

AHMEDABAD OBSTETRICS AND GYNAECOLOGICAL SOCIETY

AOGS TIMES

MARCH 2022

VOLUME 12

THEME: IMPLEMENTATION OF EVIDENCE BASED CLINICAL CARE

MOTTO: SWEAT, SMILE & REPEAT

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Happy Holi

FESTIVAL OF COLOURS



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Chief Editor: Dr. Munjal Pandya | Co-Editors: Dr. Arati Gupte Shah | Dr. Hetal Patolia

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Website: www.sunflowerhospital.in





Dr. Jignesh Deliwala President

TEAM AOGS MESSAGE





Dr. Munjal Pandya Hon. Secretary

Respected Members,

Herewith, our tenure ends on 31st March, 2022. This is 12th and Final bulletin of the said tenure. We welcome new and jubilant team of AOGS 2022-23 under able leadership of President Dr. Kamini Patel mam.

We would like to inform our members that our AOGS logo is now an officially registered Trademark-Logo! The process took a couple of years. We are thankful to the teams 2020-21 and 2021-22, and Dr. Jayesh Patel in particular for looking after the process.

As we move ahead, we wish all the members and their families happier and healthier times ahead!

We thank you for all the support and opportunity given to us and we hope that we fulfilled all the expectations in past year.

Our new AOGS premises well get functional soon and we thank AOGS members, Building Committee of AOGS and Current Team AOGS for making it possible before the deadline, saving huge amount of tax.

We will strive for making AOGS better and we all will stay united as a family!

Dr. Jignesh Deliwala President Dr. Munjal Pandya Hon. Secretary

PRESIDENT'S MESSAGE



Dr. Jignesh Deliwala President

" A DREAM IS NOT THAT WHICH YOU SEE WHILE SLEEPING,

IT IS SOMETHING THAT DOES NOT LET YOU SLEEP."

- A.P.J. ABDUL KALAM

Respected Members,

I thank you for giving me the opportunity to serve AOGS in the capability of President. I thank team AOGS for this amazing journey.

In the tenure, we launched new AOGS Application on both-Android and iOs; and we hope that all our members would utilitise it to the most.

There was launch of AOGS website with all new features. The website reflects prestigious AOGS including all the publications and events with their YouTube links.

This month, AOGS logo got registered, which took a couple of years of proceedings.

AOGS building was purchased with the help and guidance of Building Committee along with AOGS members, in form of 1st and 2nd floors of Dream Icon building.

We could do webinars in the beginning and then, hybrid CME started from August, 2021. All the CME were recorded and now made available on YouTube channel for forever.

PG Symposium series comprising of 6 webinars was made possible with participation of our Esteemed faculties and dear students.

ICCOB was highly appreciated and many of us could take benefits from the same which involved many of the International faculties as well.

I thank you again for all the support and will continue to serve AOGS in forthcoming times as well.

EDITOR'S / HON.SECRETARY MESSAGE



Dr. Munjal Pandya Editor / Hon.Secretary

" હું કરું, હું કરું, એ જ અજ્ઞાનતા, શક્ટનો ભાર જેમ શ્વાન તાણે "

કવિશ્રી નરસિંહ મહેતાજીની આ પંક્તિ મારા દાદાજી પાસેથી ઘણીવાર સાંભળી. જ્યારે જ્યારે મનને થોડુંક ઉપર ઉડવાની ઈચ્છા થતી, ત્યારે ત્યારે આ પંક્તિ મનમાં રણકવા માંડતી. AOGS માટે કાર્ચ કરવાની, આટ-આટલા વિદ્ધાનોના માર્ગદર્શન અને સાથ સહકાર સાથે આટલું બધું શીખવાની તક, એ ભગવાનના આશીવદિથી ઓછું ન ગણી શકાય આશા રાખું છું કે, મારા થકી AOGS માટે કરેલ કાર્ચ, મને સાંપડેલી તકને યોગ્ય અને ઉચિત ઠેરવી શકાય, એવી કક્ષાનું કરી શક્યો હોઉં.

AOGS ખુલેટીનના એડીટર તરીકે છેલ્લા **પ વર્ષથી** જવાબદારી પ્રદાન કરવા બદલ સર્વે Office Bearersનો ખુબ ખુબ આભાર…! AOGS પરિવારના સર્વ સભ્યોએ બુલેટીનને આવકાર્યું, એ બદલ આપ સૌનો ખુબ પાડ માનવો છે.

ગત વર્ષ ફરી એકવાર COVID નો પ્રકોપ આપણે સૌએ સહન કર્યો, તે છતાં, આપણા AOGSના, લોકલાડીલા, સૌમ્ય સ્વભાવ ધરાવતા પ્રેસીડેન્ટ ડો.જીક્રેશ ડેલીવાલા સર ની છત્રછાયા અને માર્ગદર્શન હેઠળ બુલેટીન દર મહિને નિર્ધારિત સમયે કરીને દરેક મેમ્બર સુધી સમયસર પહોચાડવાનું શક્ય બન્યું, અન્ય એડીટર્સ ડો.આરતીબેન અને ડો.હેતલ પટોલીયા મેમ નો ખુબ આભાર…!બુલેટીનમાં જ્ઞાનવર્ધક આર્ટીકલ્સ પ્રદાન કરનાર આપણા તથા અન્ય શાખાના વિદ્વાનોનો ખુભ આભાર…

