must be made compulsory.

VARIOUS COMMITTEE STATEMENTS

1. Australian media code of conduct on body image

Australia's *Voluntary media code of conduct on body image* was designed to encourage the fashion, media and advertising industries to place greater emphasis on diversity, positive body images and a focus on health rather than body shape. In doing so, it aims to reduce young people's susceptibility to feelings of low self-esteem, eating disorders and negative body image that are associated with exposure to idealised and unrealistic images seen in the media and advertising.[4,35,51]

The code of conduct:

a. Discourages the use of digitally enhanced or altered pictures and suggests these digitally pictures be identified as such
b. Encourages the use of images that represent the diversity of body shapes
c. Encourages the considered placement of advertising on dieting, cosmetic surgery, etc
d. Discourages the 'glamourisation' of models and celebrities who are particularly underweight and instead encourages a focus on models with a healthy body shape.

2. Guidelines for gynaecological examinations and procedures

The gynaecological examination of women is a formal process and potentially intimidating to women, some of whom may have suffered various degrees of physical or sexual abuse during their lives.

Doctors should consider the information provided by women, listen and respond sensitively to their questions and concerns.

According to the Royal Australian and New Zealand College of Obstetricians and Gynaecologists (RANZCOG) *Guidelines for Gynaecological Examinations and Procedures C-Gyn 30*:41

Awareness of cultural or religious factors is essential when discussing and offering gynaecological examination.

Where examination is indicated, doctors should ensure that:

a. an adequate explanation is provided about the nature of an examination and the information that it will provide
b. the patient has the opportunity to decline examination
c. permission is obtained, especially for breast and/or pelvic examination
d. privacy is provided for disrobing
e. suitable cover is provided during examination, for example, gown or cover sheet
f. a chaperone is available to attend any patient undergoing physical examination when requested, irrespective of the gender of the doctor.
g. the patient must be made aware in advance of the presence of medical students and the right to decline their attendance at any examination
h. it may be appropriate to delay examination until a follow-up appointment.

With respect to examination of young women and children, see the Royal Australasian College of Physicians (RACP) policy *Genital Examinations in Girls and Young Women: A Clinical Practice Guideline*, available at https://www.racp.edu.au/docs/default-source/advocacy-library/genital-examinations-in-girls-and-youngwomen-a-clinical-practice-guideline.pdf

In addition to these RANZCOG guidelines, it is recommended that patients watch the examination with a mirror to assist their understanding of the anatomy and what constitutes normal. The doctor should refrain from using language that is judgemental, expresses surprise or can be construedas derogatory when performing the examination.

Reproduced with permission from the Royal Australian and New Zealand College of Obstetricians and Gynaecologists (RANZCOG) College Statement C-Gyn 30. Melbourne: RANZCOG; 2004.

3. How FGM legislation applies to cosmetic procedures

RACGP fact sheet

Female genital cosmetic surgery and the law

Currently, each state and territory has provisions in their respective criminal law statutes which make the practice of female genital mutilation (FGM)1 illegal.

These laws apply extraterritorially in all jurisdictions, which means people who are involved in FGM overseas or in another state or territory can be charged under these laws. In all states except NSW, it is also an offence to remove someone from the jurisdiction with the intention of having FGM performed on that person. The penalties range from seven years to 21 years' imprisonment.

All jurisdictions define FGM. These definitions are broadly consistent with each other and cover the same conduct for FGM as defined by the World Health Organisation (WHO). Under the legislation in each state and territory, having the consent of the person who is to be the subject of FGM, or their parent or guardian, is not a defence for the practice of FGM.

The legal definitions

The various statutes define FGM as the excision, infibulation or any other mutilation of the whole or any part of the female genitalia2. The definitions would arguably apply to some procedures such as labiaplasty. However, the Acts state that it is not an offence if a procedure is performed for a "genuine therapeutic purpose"3; a "proper medical purpose"4; or is "necessary for the health"5 of the patient.

In a report released in March 2013, the Commonwealth Attorney-General's Department raised concerns about how the law and policy apply to female genital cosmetic surgery (FGCS). The report stated that anecdotal evidence suggests the incidence of FGCS has increased significantly since 1998, when the Model Laws(on which the legislation in each state and territory is based) were drafted.

Statistics from the Australian Institute of Health and Welfare (AIHW) show the number of labiaplasty procedures performed annually has been steady for the last 10 years, at about 1,500 procedures per year.

It was contemplated in the Attorney-General's report that the legislation, and how it may apply to FGCS, would be reviewed and clarified. The report's recommendations were considered by the Standing Council on Law and Justice6 in April 2013 and agreed to by the Standing Council, but there have been no further developments as at the date of release of the toolkit. Therefore some legal uncertainty remains.

In the interim, the Royal Australian and New Zealand

College of Obstetricians and Gynaecologists (RANZCOG) released an updated statement in relation to FGCS in March 2015.

Concerns and recommendations

It is arguable that the legislative exceptions for medical treatment would apply to a cosmetic procedure where consent had been provided and the procedure is performed by an appropriately qualified medical practitioner.

However, if a procedure is purely cosmetic, for example because a patient has anxiety about the appearance of their labia, it may not trigger the exceptions under each State and Territory Act. This applies particularly in NSW and Victoria, where the respective Acts state the procedure must be "necessary for the health of the person on whom it is performed" but without defining the words "necessary" and "health". This concern is heightened given the patient's consent is not a defence.

The absence of greater legal clarity does not mean that FGCS needs to be avoided altogether. Rather, it means that medical practitioners should be mindful of this when discussing FGCS with patients and documenting those discussions in their clinical records.

This uncertainty is likely to have a greater impact on the surgeons performing the procedures in question, rather than on general practitioners or other health professionals whose involvement will largely be limited to referrals. However, in the course of providing such referrals to patients, there is likely to be some discussion about the patient's reason for requesting the referral and you may find yourself giving them some information or advice about various options in general terms.

Given the legal uncertainty, it is even more important that doctors make sure their clinical records include notes addressing:

- The patient's presenting problem and concerns
- Any options for treatment discussed with the patient
- The nature and details of the referral provided
- Any other matters discussed with the patient regarding the procedure or their concerns.

Avant will continue to monitor this issue and how it affects members. If in doubt, please contact Avant on 1800 128 268.

1. See sections 73 to 77 inclusive of the Crimes Act 1900 (ACT); sections 15, 32 to 34A inclusive of the Crimes Act 1958 (Vic); section 45 of the Crimes Act 1900 (NSW); sections 323A and 323B of the Criminal Code 1899 (Qld); sections 186A, 186B, 186C and 186D of the Criminal Code Act 1983 (NT); sections 33, 33A and 33B of the Criminal Law Consolidation Act 1935 (SA); sections 178A, 178B, 178C and Schedule 1 of the Criminal Code Act 1924 (Tas); section 306 of the Criminal Code Act Compilation Act 1913 (WA).
2. This includes the labia majora, labia minor or clitoris, as specified in some of the state and territory legislative definitions.
3. In the ACT, Northern Territory, Queensland, South Australia and Tasmania.
4. In Western Australia.
5. In New South Wales and Victoria.
6. Now called the Law, Crime and Community Safety Council (LCCSC).
7. "Vaginal 'rejuvenation' and cosmetic vaginal procedures" statement, C-Gyn 24, RANZCOG, reviewed and released in March 2015.
8. To date, there have been no successful prosecutions under the various Acts in the states and territories. As far as we are aware, there have only been two cases where charges have been brought in NSW and one case in WA. The charge in the first NSW case was against a medical practitioner but was not upheld by the jury because of the "medical necessity" defence (charges were subsequently brought and upheld under a different section of the Crimes Act). The WA case (against parents of the victim) and the second NSW case (against eight people including a retired nurse) have not yet been concluded.

4. Statements from peak bodies

Royal College of Obstetricians and Gynaecologists and Brit SPAG

According to the joint Royal College of Obstetricians and Gynaecologists (RCOG)–BritSPAG release, *Issues surrounding women and girls undergoing female genital cosmetic surgery explored*, the RCOG ethical opinion paper, *Ethical considerations in relation to female genital cosmetic surgery (FGCS)*, has been produced by the College's Ethics Committee and focuses on women of all ages undergoing FGCS.

FGCS refers to non-medically indicated cosmetic surgical procedures which change the structure and appearance of the healthy external genitalia

of women, or internally in the case of vaginal tightening. This definition includes the most common procedure, labiaplasty, as well as others, such as hymenoplasty and vaginoplasty, also known as vaginal reconstruction and vaginal rejuvenation.

A number of recommendations are made in the paper, including:

- Women should be provided with accurate information about the normal variations in female genitalia and offered counselling and other psychological treatments for problems such as body image distress.
- Women must be informed about the risks of the procedure and the lack of reliable evidence concerning its positive effects.
- As full genital development is not normally achieved before 18 years of age, FGCS should not normally be carried out on girls under this age.
- Surgeons who undertake FGCS should keep written records of the physical and mental health reasons why the procedure was carried out.
- Advertising of FGCS should not mislead people on what is deemed to be normal or what is possible with surgery.
- In general, FGCS should not be undertaken within the National Health Service (NHS) unless it is medically indicated.
- The paper offers clinicians recommendations for best practice, including:
- A genital examination should be offered and conducted sensitively.
- Information about normal variations should be offered.
- Surgical reduction before the completion of pubertal development may lead to long term problems and this should be communicated to the girl and her guardian where appropriate.
- Simple measures to relieve labial discomfort should be suggested.
- In case of significant psychological distress, the girl and family should be offered a referral to a paediatric clinical psychologist.

Reproduced with permission from the Royal College of Obstetricians and Gynaecologists. Female genital cosmetic surgery. Ethical opinion paper. London: RCOG; 2013.

5. **Society of Obstetricians and Gynaecologists of Canada**
   According to the article 'Female genital cosmetic surgery', published in *Journal of Obstetrics and Gynaecology Canada*:52

Recommendations

1. The obstetrician and gynaecologist should play an important role in helping women to understand their anatomy and to respect individual variations. (III-A)
2. For women who present with requests for vaginal cosmetic procedures, a complete medical, sexual, and gynaecologic history should be obtained and the absence of any major sexual or psychological dysfunction should be ascertained. Any possibility of coercion or exploitation should be ruled out. (III-B)
3. Counselling should be a priority for women requesting FGCS. Topics should include normal variation and physiological changes over the lifespan, as well as the possibility of unintended consequences of cosmetic surgery to the genital area. The lack of evidence regarding outcomes and the lack of data on the impact of subsequent changes during pregnancy or menopause should also be discussed and considered part of the informed consent process. (III-L)
4. There is little evidence to support any of the FGCSs in terms of improvement to sexual satisfaction or self-image. Physicians choosing to proceed with these cosmetic procedures should not promote these surgeries for the enhancement of sexual function and advertising of female genital cosmetic surgical procedures should be avoided. (III-L)
5. Physicians who see adolescents requesting FGCS require additional expertise in counseling adolescents. Such procedures should not be offered until complete maturity including genital maturity, and parental consent is not required at that time. (III-L)
6. Non-medical terms, including but not restricted to vaginal rejuvenation, clitoral resurfacing, and G-spot enhancement, should be recognized as marketing terms only, with no medical origin; therefore they cannot be scientifically evaluated. (III-L)

Key to evidence statements and grading of

recommendations, using the ranking of the Canadian Task Force on Preventive Health Care.

Quality of evidence assessment

I: Evidence obtained from at least one properly randomized controlled trial.

II-1: Evidence from well-designed controlled trials without randomization.

II-2: Evidence from well-designed cohort (prospective or retrospective) or case–control studies, preferably from more than one centre or research group.

II-3: Evidence obtained from comparisons between times or places with or without the intervention. Dramatic results in uncontrolled experiments (such as the results of treatment with penicillin in the 1940s) could also be included in this category.

III: Opinions of respected authorities, based on clinical experience, descriptive studies, or reports of expert committees.

6. The Royal Australian and New Zealand College of Obstetricians and Gynaecologists
Vaginal 'rejuvenation' and cosmetic vaginal procedures

This statement has been developed and reviewed by the Women's Health Committee and approved by the RANZCOG Board and Council.

A list of Women's Health Committee Members can be found in Appendix A. Disclosure statements have been received from all members of this committee.

Disclaimer: This information is intended to provide general advice to practitioners. This information should not be relied on as a substitute for proper assessment with respect to the particular circumstances of each case and the needs of any patient. This document reflects emerging clinical and scientific advances as of the date issued and is subject to change. The document has been prepared having regard to general circumstances.

First endorsed by RANZCOG: July 2008

Current: March 2015

Review due: March 2018

Background: This statement was first developed by Women's Health Committee in July 2008 and most recently reviewed in March 2015.

Funding: The development and review o of this statement was funded by RANZCOG.

Surgical or laser techniques available which claim to improve the appearance of the female genital tract and enhance sexual function such as "vaginal rejuvenation", "revirgination", "designer vaginoplasty", "G spot amplification" are poorly understood and what is involved in these procedures is often unclear since recognised clinical nomenclature is not being used.

The American College of Obstetricians and Gynecologists (ACOG) Committee on Gynecologic Practice and the Society of Obstetricians and Gynaecologists of Canada have produced documents discouraging the practice of female genital cosmetic surgeries which do not include medically-indicated reconstructions.[1,2] Gynaecological conditions that merit surgery include genital prolapse, reconstructive surgery following female genital mutilation and labioplasties with clinical indications. Medical practitioners performing any vaginal surgery should be appropriately trained.

Recommendations by these bodies include that the obstetrician and gynaecologist should have a role in educating women that there is a large number of variations in the appearance of normal female external genitalia and that there are normal physiological changes over time, especially following childbirth and menopause. Patients requesting procedures other than for gynaecological conditions should be assessed thoroughly and the reasons for such a request assessed carefully. Sexual counselling is also recommended for patients requesting surgery that is purported to enhance gratification. The College is particularly concerned that such surgery may exploit vulnerable women. Doctors who perform these procedures should not promote or advertise that these surgeries enhance sexual function.

The College strongly discourages the performance of any surgical or laser procedure that lacks current peer reviewed scientific evidence other than in the context of an appropriately constructed clinical trial. At present, there is little high quality evidence, that these procedures are effective, enhance sexual function or improve self-image. The risks of potential complications such as scarring, adhesions, permanent disfigurement, infection, dyspareunia and altered sexual sensations should be discussed in detail with women seeking such treatments.[3]

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3. Singh A, Swift S, Khullar V, Digesu A. Laser vaginal rejuvenation: not ready for prime time. Int Urogynecol J. 2015;26:163-164.
7. Medical Women's International Association
   According to resolutions passed at the Medical Women's International Association (MWIA) 29th International Congress in Seoul, 2013:

   MWIA recognises the autonomy of women and upholds the right of adult women to choose to undergo lawful medical and surgical treatments. MWIA advocates for the provision of informed consent for all patients undergoing medical and surgical procedures.

   MWIA opposes the advertising of regulated health services (eg those usually provided by a healthcare practitioner) in a way that directly or indirectly encourages their indiscriminate or unnecessary use.

   MWIA opposes the promotion of and use of surgical products and techniques that make unproven claims of enhancing female sexual satisfaction and/or attractiveness. MWIA believes that promoting and performing such surgery carries significant risks of physical and psychological harm to women and girls.

   MWIA supports the use of gynaecological and plastic surgical techniques where the primary aim is to repair or reconstruct normal female anatomy following trauma, harmful traditional practices, pathologic processes or congenital anomalies.

   MWIA opposes media depictions that directly or indirectly promote a prepubescent appearance of female genitalia as sexually desirable. MWIA opposes media images that directly or indirectly promote abnormal perceptions of the appearance of normal female adult genitalia.

   Refer to: http://mwia.net/wp-content/uploads/2013/09/MWIA_update_september_2013.pdf
8. The American College of Obstetricians and Gynaecologists
   The American College of Obstetricians and Gynaecologists released a committee opinion in 2007 titled Vaginal 'Rejuvenation' and Cosmetic Vaginal Procedures, available at www.acog.org/Resources-And-Publications/Committee-Opinions/Committee-on-Gynecologic-Practice/Vaginal-Rejuvenation-and-Cosmetic-Vaginal-Procedures
9. The Royal Australasian College of Physicians
   The Royal Australasian College of Physicians have released a clinical practice guideline in 2009, titled Genital examinations in girls and young women: a clinical practice guideline, available at www.racp.edu.au/docs/default-source/advocacy-library/genital-examinations-in-girls-and-youngwomen-a-clinical-practice-guideline.pdf
10. Good medical practice code of conduct
    Under a set of draft guidelines released by the Medical Board of Australia in March 2015, GPs have a central role to play in advising patients considering cosmetic surgery.

    According to a committee of the Australian Health Workforce Ministerial Council, the guidelines will be added as a supplement to the Medical Board of Australia's Good medical practice: A code of conduct for doctors in Australia, available at www.amc.org.au/about/good-medical-practice

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WHO antenatal care recommendations for positive pregnancy experience

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Reduction in maternal and newborn mortality is a priority action for India for achieving the Sustainable Development Goals (SDG). The SDGs aim to reduce global maternal mortality ratio to less than 70 per 100,000 live births (LB) by 2030. Current maternal mortality ratio of India is 103 (SRS 2021) and to achieve the goals set out in SDGs India needs to achieve further reductions in its newborn and maternal mortality.

Over the last two decades, India has made considerable progress in health, which was further accelerated under the National Health Mission (NHM) that has improved the availability of and access to quality health care services for the population.

With the launch of demand driven schemes like Janani Suraksha Yojana (JSY) and later as Janani Shishu Suraksha Karyakram (JSSK) the government has worked towards increasing access to care during antenatal, intrapartum and post-natal care. The skills birth attendant program was focused on improving the quality of antenatal services while assuring the presence of trained providers for care during childbirth and post-partum period. This has been successful in improving the antenatal registration in the country. Data from the recent NFHS survey shows that the proportion of women age 15-49 in India who received ANC has risen from 58.6 percent in NFHS-4 (2015-16) to 70.0 percent in NFHS-5 (2019-21).

During recent years, the Government of India (GoI) has intensified its efforts on improving the quality of services during childbirth to address major causes of mortality through labor room quality improvement initiatives like Dakshata, LaQshya and SUMAN program. However, many conditions causing risk of death both for the mother and her newborn have roots in the antenatal period. Such conditions can be avoided if identified and managed early and efficiently in the antenatal period.

As part of the continuum of care, antenatal care (ANC) is a critical time period for women, babies, families and communities. It has been established that by implementing timely and appropriate evidence-based practices, ANC can save lives. Crucially, ANC also provides the opportunity to communicate with and support women, families and communities at a critical time in the course of a woman's life. However, as a platform to provide integrated, quality services for women, it has not been utilized efficiently and effectively. A targeted approach with focus of preventive and therapeutic strategies for managing the conditions through the antenatal period also provides opportunity to create better linkages with appropriate level of care and better birth preparedness for improved outcomes in terms of saving maternal and neonatal lives.

With the objective to provide quality ANC to every pregnant woman the Government of India launched the "Pradhan Mantri Surakshit Matritva Abhiyan" (PMSMA), a flagship initiative by the Prime Minister of India that has been a game changer in improving the access to antenatal care services in the country. The program aims to improve access to high quality ANC services to pregnant women in India through effective planning, better resources, strategic partnership with private sector, and targeted communication strategies to provide a fixed day ANC every month across the country. This is in addition of the routine ANC at the health facility and serves to provide quality antenatal care to over 3 crore pregnant women in the country.

The World Health Organization defines Antenatal care (ANC) as the care provided by skilled health-care professionals to pregnant women and adolescent girls to ensure the best health conditions for both mother and baby during pregnancy. ANC reduces maternal and perinatal morbidity and mortality both directly, through detection and treatment of pregnancy-related complications, and indirectly, through the identification of women and girls at increased risk of developing complications during labour and delivery, thus ensuring referral to an appropriate level of care. In addition, ANC also provides an opportunity for the health systems to address the indirect causes of maternal morbidity and mortality like HIV and Malaria thus helping to prevent and manage concurrent diseases through integrated service delivery.