બુલેટીન ના ડિઝાઈન થી લઈને દરેક કામ માટે હરેક પળ, અને ક્યારેક છેલ્લી ઘડીના અચાનક આવી પડેલા ફેરફારનો તાત્કાલિક ધોરણે કરવામાં તત્પર ભરતભાઈ નો ખુબ આભાર…! AOGS ઓફિસના આધારસ્તંભ સમા મુકેશભાઈ, પિંકીબેન, કનુભાઈ, મનુભાઈ અને વિજયભાઈ નો ખુબ આભાર…

આશા છે કે , TEAM AOGS 2021-22 નું આ છેલ્લું બુલેટીન આપ સોને ગમશે , અને આપના પ્રતિભાવો હર-હંમેશ આવકાર્ય છે .

TEAM AOGS 2021-2022





Dr. Alpesh Gandhi Past President FOGSI



Dr. Jignesh Deliwala President



Dr. Munjal Pandya Hon. Secretary



Hon. Jt. Secretary Dr. Nita Thakre



Clinical Secretary Dr. Shashwat Jani



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Dr. Jayesh Patel



Dr. Divyesh Panchal



Dr. Parth Shah



Dr. Mehul Sukhadiya



Dr. Bina Patel



Dr. Hetal Patolia



Dr. Praful Panagar

-: Ex-Officio:



Dr. Rajal Thaker



Dr. Sunil Shah



Dr. Dipesh Dholakiya



Dr. Hemant Bhatt

Dr. Arati Gupte Shah Dr. Devindraben Shah Dr. Parul Kotdawala



- : Special Invitee :-

Dr. Sujal Munshi Dr. Tushar Shah Dr. Yamini Trivedi

Dr. Sanjay Shah

TEAM AOGS 2022-2023





Dr. Alpesh Gandhi Past President FOGSI

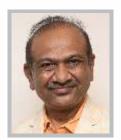


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Dr. Nita Thakre Hon. Secretary





President - Elect Dr. Mukesh Savaliya



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Hon. Treasurer Dr. Lata Trivedi



Hon. Jt. Secretary Dr. Shashwat Jani



Clinical Secretary Dr. Akshay Shah

MANAGING COMMITTEE MEMBERS



Dr. Arti Gupte



Dr. Beena Patel



Dr. Chintan Gandhi



Dr. Darshini Shah



Dr. Hetal Patoliya



Dr. Jayesh Patel



Dr. Naimesh Patel



Dr. Nisarg Dharaiya



Dr. Parth Shah



Dr. Praful Panagar

EX-OFFICIO



Dr. Jignesh Deliwala



Dr. Munjal Pandya



Ahmedabad Obstetrics & Gynaecological Society

invites you to grace the

Installation Ceremony

OF AOGS TEAM FOR 2022-23

on

Sunday, 3rd April, 2022

at

Courtyard by Marriott Ahmedabad

Ramdev Nagar Cross Road, Satellite Road, Ahmedabad

From 09.00 am Onwards (Programme overleaf)

Chief Guest

Shri Rushikesh Patel

Hon'ble Minister.

(Health & Family Welfare, Medical Education, Water Resources & Water Supply) Govt. of Gujarat **Guest of Honour**

Shri Pradip Parmar

Minister of

Social Justice and Empowerment, Govt. of Gujarat

Dr. Kamini Patel President

Dr. Nita Thakre Hon. Secretary

Dr. Mukesh Savaliya
President Elect

Dr. Snehal Kale
Vice President

Dr. Shashwat Jani Hon. Jt. Secretary Dr. Lata Trivedi

Dr. Akshay Shah Clinical Secretary

Secretary Hon. Treasurer Clin

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Dr. Arti Gupte | I Dr. Beena Patel | I Dr. Chintan Gandhi | I Dr. Darshini Shah | I Dr. Hetal Patoliya Dr. Jayesh Patel | I Dr. Naimesh Patel | I Dr. Nisarg Dharaiya | I Dr. Parth Shah | I Dr. Praful Panagar

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P: 079-26586426 E: ahmedabadobgynsoc@gmail.com, W: www.ahmedabadobgyn.org



Sunday, 3rd April, 2022

09.00 am : Breakfast

10.00 am : "Prayer by **Dr. Falguni Doctor** & Lamp Lighting"

• 10.10 am : Floral welcome

• 10.20 am : Welcome Speech by Outgoing President **Dr. Jignesh Deliwala**

• 10.35 am : Secretary Report - **Dr. Munjal Pandya**

10.50 am : Change of Presidential Medal & Oath Taking Ceremony of
 President, Office Bearers & Managing Committee Members

by Installation Ceremony Officer:

Dr. Devindraben Shah, Dr. Alpesh Gandhi

11.05 am : Introduction of President

11.15 am : President Speech by Dr. Kamini Patel

• 11.35 am : Blessings by **Hon. Guest of Honour Shri Pradip Parmar**

11.55 am : Blessings by Hon. Chief Guest Shri Rushikesh Patel

• 12.15 pm : Felicitation of Past President - Secretary

12.35 pm : Award Giving Ceremony

• 01.05 pm : Vote of Thanks - **Dr. Nita Thakre**

• 01.20 pm onwards : Lunch

Master of Ceremony: Tapaswini Gajjar

Special Educator, an author to book: **SELF:Rise Above and Beyond,** an anchor to talk show: **Tuning With Self,** motivational speaker, life coach.



AHMEDABAD OBSTETRICS & **GYNAECOLOGICAL SOCIETY**

AICOG 2000 Oration

Date: 13th March, 2022

Venue: Hyatt Regency, Usmanpura, Ahmedabad

Breakfast and registration - 9.30 am to 10.00 am

Chairpersons:



DR. KAMINI PATEL PRESIDENT ELECT



DR. MUNJAL PANDYA HON.SECRETARY



ORATION

Speaker: Prof. Dr. Human Fatemi

Topic: Cesarean & Subsequent Fertility

Time: 10.05 am to 10.50 am

































CME

CME Chairpersons:



DR. PRAGNESH SHAH



DR. MEETA PATEL



DR. HEENA SHAH



Speaker: Dr. Girija Wagh **Topic: Choosing The Right Progesterone Based on Clinical Evidences and Safety**

Time: 10.55 am to 11.20 am



Speaker: Dr. Kundan Ingle

Topic: Revolutionary Combination In Female Endocrine and Reproductive Disorder (Pre & Probiotic + Lactoferrin)

Time: 11.25 am to 11.50 am



Speaker: Dr. M. C. Patel **Topic: MPT Act Amendment**

what Gynecologist Should Know?

Time: 11.55 am to 12.20 pm



VOTE OF THANKS - FOLLOWED BY LUNCH











AHMEDABAD OBSTETRICS & **GYNAECOLOGICAL SOCIETY**





Time: 8.00 pm onwards

Venue:

Hyatt Hotel, Vastrapur, Ahmedabad.

SILVER JUBILEE ORATION



Speaker: Dr. Jaydeep Tank Topic: PCOS - a practical approach.



Year 2021 - 2022



DR. MUNJAL PANDYA HON. SECRETARY, AOGS Lucky Draw























































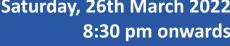






AHMEDABAD OBSTETRICS & GYNAECOLOGICAL SOCIETY **AICOG 2017 ORATION**

Saturday, 26th March 2022 8:30 pm onwards





Sikkim Manipal Institute of Medical Sciences, Sikkim

TOPIC: Maternal Near Miss Concept and Audit -Need of the hour to bring down MMR in India

Click here For Registration: http://orangerose.in/webinar/







Chief Guests





Dr. Hemant Bhatt



Guests of Honour

Dr. M.C. Patel



Dr. Pragnesh Shah

















Trade Mark No. 5125308

Annexure of Certificate No.: 2942709







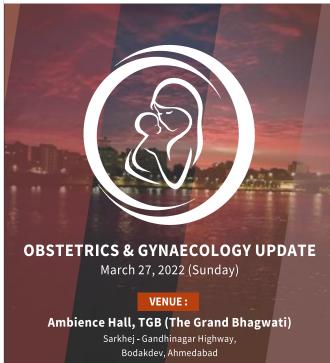
SATYANARAYAN KATHAA AT AOGS ON 30TH MARCH, 2022





MARCH 25-27

18th Annual Scientific Symposium



Care Institute Medical Society for Besearch CIMSRE and Education





MARCH 27, 2022 (SUNDAY)

REGISTRATION & BREAKFAST

09:15 AM Welcome

09:30 AM Anaphylactic Shock in OPD - Dr. Parth Patel

Panel Discussion : High Risk Pregnancy- Dilemma and Decision 09:50 AM

Moderator Dr. Devang Patel

Panelists Dr. Sneha Baxi, Dr. Dipesh Dholakiya, Dr. Aarti Patel, Dr. Minesh Patel,

Dr. Munjal Pandya, Dr. Akshay Shah

Interesting Case: Rare Case of Recurrent Rupture of Gravid Uterus 10:35 AM

- Dr. Vipali Trivedi

10:50 AM Panel Discussion:

Dilemma in Day to Day Infertility Practice - Practical Solutions

Moderator Dr. Kamini Patel

Dr. Chirag Amin, Dr. Aarti Gupte, Dr. Shaswat Jani, Dr. Chirag Parikh, Panelists

Dr. Jayesh Patel, Dr. Manoj Pandya, Dr. Jaydeep Patel,

Dr. Darshini Shah, Dr. Kirtan Vyas

11:35 AM Interesting Case: Laparoscopic Management of Scar Ectopic Pregnancy

- Dr. Dhaval Shah / Dr. Ompriya Pahi

11:50 AM Fertility Preservation in Gynaec Malignancy - Dr. Mona Shah

LUNCH 12:20 PM



SCAN TO REGISTER NOW



PROTEST OF AHNA ON 22TH MARCH, 2022















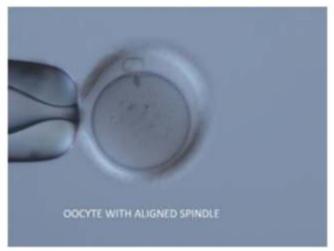


SPINDLE VIEW ICSI



Dr. Himanshu BavishiMBBS, MD - Obstetrics & Gynaecology Infertility Specialist, Gynecologist





ART is a constantly developing field of reproductive medicine. Recent addition of technologies like PGT (preimplantation genetic testing), embryoscope etc have been mainly focused on embryo selection. Unfortunately, a large proportion of patients who fail to conceive with IVF develop few or very poorquality embryos. Methods of embryo selection is not useful in this scenario.