Recognizing the need for developing a clear evidence-based framework for antenatal care, the WHO released the antenatal care recommendation for positive pregnancy experience in 2016. These guidelines are based upon a review of latest available global evidence

and present important recommendations for both developing and resource-constrained settings. They also provide a great learning and implementation opportunity to better design and provide ANC services in countries and utilize it to strengthen health systems and improve quality of care, thereby improving outcomes for mothers and babies.

As identified in the WHO's framework for quality of antenatal care, content of care and experience of care form the two pillars of quality ANC. The health system provides the structure by which factors such as service delivery models and health workforce organization impact quality of ANC processes. Content of care includes interventions related to maternal and fetal assessment and management, nutritional interventions, infectious disease testing and management, and counselling and information sharing.

Positive pregnancy experience

- Maintaining physical and sociocultural normality
- Maintaining a healthy pregnancy for mother and baby (including preventing and treating risks, illness and death)
- Having an effective transition to positive labour and birth,
- Achieving positive motherhood (including maternal self-esteem, competence and autonomy)

Ensuring quality antenatal services are one of the key element for a healthy society. Good care during pregnancy is important for the health of the mother and the development of the unborn baby. Pregnancy is a crucial time to promote healthy behaviors and parenting skills. Good ANC links the woman and her family with the formal health system, increases the chance of using a skilled attendant at birth and contributes to good health through the life cycle.

The new WHO guidelines make several recommendations across various domains such as nutrition, maternal and fetal assessment, preventive measures, interventions for common symptoms, and health system interventions.

The recommendations aim to provide a human rights-based approach allowing the pregnant women receive person centered care they want and assuring quality of contacts they need for a positive pregnancy experience while accessing the ANC services.

The new ANC guidelines aim to revise the care package and identify key interventions that help ensure healthy pregnancy, effective transition to positive labor and safe motherhood experience for the mother while allowing the health systems address challenges of meeting increased demands for services.

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Care During Pregnancy Among Cancer Survivors

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Introduction:

As improvements in cancer diagnosis and treatment translate to improved outcomes, cancer survivors will continue to grow. Three quarters of children diagnosed with cancer will become survivors and plan pregnancies.

Female fertility depends upon an intact hypothalamic-pituitary-ovarian axis, adequate ovarian follicle reserve and a normally functioning uterus, all of which may be affected by cancer treatment.

Case 1

A 29 years old G2P1 presents at 8 weeks of pregnancy for a routine antenatal care. She had unilateral salphigo-ophorectomy and staging laparotomy seven years back for immature teratoma stage I grade 3. She also had chemotherapy following the surgery. She had spontaneous conception and a vaginal delivery of a healthy child 3 years back. Now presents for routine antenatal care of present pregnancy.

Case 2

A 28 years old G2P0A1 presents for routine antenatal care at first trimester having spontaneous conception. She had history of chorio-carcinoma six years back. She was treated with chemotherapy. Her present antenatal period was uneventful and she delivered a healthy baby at term.

Impact of cancer treatment on pregnancy

Maternal and neonatal outcomes

There are mixed evidence for the association between spontaneous abortion and cancer treatment and varies with different patient cohorts and cancer treatments. A Canadian cohort study of 830 female childhood cancer survivors who received abdominal-pelvic radiotherapy and/or alkylating agents did not find an increased risk of spontaneous abortion.

However, the Childhood Cancer Survival Study, which reported on the outcomes of 4029 pregnancies in 1915 females, found non-statistically significant increases in miscarriage risk in patients whose ovaries were in the radiation field (RR: 1.86, $p = 0.14$) or near the radiation field (RR: 1.64, $p = 0.06$). This study also reported higher miscarriage rates in patients who received cranial irradiation (RR: 1.4) and craniospinal irradiation (RR: 2.22) compared to patients who received no radiotherapy.

Abdominal and pelvic radiotherapy for childhood cancer is consistently associated with increased risk of pre-term delivery and low birth weight (LBW) <2500 g, with odds ratios of up to 3.5 for pre-term delivery and 6.8 for LBW. The mechanism for these findings is that childhood uterine irradiation leads to reduced adult uterine volume and blood supply, which may restrict fetal growth and the ability to carry pregnancies to term. The degree of damage depends on total radiation dose, site of irradiation and patient age at time of treatment, with the prepubertal uterus possibly more vulnerable to the effects of irradiation.

Impaired uterine distensibility due to myometrial fibrosis can be associated with cervical incompetence, contributing to the increased risk of pre-term birth. In some studies, abdominal and pelvic irradiation has also been associated with increased risk of perinatal death and post-partum haemorrhage.

There is no difference in maternal or neonatal outcomes in women treated with chemotherapy, compared to controls. A study of female colorectal cancer (CRC) survivors showed a marginal association between chemotherapy and adverse maternal outcomes, but no link between chemotherapy and adverse neonatal outcomes.

Compared to controls, cancer survivors had higher rates of threatened abortion (<20 weeks), caesarean delivery, premature birth 20–36 weeks, LBW <2500 g, neonatal distress indicated by low Apgar score at 1 min, neonatal resuscitation and neonatal intensive care (NICU) admission.

However, there was no increase in rates of congenital abnormalities, perinatal deaths, antepartum haemorrhage, premature rupture of membranes or failure of labour to progress.

Breastfeeding

For women who carry successful pregnancies after

cancer treatment, breastfeeding may be affected by previous radiotherapy.

The majority (83%) of survivors with offspring reported minimal or no breast changes during pregnancy, and failure to lactate postpartum. This failure to lactate is likely related to deficiencies in the hypothalamic-pituitary-ovarian axis resulting from cranial irradiation.

A case series reported that 34% of women who became pregnant after surgery and radiotherapy lactated from the irradiated breast and 24.5% were able to breastfeed successfully.

Effect of pregnancy on cancer outcomes

Women who became pregnant following breast cancer diagnosis had a 41% reduced risk of death compared to women who did not become pregnant. This information is reassuring in providing evidence that pregnancy in women with previous breast cancer is safe and does not compromise overall survival.

Conclusion:

While cancer treatment may disrupt patients' gonadal function, strategies are available to help preserve the future fertility of survivors.

As the number of survivors with preserved fertility increases, they should be counselled on the safety of pregnancy with respect to congenital abnormalities and cancer outcomes, as well as areas of increased risk such as preterm delivery after abdominal-pelvic radiotherapy.

More research is required in pregnancy and birth outcomes of cancer survivors.

An Overview of Labor Care Guide

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WHO recommendations for intra partum care for positive childbirth experience (2018), were introduced with emphasis on the supportive intrapartum care including pain relief, nutrition and hydration, mobility in labour and adopting birth position of choice along with, regular labour monitoring taking care of both mother and the fetus. The phases of labor were also redefined.

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. 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 for first and subsequent labours. Every labor is unique and cervical dilatation rate of 1 cm/hour during active first stage is, no more recommended for identification of normal labour progress. The use of medical interventions to accelerate labor in latent phase, not recommended **as long as fetal and maternal conditions are reassuring.**

For effective application of these new definitions and recommendations, WHO in December 2020, introduced **WHO LABOR CARE GUIDE(LCG)-the next generation partograph.**

Aims of LCG: (a) helps in monitoring and documentation of the well-being of women, fetus and the progress of labour (b) guide skilled health personnel to offer supportive care throughout labour to ensure a positive childbirth experience for women (c) assist skilled health personnel to promptly identify and address emerging labour complications, by providing reference thresholds for labour observations that are intended to trigger reflection and specific action(s) if an abnormal observation is identified (d) to prevent unnecessary use of interventions in labour (e) support audit and quality improvement of labour management.

Main features: As per the LCG, active phase starts at 5cm.There is addition of a very important part i.e. the second stage of labour monitoring, which was missing in previous partograph designs. There is no action or alert line. It has 7 **sections**, which are adapted from the previous partograph design: (figure 1) **Section 1**: Identifying information and labour characteristics at admission; **Section 2**: Supportive care; **Section 3**: Care of the baby; **Section 4**: Care of the woman; **Section 5**: Labour progress; **Section 6**: Medication; **Section 7**: Shared decision-making. These sections contain a list of labour observations. For every observation, an alert parameter has been defined. If the observation corresponds to any alert parameter, there is need to take action accordingly after a "shared decision making" i.e. decision taken after discussing the current situation with the women in labour or with her companion. Thus, the main emphasis is on **Action Oriented Labour** which includes: **assessing**, **recording** the observation and **checkin**g the values with alert column values and **deciding** the plan along with the women.

Assessment of Fetal well being: **Intermittent Auscultation** of FHR with either a hand held Doppler ultrasound device or a Pinard fetal stethoscope is recommended for healthy pregnant women in labour. The i**nterval should be e**very 30 minutes in active first stage of labour and every 5 minutes in second stage of labour. The second stage documentation of Fetal Heart is done every 15 minutes though in LCG. Each auscultation should last for at least 1minute during a uterine contraction and for at least 30 seconds thereafter. Record the baseline as a single counted number in beats per minute and acceleration and deceleration

For whom and when to initiate LCG: It has been primarily for Low risk women and can be used for high risk pregnancies by additional monitoring. It is **initiated** when the woman enters the active phase of the first stage of labour (5 cm or more cervical dilatation), regardless of her parity and membranes status. Once initiated, it will support continuous monitoring throughout the first and second stage of active labour. Record all observations with admission of woman to labour ward. Rest is completed following subsequent assessments throughout labour. For all observations, horizontal time axis and a vertical reference values axis for determination of any deviation from normal observations (ALERT Thresholds). It also provides a second-stage section to continue the observations made during the first stage of labour.

Implementation in health care settings: For initial implementation, it needs dedicated staff who can be trained to use this partograph. Team leaders can be identified and they can further propagate the use

by training the health care providers in small groups. Initially it can be applied to low risk women Once the teams of health care providers is trained and is comfortable to use it, the use can be extended to high risk women, after appropriate modification.

Experience at Safdarjung hospital:

A randomised controlled trial conducted at Safdarjung hospital (2021) to evaluate the role of monitoring using Labor Care Guide over 280 low risk women in spontaneous labor gave very promising results in terms of significant reduction in primary cesarean deliveries without increase in perinatal complications to mother and fetus and duration of hospital stay.

Conclusion

The emphasis must be given on respectful maternal care and supportive intrapartum care, so as to give a positive experience to the labouring women. The duration of latent phase is not defined and expectant management in latent phase till maternal-fetal status reassuring. The active phase starts from 5 cm. Labor care guide i.e. the next generation partograph can replace WHO partograph after modifications as per local settings after appropriate research. he WHO LCG, the-next generation partograph, is a complex-looking yet simple and feasible labor-monitoring tool that can help in achieving vaginal deliveries with optimum feto-maternal outcome by patiently allowing labor to progress. It can actually help in imparting positive child birth to the woman in labor.

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Challenges in Implementation of MTP Amendment Act

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Background

In a historic move to provide universal access reproductive health services, India amended the Medical Termination of Pregnancy (MTP) Act 1971 to further empower women by providing comprehensive abortion care to all.

The new Medical Termination of Pregnancy (Amendment) Act 2021 expands the access to safe and legal abortion services on therapeutic, eugenic, humanitarian and social grounds to ensure universal access to comprehensive care. The new law, which came into force from 25 March 2021, will contribute towards ending preventable maternal mortality to help meet the Sustainable Development Goals (SDGs) 3.1, 3.7 and 5.6.

Progressive features of MTP Act 2021

The changes consider the advances in medical technology, simplify requirement of providers, increase upper gestation limit for termination of pregnancy under specific conditions, and remove the gestation limit for cases that could burden the health system. The goal is to strengthen access to comprehensive abortion care without compromising dignity, autonomy, confidentiality, and justice for women who need safe and quality services.

- Abortions beyond 20 weeks allowed: It allows abortion to be done on the advice of one doctor up to 20 weeks, and two doctors in the case of certain categories of women between 20 and 24 weeks (Table 1)
- Enhances the upper gestation limit from 20 to 24 weeks for special categories of women including survivors of rape- thus preventing the socio-economic and psychological impact of unwanted pregnancies.
- Lowers burden on courts: Removes the limit of 24 weeks for termination of pregnancy in case of substantial foetal abnormalities, diagnosed by the newly established Medical Board– thus easing the burden on courts of writ petition for seeking abortion beyond the permitted period.
- Maintains confidentiality: Names of the woman whose pregnancy has been terminated will be kept confidential– thus ensuring dignity and confidentiality of women.
- De-stigmatizes relations outside marriage: Relaxes termination of pregnancy due to contraceptive-failure condition for "any woman or her partner"– thus de-stigmatizes pregnancies outside marriage

Table 1: Key Highlights of MTP ACT

Features	MTP Act 1971	MTP Amendment Act 2021
Medical practitioner's opinions required	- One Doctor's opinion if termination is within 12 weeks of conception - Two Doctor's opinions for 20 weeks	- One doctor's opinion till 20 weeks - Two for 20-24 weeks - Medical board permission for beyond 24 weeks
Gestation limit	20 weeks for all	- 20-24 weeks for vulnerable women e.g. rape victim - beyond 24 weeks for 'substantial' foetal abnormalities
Privacy	Not mentioned	protects the confidentiality of data related to termination and privacy of women and the case

Challenges in Implementation

There are various issues as to why the practise of illegal and unsafe abortions continues in our county inspite of Medical Termination of Pregnancy (Amendment) Act 2021 – lack of awareness, discrimination, stigma, lack of counselling etc.

Some concerns while implementing the amendments:

- No right to abortion at will: It has various conditions for the termination of pregnancies.
- No recourse for rape victims: For the termination of pregnancies beyond 24 weeks, rape victims cannot approach the Medical Board (can approach in case of 'substantial foetal abnormalities' only). So, the only recourse remains is through a Writ Petition.
- No time frame for the medical board: Bill doesn't provide the time frame within which the Medical board must make its decision – any delays may lead to further complications for women.
- The formation of the Medical Boards in various states has been left at the hands of the State governments

without any strict plan for action. Adding another layer of barrier for availing abortion care will only create further delay in terminating such pregnancies.

- Transgender and unmarried, if they require abortion beyond 20 weeks, are not considered.
- According to the bill only Registered medical practitioners having experience or training in gynecology or obstetrics can perform the abortion, but according to NH&FS (2015-16) data only 53% of abortions are performed by a registered medical doctor, the rest are conducted by a nurse, midwives, family members, etc
- Expecting the presence of two gynecologists in rural areas to ascertain the need for abortion is irrational.

The Roadmap Ahead

The MTP (Amendment) Act, 2021 is no doubt, highly ambitious at streamlining the abortion laws in case of irregular pregnancies. However, the implementation of this Act can itself prove to be a challenge in the coming times.

It is imperative now that the recent changes, rules, and regulations are adequately communicated and widely disseminated to not just service providers but also other stakeholders, such as programme managers, NGOs and the community. In collaboration with WHO India, the MoHFW through the SAMARTH initiative (Sustain-Accelerate-Mainstream Access to Reproductive-health Through Health-system) is supporting the dissemination of this evidence-based information to accelerate achievement of 'universal reproductive health' in India. Also, India needs to create a cadre of certified medical practitioners including ASHA, ANM workers in its health system.

Recurrent endometriosis

Manju Khemani
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Studies show that between 20% and 40% of women will experience recurrence of endometriosis symptoms within five years of their initial surgery. Recurrence after surgery may be either due to the development of de novo lesions or to in situ growth of residual foci. Surgery is considered the treatment of choice for symptomatic endometriosis, especially after the failure of medical therapy, but, it is cytoreductive rather than curative. In a recent UK population-based report, 48% of patients with endometriosis received surgical treatment. Approximately one-fifth of these patients required further surgical treatment, within three years of the index procedure. Moreover, at subsequent surgery the endometriosis subtype observed is likely to be the same subtype observed previously.This means a patient with superficial endometriosis after surgery will have SUP endometriosis at repeat surgery ,a patient with OMA will have recurrence of OMA but may have associated DIE at repeat surgery. Interestingly, however, there is a high percentage of patients that present with more severe lesion subtypes, particularly DIE.

Recurrence varies according to the site of disease according to Busacca et al. after 4 years

ovarian,	24.6, and
peritoneal,	17.8,
deep ovarian (DIE)	30.6
peritoneal endometriosis	23.7%

Risk is increased as time elapsed.

What is recurrent endometriosis?

Unfortunately, there is no uniformity in defining this. Recurrence could be 1. recurrence of pain, 2. as clinical or instrumental detection of an endometriotic lesion (anatomical relapse), or 3. as a repeated rise of the marker CA 125 after surgery.

Recurrence of pain-- Pain could be dysmenorrhoea, dyspareunia, or pelvic pain, with or without clinical signs or instrumental evidence, equal to or greater in severity than that experienced before surgery. Many studies consider recurrence as recurrence of pain which is subjective and reported by the patient. Pain recurrence is much more than defined by clinical findings

Clinical findings- Some studies consider recurrence based on a pelvic examination suggestive of endometriosis, with typical findings of a pelvic fibrotic area or tender nodule. but pelvic nodulation may be the expression of either endometriosis recurrence or fibrosis due to previous surgery. So it's not very specific. A fibrotic nodule may represent endometriotic disease suppressed by medical therapy. The clinical definition would be meaningful only if supported by confirmation of the suspicious findings through direct intraoperative visualization of the lesions or through correlation with histopathological reports, which are not available when treating recurrence with a non-surgical approach.

Anatomical relapse- The recurrence of ovarian endometrioma is defined in most studies as the presence of transvaginal ultrasound of at least 2 cm in diameter cyst with poor vascularity at the capsule and, homogeneous, low echogenic content with thin internal trabeculations, with or without internal septa. This cyst must persist for at least 2 menstrual cycles.

Significant increase in CA 125- (Chen et al). demonstrated the value of CA 125 as a good predictor of endometriosis recurrence in patients with advanced endometriosis and initially elevated CA 125 levels. But CA 125 is nonspecific and may be elevated in many other conditions.

What are the risk factors for recurrence – Different authors have quoted different factors for recurrence. These are

1. younger age of patient more likely to recur
2. Large size of the cyst
3. High rAFS score
4. Bilateral cyst
5. Extended follow-up period
6. In deep infiltrating endometriosis completeness of surgery
7. Pregnancy after surgery reduces the risk of recurrence

What is the effect of preoperative medical therapy on recurrence?

Preoperative medical therapy before surgery in endometriosis may increase the risk of recurrence. Koga et al.showed that this may be as a result of the endometriotic lesions being masked during the surgery because of the previous usage of medication. On the other hand Muzii et al. reported that pre-operative Gonadotropin Releasing Hormone (GnRH) agonist treatment did not provide any surgical improvement and did not affect recurrence rates.

Is there a role for secondary prevention of recurrence of disease and painful symptoms in patients treated for endometriosis?

Eshere2022 guidelines recommend When surgery is indicated in women with an endometrioma, clinicians should perform ovarian cystectomy, instead of drainage and electrocoagulation, for the secondary prevention of endometriosis- associated dysmenorrhoea, dyspareunia and non-menstrual pelvic pain. However, the risk of the reduced ovarian reserve should be taken into account. Cystectomy prevents recurrence.

Clinicians should consider prescribing the postoperative use of a LNG-IUS system (52 mg) or a combined hormonal contraceptive for at least 18–24 months for the secondary prevention of endometriosis-associated dysmenorrhoea.

Eshere 2022 guideline further mention that after surgical management of ovarian endometrioma in women not immediately seeking conception, clinicians are recommended to offer long-term hormone treatment (e.g. combined hormonal contraceptives) for the secondary prevention of endometrioma and endometriosis-associated related symptom recurrence. For the prevention of recurrence of deep endometriosis and associated symptoms, long-term administration of postoperative hormone treatment can be considered.

So two important components to prevent recurrence are completeness of primary surgery and prescribing post-op OCP Dienogest or LNG IUD till the patient is willing to conceive. Yu Wang did a cost effective analysis after surgery for medical therapy to prevent recurrence and showed Six months of therapy with GnRH-a can be a highly cost-effective option for the prevention of endometriosis recurrence. Is Dienogest superior to GNRH analogue in treatment of recurrent endometriosis. Ahmed Mahmoud Abdou showed Daily dienogest is as effective as depot LA for relieving endometriosis-associated pelvic pain, low back pain and dyspareunia in patients with recurrent endometriosis. In addition, dienogest has acceptable safety, tolerability and lower incidence of hot flushes. Thus, it may offer effective and well-tolerated treatment in endometriosis. But the jury is not yet out and exact treatment choices should be individualized according to each woman's needs. It is important to choose the treatment according to the side effects of the administered treatment and the patient's characteristics. Regardless of the lesion and the medication type, patients who discontinued medication experienced a higher incidence of recurrence, indicating that the protective effect of these medications seems to vanish rapidly after the discontinuation.