Treatment should be focused on optimizing number of and quality of embryos. Many of the previous literature focused on pregnancy rate per transfer, implantation rate, etc. Using this marker had the limitation that it did not predict cycle success for couple. In some situations embryo transfer was not done in many started IVF cycle. Recent consensus which is more and more accepted is to use cumulative live birth per started cycle as a primary outcome measure. So SART (society for ART USA) has started using this data to guide patients about their expected success rate. Thus, it is only imperative that primary focus is improving quality of embryos. Embryo selection tools can help only after this stage is achieved.

The oocyte meiotic spindle is involved in various functions that are essential for fertilization and early post-fertilization events. It is responsible for proper chromosome segregation after oocyte activation. The integrity of the meiotic spindle is necessary for the sequence of events leading to the correct completion of meiosis and fertilization. The microtubules of the meiotic spindle are, however, highly sensitive to chemical and physical changes that may occur during oocyte handling¹. In addition, physiological parameters, such as increased maternal age (Battaglia et al., 1996; Volarik et al., 1998) and ageing in vitro, post-oocyte retrieval (Eichenlaub-Ritter et al., 2004), are associated with disruption of meiotic spindle architecture. The main and dramatic consequence of meiotic spindle damage is the formation of aneuploid embryos, by inducing unbalanced disjunction and non-disjunction of

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chromatids and chromosome scattering (reviewed by Bernard and Fuller, 1996). The polscope system generates contrast to image the meiotic spindle on the basis of its birefringence. Parallel-aligned meiotic spindle microtubules are able to shift the plane of the polarized light, inducing retardation of the light. ¹

Since its introduction more than two decades ago, ICSI has become a successful and well-established part of ART. Success of ICSI & embryo transfer partially depends on oocyte nuclear and cytoplasmic maturation as well as factors related to the methods of microinjection. (Van de velde et el, 1998). According to the Meta-analysis by C G petersen et al. when the meiotic spindle was viewed the oocytes showed stastically significant higher fertilization rate (p<0.0001), percentage of day -3 top-quality embryos (p = 0.0003) & percentage of embryos that reached blastocyst stage (p<0.0001). In this study however there was no significant difference in clinical pregnancy rates & Implantation rates. However clinical pregnancy rate and implantation rate do not accurately predict success and cumulative live birth rate was not reported.

When there is very limited number of oocytes the fertilization rate is very crucial. If there are only 4 oocytes and if we can get 3 embryos instead of 2 there is a very good increase in overall success of the cycle.

Visualizing meiotic spindles can also give an option of aligning oocytes for ICSI. For conventional ICSI we use polarbody as a surrogate marker for spindle location. In some patients the spindle is displaced from polar body and this can cause potential damage to spindle at the time of ICSI. If we use polscope and align the spindles this damage can be minimized. In study by Elham Asa et al. Fertilization rate in spindle aligned group was higher than control group (p<0.05).³

In case of patients with repeated poor-quality embryos there can be factors related to sperm or/and eggs. There are various tests like sperm DNA fragmentation available for evaluating sperm factors apart from conventional semen examination. However, to evaluate oocyte quality presence OR absence of meiotic spindle can be a useful marker. Spindle length and spindle area has also been suggested as a marker of quality of eggs. Hiroyuki et al demonstrated that Meiotic spindle parameters determine the timing of the first zygotic cleavage and are strong indicators of human embryo developmental potential. The rate of blastocyst formation or pregnancy by Day 2 embryo transfer was significantly higher following early cleavage than after late cleavage (52.4% vs. 24.4% or 32.6% vs. 11.4%). Spindle areas (108.0 vs. 89.8 μ m²), lengths (14.7 vs. 13.4 μ m) and PolScope retardance were also significantly greater in the early cleaving group⁴. If there are oocytes not showing spindles this can be interpreted as poor-quality eggs. In case couple is considering gamete donation this information can help patient decide whether to go for sperm donation OR oocyte donation.

References

- 1)Rienzi L, Ubaldi F, Iacobelli M, Minasi MG, Romano S, Greco E. Meiotic spindle visualization in living human oocytes. Reprod Biomed Online. 2005 Feb;10(2):192-8. doi: 10.1016/s1472-6483(10)60940-6. PMID: 15823222.
- 2)Petersen CG, Oliveira JB, Mauri AL, Massaro FC, Baruffi RL, Pontes A, Franco JG Jr. Relationship between visualization of meiotic spindle in human oocytes and ICSI outcomes: a meta-analysis. Reprod Biomed Online. 2009 Feb;18(2):235-43. doi: 10.1016/s1472-6483(10)60261-1. PMID: 19192344.
- 3)Asa E, Tabatabaee R, Farrokhi A, Nejatbakhsh R. Relationship between meiotic spindles visualization and intracytoplasmic sperm injection outcomes in human oocytes. Anat Cell Biol. 2017 Mar;50(1):26-32. doi: 10.5115/acb.2017.50.1.26. Epub 2017 Mar 29. PMID: 28417052; PMCID: PMC5386923.
- 4) Tomari H, Honjou K, Nagata Y, Horiuchi T. Relationship between meiotic spindle characteristics in human oocytes and the timing of the first zygotic cleavage after intracytoplasmic sperm injection. J Assist Reprod Genet. 2011;28(11):1099-1104. doi:10.1007/s10815-011-9634-5