What is the role and effect of surgery for recurrent disease?

The second surgery is more difficult. Surgery for recurrent endometriomas is associated with evidence of a higher loss of ovarian tissue and is more harmful to the ovarian reserve evaluated by AFC and ovarian volume if compared with endometriomas operated for the first time.

after repeat conservative surgery for infertility, the pregnancy rate is almost half the rate obtained after primary surgery. In patients who have failed primary surgery, assisted reproduction appears to be significantly more effective than repeat surgery. In patients who failed assisted reproduction, the management remains to be extremely controversial.

So in conclusion, the first surgery should be done by experts in the field. The importance of medical management should be informed to the patient after primary surgery. Patients should be followed up to emphasize compliance to medical therapy.No one medical therapy is better than another. Art is better than repeat surgery for infertile patients suffering from endometriosis.

HRT in Gynaecologial Cancers

Bindiya Gupta
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We keep dreaming of a future, a future with a long and healthy life Not lived in the shadow of cancer but in healthy light ...

Hormone therapy (HT) has been used for decades to improve quality of life of menopausal women by reducing menopausal symptoms as many associated health benefits were emphasized upon in the beginning. Long-term estrogen deprivation may cause symptoms such as hot flashes, vaginal dryness, and bone loss.

Large studies evaluating the safety of HT, including the Women Health Initiative Study (WHI) and the Million Women Study (MWS), challenged the safety and raised concerns over HT usage including risk of various cancers. With this, began the large debate on role of HT in women with cancers and risk of cancers in women on HT. There is more evidence on when and how to prescribe HT in a women treated for malignancy.

Uterine Cancer

Endometrial cancer

For survivors of endometrial cancer, concern is that endometrial cancer is an estrogen linked cancer, and estrogen used in HT therapy may increase the risk of endometrial cancer recurrence.

The NCCN panel states that estrogen replacement therapy is a reasonable option for patients who are at low risk for tumor recurrence, but initiating such therapy should be individualized and discussed in detail with the patient. If adjuvant treatment is carried out, there should be a 6- to 12-month waiting period before initiation of hormone replacement therapy, and participation in clinical trials is strongly encouraged. Selective estrogen-receptor modulators (SERMs) may prove to be attractive options for hormone replacement therapy. Long-term comparisons between conjugated estrogens and SERMs for hormone replacement therapy are needed. Non-hormonal therapy may be considered in patients who are deemed poor candidates for hormone replacement therapy (eg, smokers, history of breast cancer, history of multiple strokes).

Uterine sarcoma

Since endometrial stromal sarcomas express ER and PR, HRT is not recommended in these sarcomas.

Hormone Therapy in Ovarian Cancer Survivors

Premenopausal women who have been treated for carcinoma ovary can be safely offered estrogen therapy. Surgical removal of ovaries in ovarian cancer before menopause often results in significant symptoms of menopause such as hot flashes and mood changes. Physicians have been and still are, reluctant to give ovarian cancer survivors estrogen therapy because of the fear of increasing chances of relapse. Progesterone should e added to estrogen to prevent increased risk of breast cancer

A study reported that post-treatment HT does not have negative effect on the progression free and overall survival of epithelial ovarian cancer patients. However; a multicentric study is needed to support and extend these findings. The benefits of estrogen therapy in these women are multiple, according to the study. Such therapy reduces or eliminates many of the menopausal symptoms that follow removal of the ovaries including hot flashes, mood swings, sleep disturbances and other symptoms that can disrupt quality of life.

Some hormone secreting tumors like sex cord stromal tumors are a relative contraindication to HRT. Similarly, due to higher expression of ER and PR women with low grade serous ovarian cancer and endometrioid ovarian tumors HRT should be avoided in these cases.

Cervical Cancer

Hormone therapy is not contraindicated after treatment for either squamous cell carcinoma or adenocarcinoma of the cervix and can be initiated after assessing the benefits and risks. In women with intact uterus progesterone must be added.

Vulvar Cancer

Systemic and topical estrogen can be used following vulvar carcinoma. There is no evidence of an adverse effect with regard to recurrence of vulvar disease.

Fertility Concerns in Cancer Survivors

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Improvements in cancer therapy have enhancement of survival upto 80 % and the issue of the long-term side effects like infertility of such therapy directly impact cancer survivors

Impact of chemotherapy on fertility depends on age of woman and baseline ovarian reserve, doses and regime of the drugs and radiation used. Alteration of chemotherapy regime to preserve fertility should be done in young women.

With cancer patients one can preserve fertility at two stages - Preserving fertility before cancer therapy and then optimizing fertility after cancer therapy GnRH agonist can be given before chemotherapy to suppress FSH, follicular development and cell division. There is halting of recruitment from the quiescent pool of primordial follicles into the chemotherapy sensitive pool. The data is conflicting and until definitive proof of efficacy is established, other fertility preservation options should be offered in addition to GnRH agonist treatment

Conservative fertility preserving surgery could be considered in very early cancers of the ovary and cervix. Medical therapy with progesterone instead of surgery can be considered in early uterine carcinoma.

Semen preservation being an easy procedure must be advised to men before cancer therapy.

For women oocyte or embryo preservation is done. Conventional ovarian stimulation protocols require waiting for menstrual cycle. Stimulation protocols for cancer patients are modified to random start protocols so that no time is wasted. They can be started in any phase of the cycle shortening the period between oocyte retrieval and and start of cancer therapy which is very important in these patients. Other modifications are done in regimes. With breast cancer patient who are ER positive estradiol levels during stimulation are kept at safe lower levels by co administration of letrozole or tamoxiphene. In case of inheritable cancers a preimplantation genetic biopsy and testing of embryo may be an added advantage with IVF

Before starting fertility preservation it is important to counsel the patient that pregnancy is not assured with IVF and there can be failures. However, it is stressed that there is no difference between fresh and frozen oocytes or embryos as far as pregnancy rate is concerned. The patient must be explained that donor gametes, gestational surrogacy and adoption are other options.

Legally cryopreservation of gametes and embryos can be done for 10 years but in cancer patients there are provisions for extension.. It is important to take consents regarding what is to be done with gametes and embryos in case of death in these cases. A nominee is a must on the consent forms. Preserving fertility in minors is complicated and the guardian signature is essential.

The field of oncofertility has now come to the forefront in cancer care. The cancer specialists not only talk about cancer and its treatment, but also discuss the option of fertility preservation at the time of diagnosis of cancer. Survival and procreation are being given equal importance by doctors and patients in oncology units. The diagnosis of cancer is a life crisis for any patient. Surveys have shown that most patients have a strong desire to be informed about their fertility future. They are willing to accept changes in standard protocols to preserve fertility.

Post cancer treatment patients fertility decision, will depend on patients medical status and prognosis, partner status, age, whether reproduction can occur safely for woman and offspring and other reproductive options.

More awareness regarding oncofertility amongst caregivers and patients will help bridge this gap and spread knowledge. Parenthood and life fulfilment can be a very important reason for emotional wellbeing in cancer survivors. Thus fertility preservation is not only an option but a necessity for such patients.

STEP-BY-STEP

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Internal iliac artery is the major blood supply ofpelvic structures. It arises from the common iliac artery andruns infero-medially in the pelvis.It is a well-known fact that internal iliac artery ligation isa very important method to control pelvic hemorrhage. It can become a necessity at any point of time in obstetricand gynecological procedures, whether it is followingvaginal delivery, trauma to pelvic organs, during cesareansection, or benign and radical surgeries.Internal iliac artery ligation could be a planned or anexpected procedure, as in the case of an elective cesareansection for complete placenta previa; or it could become asudden, unexpected necessity during any pelvic surgery,or following delivery.

Whenever a situation of profuse bleeding is encountered during surgery, the surgeonshould remain calm and must immediately place mopsand apply pressure. Bilateral ligation of the anterior division of the internal iliac arteries decreases pelvic perfusion by49%and pulse pressure by 85%. It convertsan arterial system into a venous system.

Sound knowledge of anatomy is essential for proper dissection. Bifurcation of aorta is just below the level of umbilicus. Common iliac artery divides after 4-5 cm from origin from aorta at the level of sacro-iliac joint. Internal iliac artery divides into anterior and posterior divisions about 3 cm after leaving common iliac artery. Posterior division leaves internal iliac artery from its lateral surface.Ureter crosses from lateral to medial side at the bifurcation of common iliac artery. External iliac vein lies medial to external iliac artery and lateral to internal iliac artery.Internal iliac vein lies posterior and lateral to internal iliac artery.

Internal iliac ligation can bedone through anterior or posterior approach. Anterior approach is through broad ligament after dividing the round ligament (Fig 1). Posterior approach is via pouch of Douglas. Open peritoneum adequately for good exposure. Dissect through the loose areolar tissue with linear strokes. Use deep retractors. Identify the internal iliac artery and trace itfrom bifurcation till posterior division. Below the iliac vessels lies the psoas muscle.Identify ureter by its peristaltic movements. Open 2-3mm area of sheath of internal iliac artery and loop the artery with a right angle clamp from lateral to medial side (Fig 2). Ligate the artery on both sides. Palpate femoral artery after tying to confirm that posterior division has not been tied inadvertently.Injury or ligation of internal iliac vein, external iliac artery, external iliac vein , ureter are possible complications.

Internal iliac artery ligation is a simple procedure, and has a dramatic effect on control of pelvic haemorrhage. It is a must-know procedure for all obstetricians and gynaecologists.