Choice of Contraception after solid organ transplant



Dr. Kunur N. ShahDGO,MRCOG,FACOG,FICOG

- Associate Professor of Obst. & Gynaec, IKDRC-ITS, Ahmadabad
- Special interest in Urogynecology, Reproductive medicine and Surgery
- Fetal Medicine Foundation(FMF –UK) certified NT specialist
- Presented and published various papers in national and international conferences and journals
- Invited as speaker at state and national conferences

Introduction:

Patients undergoing solid organ transplantation have experienced increased graft survival rates over the past several decades. Before transplantation a woman may find it difficult to conceive or avoids pregnancy due to multiple health risks but restoration of fertility and subsequent successful pregnancies have been reported after solid organ transplantation. These pregnancies are high risk pregnancies so it is advisable to avoid pregnancy till patient's clinical condition stabilizes. According to European best practice guideline , it is advisable to delay pregnancy for 2 years post transplant. As there is return of menstruation and fertility potential after solid organ transplant , contraception is required to delay pregnancies.

Medical Eligibility Criteria (MEC):

There are four categories. Category 1: No restriction for use of contraceptive method, Category 2: A condition where the advantages of using the method generally outweigh the theoretical or proven risks, Category 3: A condition where the theoretical or proven risks usually outweigh the advantages of using the method, Category 4: A condition which represents an unacceptable health risk if the contraceptive method is used.

Barrier Methods:

Condoms are simple, cheap, easy to use, without risk of drug interaction but with limited effectiveness in typical users so this method of contraception should be combined with other more effective methods to provide protection against transmission of HIV and other STIs in already immuno compromised post transplant recipients.

Combined Hormonal Contraception (CHC):

The estrogen component is often contraindicated in co morbidities associated with post transplant like history of thrombosis, severe uncontrolled hypertension, recent history of myocardial infarction, migraine with aura, active liver disease etc. Specific to post transplant recipients CHC are contraindicated in women with cardiac allograft vasculopathy, acute or chronic graft rejection. Major concern associated with Combined Oral Contraceptives (COC) is drug interaction with various immuno suppressors taken by post transplant patients. Comparison of TCP(Trans dermal Contraceptive Patch) versus COC use in post renal transplant patients concluded that trans dermal mode of administration reduces chances of drug interaction and therefore safer for post transplant patients. Vaginal rings(Nuva ring) are superior to oral and trans dermal patches since they avoid first pass metabolism in

liver.

Progestogen Only Contraception (POC):

POP has to be taken on the same time every day for maximum effect, along with lesser effectiveness than CHC, makes it less popular among transplant recipients who are already on multiple medications. It has various side effects like weight gain, amenorrhea or irregular bleeding, drug interaction with cacineurin inhibitors and glucocorticoids, alteration in lipid metabolism etc.

Progestogen - only injectable has advantage of by passing the hepatic first pass metabolism so no major interactions with immuno suppressors are observed.

Risk - benefit profile of Implanon (Sub dermal Implant) is nearly similar to that of DMPA except reduction in bone mineral density. There is lack of data regarding the use of Implanon among organ transplant recipients, but owing to its similarity with other drugs having long safety data, its use among organ transplant patients is likely to be safe.

Intra Uterine Contraceptive Devices (IUCD):

IUCDs are considered as LARC - Long Acting Reversible Contraceptives. They are more cost effective for post transplant patients than other short duration methods like CHC . There is no reduction in efficacy of IUC in immuno compromised patients or patients receiving immuno suppressive medications. Many studies have proven effectiveness of LNG IUS in post transplant patients. In small retrospective review and case series of LNG IUS in post renal and liver transplant patients , no case of PID was reported . Chochrane study concluded that the risk of IUD-related infections was low, with or without antibiotic prophylaxis .

Emergency Contraception (EC):

There are mainly three methods available: Copper IUD, levonorgestrel EC (LNG-EC), Ulipristal acetate EC (UPA-EC). There is no restriction of use of EC pills in post transplant recipients and both are included as MEC 1 category. Use of IUD as a method of EC should only be avoided in cases of active or symptomatic STI to avoid flare up of infection.

Conclusion:

All contraceptive methods including Copper Intra Uterine Device (IUD) ,Levonorgestrel Intra Uterine System (LNG-IUS), sub dermal implant, depot medroxy progesterone acetate (DMPA), progestin-only pills (POP), combined hormonal methods (CHC) belong to category 2 for uncomplicated solid organ transplant. For patients with complicated post organ transplant (acute or chronic), eg. graft rejection, cardiac allograft vasculopathy initiation of Cu IUD and LNG-IUS is category 3, while continuation is category 2. Combined Hormonal Contraception - CHC belongs to category 4 in case of complicated solid organ transplant recipients. Individualization of suitable contraceptive method as per the patient's own health risks should be done.