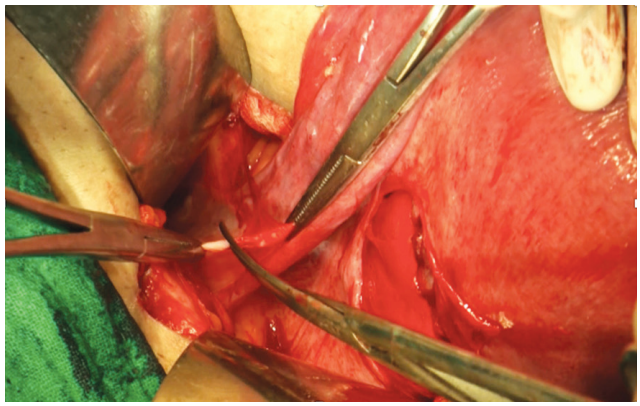

Fig 1: Anterior approach through the broad ligament

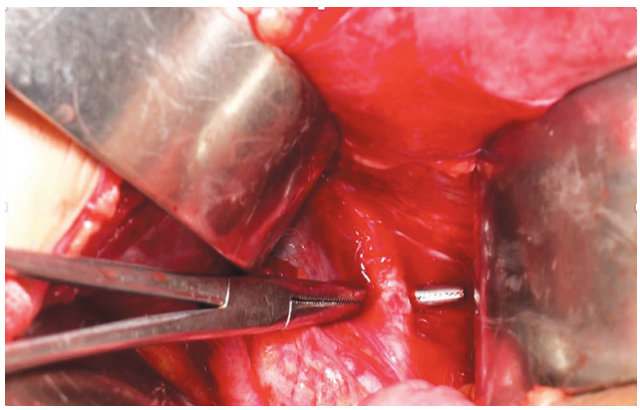

Fig 2: Insert the right angle clamp from lateral to medial

Befriending the internal iliac artery: Tackling Challenges

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Interruption or ligation of the hypogastric artery is relatively safe in young and obstetric patients. ligation resulted in fewer complications compared to embolization, however we can still encounter any serious intraoperative complications such as injury to the external and internal iliac vein, Injury to ureter during ligation of internal iliac artery, inadvertent ligation of external iliac artery, post-procedural vesical necrosis, development of perineal and gluteal necrosis as cited in the literature. The operative risk and complications can be decreased by having a detailed knowledge of anatomy, a good surgical field exposure and a good surgical skill and practice.

Classical suture ligation technique can be challenging for many as it requires extensive retroperitoneal dissection where visualization can be limited. The principal concern during the dissection is an inadvertent injury to the thin-walled external iliac vein, which lies just lateral to the internal iliac artery. During circumferential vessel isolation, the internal iliac vein can also be damaged. This can result in severe pelvic hemorrhage that impairs visualization, making it difficult to control. Other rare complications can result from ligation proximal to the posterior division resulting in gluteal ischemia, inadvertent ligation of external iliac artery supplying lower limb and ureteric injury.

Most of the complications can be avoided by adopting techniques that are easier, requiring limited retroperitoneal dissection, simple, faster and decreases the risk of injury to surrounding structures. Opening the peritoneum directly over iliac vessels and limiting retroperitoneal dissection to adnexal triangle using electrocautery reduces blood loss. Staying parallel to vessel while isolating internal iliac artery and passing the clamp from lateral to medial for circumferential ligature reduces vein injuries. Still simpler is using vascular clips. Placing the sutures/clips 3-4 cm distal to bifurcation preserves the posterior division supply. Palpating the femoral and dorsalis pedis artery affirms intact external iliac artery.

Internal iliac artery ligation is an effective fertility preserving and life-saving procedure for combating pelvic haemorrhage. The procedure can be very safe and simple in skilled hands with no major intraoperative complications. Meticulous understanding of retroperitoneal anatomy is mandatory to prevent inadvertent injury to the adjoining structures.

Abdominal Cervical Cerclage

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HOD & Director at BLK MAX Hospital

Cervical incompetence is the inability of the cervix to retain an intra-uterine pregnancy till term as a result of structural and functional defects of the cervix. Cervical encerclage intends to prevent this mishap. The cerclage can be placed via transvaginal, open transabdominal or laparoscopic approach, preferably before pregnancy.

Indications of Cerclage

In High risk women usually inserted as a Prophylactic measure at 11–14 weeks of gestation or as a therapeutic measure in cases of cervical length shortening (less than 25 mm) seen on transvaginal ultrasound in asymptomatic women. Sonographic assessment of the cervix is usually performed between 14 and 24 weeks of gestation by transvaginal scan and with an empty maternal bladder. Cervical encerclage is advocated in women at high and intermediate risk - previous preterm birth or second trimester loss (16–34 weeks' gestation), PPROM, previous use of cerclage, known uterine variant (Unicornuate or septate uterus), history of trachelectomy, significant cervical excisional surgery i.e. large loop excision of the transformation zone (LLETZ) with an excision depth greater than 1 cm or a cone biopsy.

Emergency Cerclage

Vaginal Insertion of cerclage as a salvage measure in the case of premature cervical dilatation with exposed fetal membranes in the vagina can be considered up to 27+6 weeks gestation. Occlusion of the external os is done by placement of a continuous non-absorbable suture. The theory behind the potential benefit of occlusion cerclage is retention of the mucus plug. It is also called Wurm's procedure. However, outcome of the procedure is poor.

Suture Material

The suture material is non-absorbable. The polyester suture is used more often than the silk. The ideal suture material is a Mersilene tape, a polyester suture; which is non-absorbable and braided. It has blunt needles on either sides and is 5 mm in breadth and 30 cm in length.

Comparison of Site of Cerclage by Various Methods

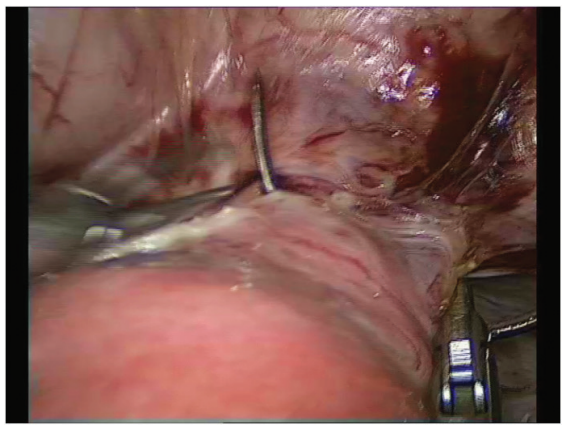
In McDonald technique, a transvaginal purse-string suture is placed at mid cervical level, without bladder mobilization. In high transvaginal cerclage by Shirodkar technique, the suture is placed following bladder mobilization anteriorly and rectum posteriorly, to allow insertion above the level of the cardinal ligaments (at internal os). In abdominal cerclage, suture is placed at the cervico-isthmic junction. Hence abdominal cerclage has maximum chances of having a successful pregnancy outcome.

Transabdominal Encerclage :

The transabdominal cerclage is usually inserted following an unsuccessful vaginal cerclage or extensive cervical surgery. The encerclage is performed via a laparotomy or laparoscopy, placing the suture at the cervico-isthmic junction.

Laparoscopic Cerclage

A laparoscopic approach may be superior to the transabdominal approach in terms of surgical outcomes, cost, and postoperative morbidity. Similar to the transabdominal approach, laparoscopic cerclage can be placed during pregnancy or as an interval procedure. Interval cerclage is relatively simple procedure. Lap Cerclage during pregnancy is a complicated surgerical procedure requiring expertise.



Needle being taken out medial to right uterine vessels

Pregnancy Cerclage:

The vesicouterine peritoneum is opened and bladder dissected slightly off the lower uterine segment, exposing the uterine vessels anteriorly on both sides. A window is created in broad ligament which can be used for mild manipulations of uterus. A 5-mm non-absorbable Mersilene polyester suture is placed by passing each needle medial to the uterine vessels from posterior to anterior, at the level of the internal cervical os bilaterally. The landmarks for this placement include the uterosacral ligaments; a distance of 1.5 cm superior and 1 cm lateral to the insertion of the uterosacral ligament. The needles are then cut off and removed, and the Mersilene suture is then tied tightly around the cervix with six knots. It can be tied anteriorly in case of advanced pregnancy where posterior knot tying is difficult. The ends of the stitch are trimmed and a non-absorbable suture is used to secure the knot to the lower uterine segment in an effort to minimize protrusion of the knot. The vesicouterine peritoneum is then re-approximated over the laparoscopic cerclage with absorbable suture. Surgical risks include injury to major vessels- Uterine artery and vein. The slight venous bleeding often encountered during the procedure usually stops after tying the knot. Patient has to undergo Elective Caesarean section at term so the stitch remains in place and becomes useful for next pregnancy . In case of abortion, suture can be removed laparoscopically and the abortion process is completed vaginally.

Interval Cerclage

Interval cerclage is technically much simpler procedure involving minimal risk. Hence it should be offered to all high risk patients with a short torn cervix and previous failed vaginal cerclage. Steps of surgery are similar as above. However, the uterine manipulation can be done freely so as to be able to put cerclage suture most appropriately. The posterior knot is possible which may be removed if patient happens to have a miscarriage.

Conclusion

A laparoscopic approach to cervical cerclage placement is a potentially effective adjunct to the treatment of women at high risk of recurrent preterm birth or miscarriages. Laparoscopic and transabdominal approaches both yield similar obstetric outcomes, and laparoscopic cerclage may be a superior method in terms of surgical outcomes, as suggested by several studies. A prospective, randomized trial is needed in order to clearly establish the specific benefits to both surgical and obstetrical outcomes.

Dealing With Transgender Patient

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Gender incongruence and variance is a universal and culturally diverse phenomenon. It is important to differentiate between gender and sex. An individual's 'gender' is the inherent psychological identification of self in living a particular role in society, typically masculine or feminine. While, 'sex' of the individual refers to the role assigned at birth based on genital phenotype, by parents, physicians and society at large. If gender and sex are same it is considered as 'cisgender'. However, if these are not in agreement, then the person may be a 'transgender'.

Prevalence rates for transgender quoted in literature is around 1:11,900 to 1: 45,000 for MTF (Male to female) individuals and 1:30,400 to 1:200,000 for FTM (female to male). This incidence is increasing because of more acceptance in society.