There should be "Cafeteria Approach", means discussing all available contraceptive options with the patient along with their pros and cons and involving the patient herself in decision making.

CARDIAC DISEASES IN PREGNANCY



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Pregnancy is associated with hemodynamic changes which invariably puts stress on cardiovascular system , even in mothers with normal heart. Such hemodynamic stress can be associated with increased risk for both mother and baby. Particularly in mothers with pre-existing cardiovascular diseases it can have serious prognostic issues in terms of pregnancy cause n fetal growth morbidity mortality.

In current times number of women with pregnancy and cardiovascular disease is increasing in India, both because many women with congenital heart disease achieve pregnancy as well as older age conception leading to many of them having comorbidities like obesity, hypertension and diabetes with increased cardiovascular risk.

Also maternal complications that develop in pregnancy can be predictor of long term cardiovascular health. Placental disorders, hypertensive disorders of pregnancy, gestational diabetes have higher rates of cardiovascular diseases in later life. So as much as obstetricians need to understand nuances of cardiovascular system, cardiologists have also to get well versed with pregnancy and its implications in women with heart diseases.

Spectrum of cardiovascular disorders in pregnancy includes

Congenital heart diseases

Valvular heart diseases

Coronary artery diseases and myocardial infarctions peri-partum period

Peri-partum cardiomyopathy

Inherited aortopathies

Mechanical prosthetic valves and anticoagulation

Fontan circulation

Complete transposition of great arteries with mustard or sennings operations

Most important for cardiologist as well as obstetrician is to keep in mind contraindications and high risk pregnancy situations

Conditions were Pregnancy is contraindicated

Severe pulmonary hypertension

Eisenmenger syndrome

Dilated cardiomyopathy with severe LV dysfunction, LVEF < 30%

Peripartum cardiomyopathy with residual LV dysfunction

Symptomatic severe Aortic Stenosis

Severe Mitral Stenosis etct

Conditions which confers pregnancy a HIGH RISK

Mechanical prosthetic valves

Dilated cardiomyopathy with MODERATE LV dysfunction

Unrepaired coarctatiion of aorta

Fontan circulation etcetc

So, whenever women with planning for conception comes to gynecologist, she should be counseled pre-conception risk stratification.

Those women with cardiac condition as contraindication to pregnancy should be told to either treat such disorders and if not amenable to surgery then pregnancy should be avoided.

Approach to pregnant women with cardiovascular disorders

History of cardiac disease or cardiac symptoms

Physical examinations- to see signs in systemic examination of volume overload

Finding murmurs more than grade 3 systolic

Lab tests-Troponin I, NT pro BNP

Chest radiography- only in known heart disease or to confirm or rule out cardiac diseases

Echocardiography- transthoracic evaluation should be kept at low threshold and is cornerstone to diagnosis and prognosis

Need of cardiovascular intervention in pregnancy

- 1. Severe symptomatic mitral aortic or pulmonary stenosis- second trimester valvuloplasty
- 2. Open heart surgery between 20 to 26 weeks , only if maternal health emergency
- 3. Labour and delivery –

vaginal delivery preferable due to lesser complications; preferably in left lateral position, to cut short second stage of labour by assisted delivery methods; infective endocarditis prophylaxis

Cesearean section preferred only when dilated aorta, severe pulmonary hypertension or severe heart failure or severe aortic stenosis.

So to summarise, conditions when to refer to your cardiologist straightaway

Pregnant woman with

Congentinal heart diseases

Valvular heart diseases

Severe pulmonary hypertension

Severe left ventricular systolic dysfunction

New onset severe chest pain or dyspnea

Mechanical prosthetic valves

Residual LV dysfunction in post partum cardiomyopathy patients

PREGNANCY YOGA



Dr. Hina M. MashkariaM.D. (GYNAEC)
SENIOR GYNAECOLOGIST

"YOGA" IS THE GREATEST GIFT GIVEN BY INDIA TO THE WHOLE WORLD. YOGA IN PREGNANCY IS NOT MERELY AN EXERCISE BUT ALONG WITH EXERCISE IT IS ALIGNMENT OF SOUL OF MOTHER, SOUL OF FETUS WITH ALMIGHTY GOD.

IN THIS ERA WHEN WOMAN EMPOWERMENT IS IN FULL COLOR, WE OBSTETRICIAN COME ACROSS HUGE BULK OF WORKING PREGNANT WOMAN. IN THIS FAST — STRESSFUL — BUSY — COMPETITIVE RUNNING LIFE, MENTAL PEACE OF "TO BE MOTHER" IS MANDATORY IN HER MOST PRECIOUS TIME OF HER LIFE.

ALL OUR "VEDAS"- SASTRA ALSO NARRATETHE FACT THAT YOU CAN IMPLANT ALL VIRTUES IN YOUR "IN WOMB" BABY IF YOU ARE HAVING THAT CONCEPT IN MIND.

YOGA IN PREGNANCY

- ALLEVIATES STRESS AND ANXIETY
- RESTORES BREATHING PATTERN
- STRENGTHENS FEMALE'S PHYSICAL AND MENTAL HEALTH

WHEN A PREGNANT LADY IS FULLY UNDER OUR GUIDANCE, FOR SAY- LONG PERIOD OFTIME LIKE 6-8 MONTHS, HER ACCEPTANCE TOWARDS OUR THOUGHTS & ADVICES ARE VERY HIGH. SO, ALONG WITH PRESCRIPTION OF MEDICINES, IF WE SERVE THE THOUGHTS OF YOGA AND GARBH SANSKAR, WE CAN CONTRIBUTE SOMETHING TO IMPROVE OVERALL HEALTH OF SOCIETY. WE ARE VERY ATTENTIVE AND ALERT TO JUDGE THE PHYSICAL HEALTH OF BABY IN UTERO BY MANY SCANS /INVESTIGATIONS ETC., BUT THIS IS SOMETHING FOR MENTAL HEALTH OF MOTHER & UNBORN BABY.

I AM PROVIDING FREE YOGA SESSION ONCE A WEEK IN MY HOSPITAL TO ALL MY PREGNANT PATIENTS BY YOGACHARYA SINCE LAST 6 YRS AND I FEEL SATISFIED.





Case report of Bladder Endometriosis case with Frozen Pelvis



Dr. Pragnesh ShahGynaec.
Laparoscopic Surgeon



Dr. Parulben Shah
Gynecologist &
Infertility Specialist



Dr. Foram VoraObstetrician & Gynecologist,
Laparoscopic Surgeon

A CASE REPORT:

41 year old lady,P2L2, came to our institution on 5/4/2016 with the complaint of pain in lower abdomen, severe congestive type of dysmenorrhoea and chronic dysuria from past 2 years. She had taken multiple courses of antibiotic for dysuria in past 2 years. Her dysmenorrhoea was so severe that is was not relieved on taking oral analgesics and was affecting her quality of life. Her VAS pain score 9-10 preoperatively and 1-2 on 25th day of postoperative period. Her menses were regular. No significant past or family history elicited.

CLINICAL EXAMINATION:

On Per abdomen examination – Abdomen was soft.

On Per speculum examination – circumferential erosion present.

On Per vaginal examination- Uterus was anteverted, bulky, restricted mobility and tenderness present in all the fornices.

On Per rectal examination – thickening felt in pouch of douglas, with restricted mobility of uterus and free rectal mucosa.

INVESTIGATIONS:-

On TVS ultrasound and MRI – 3*4 cm bladder Endometriotic nodule with Adenomyosis of uterus, Bilateral chocolate cyst and frozen pelvis seen. Tenderness around the uterus elicited with TVS probe.

On Cystoscopy - Endometriotic nodule 3*4 cm seen projecting from the dome of the bladder into the cavity. Trigone and bilateral ureteric orifice seen. Nodule was relatively far from bilateral ureteric orifice(>2 cm).

Operative Steps:

- 1. Omental adhesions around partially filled bladder and isthmic part of uterus cut with harmonic. Both paravesical spaces were dissected from pelvic wall with harmonic.
- 2. Upper margin of bladder lesion marked with harmonic simultaneous to cystoscopic marking with monopolar needle ,under guidance of cystoscopic illumination.
- 3. Adhesiolysis done laterally between omentum and sigmoid colon.
- 4. Left infundibular ligament, ovarian and round ligament coagulated with bipolar and then cut with scissor. Paravesical space created. Bladder mobilized.
- 5. Right infundibular ligament, ovarian, round ligament coagulated and then cut with scissor. Paravesical space created. Bladder mobilized.
- 6. Bilateral uterine bundle coagulated and then cut.
- 7. Bladder dissected out completely over the vaginal cup.
- 8. Bladder filled with 200cc methylene blue. Endometriotic nodule 3*4 cm cut circumferentially over the marking with harmonic.
- 9. Stay sutures taken at both the cut ends of bladder for easy suturing. Stay sutures taken out on abdomen with the help of port closure needle. Bladder closed transversely in two layers using 3-0 vicryl in watertight continuous locking fashion. No leakage observed from the sutured site after retrograde filling of bladder with 100 cc methylene blue dye.

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- 10. Posterior wall of uterus separated from intestinal adhesions.
- 11. Colpotomy done with monopolar hook using pure cutting current.
- 12. Vaginal vault closed with vicryl 1-0 by interrupted figure of eight sutures. Precaution taken to keep two suture lines(bladder and vault)separated by atleast one centimeter.
- 13. Suction irrigation done well.
- 14. Drain kept in prevesical space.
- 15. Uterus with bilateral tubes and ovaries+ bladder endometriotic nodule sent for HPE.

POSTOPERATIVE CARE:-

- 1. Broad spectrum injectable antibiotics used for 3 days followed by oral antibiotics.
- 2. Fluid intake was maintained around 3-4 litres per day. Strict input-output chart maintained.
- 3. Prevesical drain kept for 48 hours (till output was minimal). Strict watch for any drainage of urine through prevesical drain observed.
- 4. Strict watch for vitals and abdominal distension kept.
- 5. On discharge (day 3) patient and relatives explained about blocked catheter, its early detection and reporting as soon as possible.
- 6. Foley's catheter kept for 21 days with DJ Stent.
- 7. CT guided cystogram done on 22nd day to check for any leakage of urine or residual defect. After satisfactory report cystoscopy planned.
- 8. Low pressure cystoscopy done and foley's and DJ Stent were removed in the same sitting. Normal stitch line with mucosa over it noticed.