Both transwomen as well as transmen, being biologic females need gynecological healthcare. In subsequent section I have briefly discussed the salient points of the care. For elaborate reading, readers may go to author's book on "Recent advances in Obstetrics and Gynaecology, first edition"

Clinic requirements: It is important to have confidentiality, privacy and individualized care in the clinic with trans-friendly staff. There should be compatible appropriate sex chaperone present during examination. Notices and signages indicating that the clinic is non-discriminatory and gender friendly should be appropriately placed. The restrooms should be gender neutral. Appropriate feedback mechanisms should be present to record and address the patient's concerns. Insurance claims should be filled or checked carefully, as the patient may have retained 'biologic sex' in documents.

Examination goal: Besides diagnosing and treating postoperative complications, It is important to diagnose and treat common gynecological infections in transwomen and those transmen still engaging in penetrative sexual intercourse. Treatment of pelvic pain and bleeding in transmen retaining internal organs is important. Gynecologists may be required to perform hysterectomy, oophorectomy or vaginectomy and also they should provide options for fertility (oocyte, sperm, embryo) preservation, IVF and surrogacy in transgenders. When more and more gender affirmation surgeries occurring, one should be well versed in the care of the aging transgender.

Salient points on clinical examination: Regular clinical examination along with investigations is an important part of transgender health, especially when they have been operated for gender change.

Vaginal Examination: Besides regular follow up in early postoperative period for atrophy, stenosis, loss of vaginal depth, transwomen may suffer from vaginal prolapse. Vaginal dryness is not a common problem. But presence of hairs might need regular use of depilating cream due to the nature of used skin. For vaginitis, soap water/ vinegar and water douche, vaginal metronidazole, terconazole, may be prescribed. Vaginal examination may be a traumatic experience for a transman, who has opted to retain internal organs. Often these patients do not come for examination and may harbor various lesions. They also have atrophic vaginal lining due to use of testosterone, which adds to the discomfort.

PAP smear- For transmen with the retained cervix, pap smear should be done in a similar manner but this might be psychologically traumatic and it may be inadequate or atypical due to regular use of testosterone and this point should be considered while interpreting the results.

Screening for sexually transmitted diseases (STDs)- Screening for these (HIV, hepatitis B, C and syphilis) is usually carried out as per recommended guidelines for cisgender women. Immunization for hepatitis A, B and HPV are carried out as per schedule. There might be increased risk of STDs due to psychological disorders, physical and sexual abuse, unsafe sex, especially with men, in both transwomen and transmen. Anal pap smears may be taken in cases of receptive anal sex. Swabs may be taken from oropharynx, vagina, urethra, rectum etc, as needed.

Breast examination- There may be increased risk of breast cancer in transwomen, who have been on estrogens for more than 5 years. Screening mammogram every 1-2 years may be recommended

for transwomen more than 50 years old with additional risk factors. Many transwomen have undergone silicone implant- based breast augmentation. This makes mammography a bit difficult but is still feasible. Annual yearly clinical examination for chest and axillary masses is recommended.

Screening for cancers- Transmen with retained pelvic organs may be at increased risk for polycystic ovarian syndrome with its attendant complications. One should also keep a watch for ovarian cancer. This syndrome also increases the risk of endometrial cancer. Both these have been known to occur in transmen. Prostate gland is routinely left behind during feminizing genitoplasty. Orchiectomy with inherent withdrawal of testosterone,as well as feminizing endocrine therapy may reduce the risk of prostate cancer, but it has been known to occur in transwomen, and these patients should be routinely screened for this disease, with criteria, as for cisgender men aged >50 years.

Risks due to testosterone deficiency or cross sex feminizing hormone therapy- There is increased risk of CVA, strokes and venous thrombosis with thrombo-embolism in patients, who are on estrogens, especially with increasing age, smoking and other co-morbidities. The risks can be reduced by avoiding progestins, avoiding the use of ethinyl estradiol and using transdermal instead of oral estradiol. Such hormones should be stopped at least one month prior to any elective surgery. Estrogen therapy can lead to increase in HDL, cholesterol, triglycerides and risk for type 2 diabetes due to may also be up to 21% increase in body fat. Transwomen, who have undergone orchiectomy and are off estrogen/ have stopped estrogen may be at significant risk for bone loss, and should be screened with DEXA scan. Estrogen therapy along with Vitamin D and calcium should be started if there are no contraindications.

Gender incongruence and variance is a universal and culturally diverse phenomenon. These persons should be managed by multidisciplinary teams comprising of various specialists, who are gender sensitive and well versed in managing such patients.

Ultrasound in Labour Management

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More than any other diagnostic modality, ultrasound has significantly changed the face of diagnosis in medical science. Now obstetrics practice cannot be done without ultrasound. The unknown gray areas of obstetrics can be looked through the ultrasound. Now from its role in antenatal care to delivery it also helps in better management of labour. It will help to reduce the rate of caesarian section which is in a rising trend, So obstetric ultrasound has evolved into ultrasonographic obstetrics. Therefore to understand labour better and to follow up the progress of labour, to monitor the fetus wellbeing and to make a decision about the mode of delivery INTRAPARTUM ULTRASOUND helps.

Evidence show that digital pelvic examination during labour is not very much accurate. The study of Dupius at al published the American journal of obstetrics and gynecology ,2005 revealed this truth. Not only that there are a hand full of studies showing that ultrasound in superior to vaginal examination.

The Significance of Intrapartum ultrasound

- To asses before induction of labour
- To Determine the labour progress
- To decide in stalled labour
- Before Instrumental Delivery
- To reduce LSCS rate

Position of the Probe

- Suprapubic position
- Sub pubic position
- Translabial position -sagittal and transverse

Measurements taken are:

1. Head perineal distance

The distance measured by a translabial scan in the transverse position The distance between the skin of mons pubis and the uppermost part of fetal skull is measured.The cut off being 47 mm.

2. Head-symphysis distance:

Distance between the inferior edge of symphysis pubis to the nearest point of the fetus skull along a line perpendicular to the long axis of the symphysis pubis and the cut off is 32 mm.

3. Angle of progression :

This is an angle measured with a imaginary midline drawn through the public symphysis and a line from the inferior apex of the symphysis to the leading part of the fetus skull. If angle is more than 120 degree it favours vaginal delivery.

4. Head Directions

We all know the head has to move anterior in the mechanism of labour, therefore the fetus head direction can be viewed. It is the angle between the vertical line from the inferior apex of the symphysis. And another line drawn perpendicular to the widest diameter of the fetus skull. As the labour progresses this angle increases.

5. Progression Distance

This is the distance measured between a vertical line from the interior part of symphysis pelvis to the leading part of the skull. As labour progress this distance increases denoting the head is coming down.

Occiputo- Posterior

Clinically this can be diagnosed but now with our overweight in women it is difficult to asses. By a supra pubic scan even a beginner can identify whether the back is anterior or not. If it is occiputo posterior both the eyes can be seen otherwise called venetian mask sign. As labour progressive we can follow up the rotation of the head or persistent occiput posterior.

Fetus head position before instrumental Delivery

Before applying either forceps or vacuum we can apply it properly under ultrasound guidance.

Nuchal Cord

With colour doppler study we can see if the cord is around the neck or not. If there is a deceleration in CTG we can diagnose it and plan delivery mode.

Ultrasound Elastography of Cervix

Considering the importance of the cervix in normal labour, the ultrasound technology of elastography reflects the structural changes promising for the

prediction of successful labour.

Software has been developed for these measurements but actually in practice it is not necessary we do not need expertise too. Even with our basic knowledge we can do it and make life easier for us .

So if Intrapartum ultrasound parameters are added to our regular partogram the diagnosis can be more accurate and we can be more exact in our mode of delivery

To conclude the intrapartum use of ultrasound help us to monitor labour better and reduce C.section rate and results in a healthy mother & baby.

Let us start practicing it.

Shoulder Dystocia Drill

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Shoulder dystocia is defined as a vaginal cephalic delivery that requires additional obstetric manoeuvres inorder to deliver the foetus after the head has delivered and gentle traction has failed. Shoulder dystocia occurs when either the anterior, or the posterior (less common) , fetal shoulder impacts on the maternal symphysis, or sacral promontory, respectively. Reported incidence is between 0.58% and 0.70%. Shoulder dystocia is an obstetric emergency and must be dealt swiftly via orderly sequenced drill, inorder to prevent maternal morbidity such as postpartum hemorrhage, perineal tears, and perinatal morbidity. Its imperative that all residents and midwives must be routinely subjected to dystocia drill so that as first care providers they are in state of ever readiness if sudden dystocia occurs in labor room. Prompt recognition remains a key in timely management of shoulder dystocia. It is diagnosed when the head remains tightly applied to the vulva or retracts (turtle-neck sign) and there is failure of restitution of the fetal head. Following steps are required.

1. **Call for help**. Avoid Fundal pressure.
2. **McRoberts' manoeuvre** is a simple, rapid, and effective intervention and should be performed first. It involves flexion and abduction of the maternal hips with positioning of the maternal thighs on her abdomen. It straightens the lumbosacral angle, rotates the maternal pelvis towards the mother's head and increases the relative anterior-posterior diameter of the pelvis, this procedure has a success rate of 90%. Suprapubic pressure should be used to improve the effectiveness of the McRoberts' manoeuvre. If these fail, next step is either internal manipulation or all-fours position.
3. **Internal rotation as described by Woods and Rubin**, whole hand should be entered posteriorly to perform internal rotation or delivery of the posterior arm. Delivery can then be facilitated by rotation into an oblique diameter or if possible, by a full 180-degree rotation of the fetal trunk. Pressure on the posterior aspect of the posterior shoulder has the additional benefit of reducing the shoulder diameter by adducting the shoulders. The shoulders should be rotated into the wider oblique diameter, resolving the shoulder dystocia.
4. **Delivering the posterior arm** reduces the diameter of the fetal shoulders by the width of the arm.

   The fetal wrist should be grasped, and the posterior arm should be gently withdrawn from the vagina in a straight line. Complication is the humeral fractures in baby with reported incidence between 2% and 12%.
5. **All-fours' technique**. For a slim mobile woman without epidural anaesthesia and with a single midwifery attendant, the 'all-fours' position is more appropriate with success rate of 83%.
6. **Third-line manoeuvres- Failure of first- and second-line manoeuvres.** These include cleidotomy (surgical division of the clavicle or bending with a finger), symphysiotomy (dividing the anterior fibres of symphyseal ligament) and the Zavanelli manoeuvre (used for rare bilateral shoulder dystocia, where both the shoulders impact on the pelvic inlet, anteriorly above the pubic symphysis and posteriorly on the sacral promontory. This involves vaginal replacement of the head followed by delivery via caesarean section.

An absolute time limit for the management of shoulder is difficult to ascertain dystocia as there are no conclusive data available, but there appears to be a very low rate of hypoxic ischaemic injury up to five minutes. Brachial plexus injury complicating 2.3% to 16% of such deliveries is the most important complication and the most important cause of litigation across the world. All maternity staff should participate in shoulder dystocia training at least annually. This has been shown to improve knowledge, confidence, and management of shoulder dystocia.

THE VACUUM EXTRACTOR (Ventouse delivery system)

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It is a Type of instrument for operative vaginal delivery.
Majority of assisted vaginal deliveries globally are now performed using this instrument as opposed to the obstetric forceps.

Indications:
Fetal
Suspected fetal compromise (cardiotocography pathological, abnormal fetal blood sampling result, thick meconium)
Maternal
Nulliparous women – lack of continuing progress for 3 hours (total of active and passive second-stage labour) with regional analgesia or 2 hours without regional analgesia
Parous women – lack of continuing progress for 2 hours (total of active and passive second-stage labour) with regional analgesia or 1 hour without regional analgesia
Maternal exhaustion or distress
Medical indications to avoid Valsalva manoeuvre
Combined
Fetal and maternal indications for assisted vaginal birth often coexist.
Contraindications for Vacuum-Assisted Vaginal Delivery
- Underlying fetal disorder
  - Fetal bleeding disorders (eg, hemophilia, alloimmune thrombocytopenia)
  - Fetal demineralizing diseases (eg, osteogenesis imperfecta)
- Failure to fulfill all the requirements for operative vaginal delivery
  - Incomplete dilatation of the cervix
  - Intact fetal membranes
  - Unengaged vertex
- Abnormalities of labor
  - Fetal malpresentation (eg, breech, transverse lie, brow, face)
  - Suspected cephalopelvic disproportion
- Estimated gestational age 34 weeks or estimated fetal weight 2500 g
- Failure to obtain informed consent from the patient

Safety criteria for vacuum delivery
- Head is ≤ 1/5 palpable per abdomen (in most cases not palpable).
- Cervix is fully dilated and the membranes ruptured.
- Station at level of ischial spines or below.
- Position of the fetal head has been determined.
- Caput and moulding is no more than moderate (or +2).
- Pelvis is deemed adequate.
- Adequate anesthesia
- Maternal bladder has been emptied
- Patient has agreed after being informed of the risks and benefits of the procedure.

Types of vacuum cups.

The 2 main types of hand-held disposable vacuum devices are:
(A) The soft cup, which is pliable and funnel- or bell-shaped.
(B) The rigid cup, which is firm and mushroom-shaped (M cup).
They can be made of plastic, polyethylene, or silicone.

Cup to be place at **flexion point which is 3 cm anterior to the posterior fontanelle** on the sagittal suture.
Pressure applied: Start with 0.2 kg/cm2 and increase up to 0.8/cm2 within 1-2 mins.
This creates an artificial **caput succedaneum (known as a chignon),** and then application of a traction force to the fetus .Force applied perpendicular to the axis of cup.
Direction of pull : Along the axis of pelvis.
Discontinue vacuum-assisted birth where there is no evidence of progressive descent with moderate traction during each pull of a correctly applied instrument by an experienced operator.
Complete vacuum-assisted birth in the majority of cases with a **maximum of three pulls** to bring the fetal head on to the perineum. Three additional gentle pulls can be used to ease the head out of the perineum.
Discontinue vacuum-assisted birth if there have been **two 'pop-offs' of the instrument**. Less experienced operators should seek senior support after one 'pop-off' to ensure the woman has the best chance of a successful assisted vaginal birth.
The rapid negative pressure application for vacuum-assisted birth is recommended as it reduces the duration of the procedure with no difference in maternal and neonatal outcomes. Paediatrician must be informed about the indication of ventouse delivery.
Complications:

Maternal:

Significant vulvo–vaginal tear

OASI

Postpartum haemorrhage
Perinatal:
Cephalhaematoma
Facial or scalp lacerations.
Retinal haemorrhage
Jaundice or hyperbilirubinaemia
Subgaleal haemorrhage
Intracranial haemorrhage

External Cephalic Version

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Background: Breech presentation complicates 3–4% of term deliveries and is more common in nulliparous women and in pretermdeliveries.External cephalic version (ECV) is a procedure wherein the fetus is rotated from a noncephalic(transverse or breech) to a cephalic presentation by abdominal manipulation .It is performed as an elective procedure in nonlaboring patients at or near term (beyond 37 weeks) as by this time spontaneous version will occur in many cases and in case of any complication during the procedure,an immediate caesarean section can be done.ECVimproves likelihood of a vaginal cephalic birth thereby reducing the chances of caesarean section as well as complications related to breech vaginal births.Overall success levels are greater for multiparous women (60%) than for nulliparouswomen (40%).Spontaneous version from breech to cephalic is unusual at termand occurs in only 8% of primigravida women after 36 weeks of gestation.

Counselling of women: Women should be informed that the success rate of ECV is approximately 50% and there are chances of spontaneous reversion to breech after successful ECV.She should be informed that labour after ECV is associated with a slightly increased rate of caesarean section and instrumental delivery when compared with spontaneous cephalicpresentation .

Prerequisites: Proper informed consent,reactive Non stress test,availaibility of Abdominal Ultrasound, facility for immediate caesarean section .

Selection of case: The woman should be term pregnancy beyond 37 weeks of gestationor 36 weeks and beyond in case of primigravida,not in labour,not associated with any obstetric complication,no leaking or bleeding per vaginum.

Procedure: Maneuver may be preceded by inj terbutaline 0.25 mg sc,if required especially in primigravidas with taut abdomen.Afterensuring a normal fetal heart rate,the women is laid down on her back with thighs slightly flexed and abdomen exposed. This ensures relaxation of abdominal muscles and eases the maneovering of fetalpoles. Thefetalpresentation,position of the back ,amount of liquor,placental position and fetal heart are checked on ultrasound.A wedge may be used below the woman's buttocks to aid disengagement of breech.The breech is held with both hands and mobilised out of the pelvis towards the side of the back to disengage it from the pelvis.Withright hand breech is held and the other hand head is grasped.The breech is pushed towards the back of the fetus and head is pushed forward towards the face of the fetus.Bothmaneoveres are performed one after another and not simultaneously.The breech and cephalic poles may be maneovred by single person or by two people with one holding and pushing the breech and other pushing the head forwards.With this pushing back of the breech and forward roll movement of the head,once the lie becomes transverse,check the fetal heart rate and exchange the hands to ease the completion of forward roll movement so that the head comes to lie above pubic symphysis.Confirm the fetal head position andfetal heart on ultrasound and do post procedure NST.

Women undergoing ECV who are Rhesus negative should undergo testing for fetomaternalhaemorrhage and be offered anti-D.

Contraindications: ECV is contraindicatedif an absolute reason for caesarean section already exists (e.g.major placenta praeviamajor,cephalo pelvic disproportion). It iscontraindicated in multiple pregnancy,Rhisoimmunisation, current or recent (less than 1 week) vaginal bleeding,abnormalFetal heart rate or non stress test, rupture of the membranes,oligohydramnios or maternal hypertension.

Establishing & Running a safe multiple pregnancy servicein the United Kingdom

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Why doweneed thisservice?

Multiple pregnancies make-up 1.6% of all pregnancies, but contribute to 7% ofstill-births (2-3 times higher than singletons).

They have increased perinatal morbidity and mortality due to prematurity;Spontaneous/ latrogenic and increasedintrapartum interventions.

Neonatal admissions due to increased neonatal morbidity and mortality and theycontribute to 14% of neonatal deaths (6-8 times higher thansingletons).

TAMBA

(Twins andmultiple birthsassociation)

The Maternity Engagement Project was an initiative of the Department of Health andInnovation Excellence and Strategic Development Fund.

This wasimplemented tocheck theadherence toNICE QS46Statements.

Theaudit was conducted by Tamba in March 2017 and we were re-audited in March2018. We had 6059 deliveries; 1.65% ofpregnancies (100sets oftwins); 9.1%stillbirth

rate; Emergency LSCS 3.04%; Elective LSCS 34% and 17% NNU admissions; 12.5%Neonatal deaths.

Multiple Pregnancy clinic

MFM Lead Consultant one stop clinic is held weekly with a dedicated specialist highrisk midwifery team and champion twin sonographers.

Monthly Parentcraft/antenatal classes were started in April last year and we are alsosupported by a team of bereavement midwives.

I have updated the protocols on the DCDA and monochorionic twins as well as thehigher order multiples witha risk assessment recordedin themedical notes.

Current Clinical Guidelines and Patient Information Leaflets are available on the Trust's website in the e-library.

Online e-referralson CRRS(online patientrecords) beganon 1.1.2019.

Audit andStudies

I chair aWeekly FMU-MDTin which wediscuss themultiples as well.

We presented ourfindings at theBritish Maternaland Fetal MedicineSociety (BMFMS) Annual conference in 2018and willalsobepresentingatthePerinatalMedicine conference in London 2020.

WestMidlandsMultipleBirthsGroup(WMMBG)hasbeen set up toreview howservices for women witha multiple pregnancyareprovided throughout theWestMidlands based on full implementation of the NICE Twin and Triplet Guideline whichis due tobe publishedin early September. This canthen lead toplanning howto workin collaboration tointroduce changes suchas sharingprotocols and settingup stafftraining, auditing servicesand aresearch programme toadd tothe evidencebase forbest practice.

We are presently providing data to the National Multiple Pregnancy Registry andhave been invited to recruit to the Twin risk study.

Goingforward

We are complying with the Better Births (2016) UK providing continuity of carer andare hoping toappoint aNeonatal nursechampion anda LeadNeonatal Consultant.

We arealso lookingat establishingNeonatal followup anddevelopmental clinics.

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