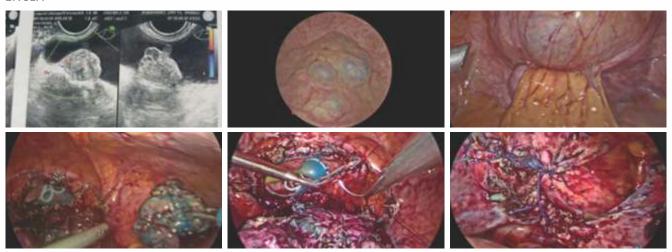
CONCLUSION:-

Bladder endometriosis should be considered in women of reproductive age who present with urinary tract symptoms not responding to routine medical management with a view to laparoscopic treatment. An optimal treatment of bladder and urethral endometriosis should ideally involve a team of experts, ie, gynecological endoscopists, radiologists, and urologists, who are familiar with endometriosis.

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ENCL.:



PREGNANCY IN RENAL TRANSPLANT RECIPIENTS



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Special Interest in

- UROGYNECOLOGY - IVF - Endoscopy High risk obstetrics pregnancy in post renal transplant and chronic renal disease

Publication: 35 Publications

Pregnancy in renal transplant recipient is a high risk pregnancy associated with increased risk of graft rejection leading to renal damage and also at risk for developing gestational hypertension, preeclampsia, infections, preterm deliveries and premature rupture of membranes. The cause of renal transplant, itself acts as an independent factor for developing preeclampsia, prematurity, low birth weight, and neonatal death^{1,2}. In these patients, pregnancy outcome is influenced by various factors like severity of renal dysfunction, preexisting hypertension, and amount of proteinuria²

Peritransplant counselling is cardinal for making these patients to understand the effect of pregnancy on grafted kidney and advice regarding best time to conceive. Initial recommendation was to wait for 2 years for getting conceive after successful transplantation. It has been replaced by the American Society of Transplantation Consensus Opinion that as long as graft function is good, patient can conceive. Graft function is considered to be optimum when serum creatinine <1.5 mg/dl, with <500 mg/24 hour protein excretion³. However, when renal transplant-pregnancy interval is more than 5 years, it may cause persistent impairment of renal function, due to poor tolerance of grafted kidney to the changes of pregnancy but with proper management and follow up this can be prevented.

During antenatal period, patient's blood pressure as far as possible should be monitored daily. They should have regular antenatal follow up every 2-3 weeks upto 20 weeks, then every fortnight till 28 weeks, thereafter weekly till delivery. At each visit, patient's complete blood count, urine routine and microbiology to rule out any infection and proteinuria, blood urea nitrogen, serum calcium and phosphorus need to be done. Glucose tolerance test should be done in each trimester with liver function test every 6 week, along with graft Doppler⁵.

There are chances of graft rejection during pregnancy, but it is difficult to diagnose with fluctuations in serum creatinine as pregnancy induces hyper filtration in transplanted kidneys, as it does in normal pregnancy. Whenever altered allograft function is detected on graft doppler, it is important to rule out acute rejection due to preeclampsia, and pyelonephritis. If rejection is suspected, kidney biopsy can be taken uneventfully under ultrasound guidance⁶. Although, there is limited data supporting use of agents like Muromonab-CD3 or antithymocyte globulin for treatment of rejection, however it can be managedalone with corticosteroids⁶. American Society of Transplantation Consensus Conference recommends that in order to prevent graft rejection, dose of immunosuppressant agents should be maintained at pre-pregnancy levels throughout pregnancy. Hence, serum level of these drugs need to monitored during antenatal period^{3,7}.

These patients are likely to develop hypertension during pregnancy, as a result of either preexisting chronic hypertension or gestational hypertension, which needs to be managed aggressively³.. Methyl dopa is stillbeing preferred for mild hypertension as it is well tolerated and does not cause uteroplacentalin sufficiency⁸. Other antihypertensive agents likelabetolol, nifedipine, and thiazide diuretics can be used depending on severity of hypertension. Agents like hydralazine, labetolol, and nifedipine can be used in case of emergency blood pressure control⁸. Such patients probably can develop superimposed preeclampsia which can causefrightful maternal and fetal complications, like renal failure, liver failure, HELLP syndrome (hemolysis, elevated liver enzymes, and thrombocytopenia), eclampsia, stroke andeven maternal mortality. In fetus, it can result in small for gestational age, preterm delivery, hypoxic injury, and fetal loss⁹. It is difficult to diagnose preeclampsia early in renal transplant recipients as they already have proteinuria and blood pressure commonly shoots late in pregnancy¹⁰.

Other antenatal complication like gestational diabetes, anemia, and infections such as urinary tract infections can

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occur^{11,12}. These patients are prone to develop infections like toxoplasmosis and infection with herpes simplexvirus, HIV, varicella zoster, hepatitis B or C virus¹³. Prenatal screening should be done to detect these infections and they should be vaccinated with live vaccines like rubella before transplant. In most of the cases, cesarean section is favored mode of delivery but normal vaginal delivery can be conducted uneventfully.

Apart from above mentioned risks, renal transplant recipients are also at high risk for premature rupture of membranes, leading to the increased chances for preterm delivery and low birth weight babies6. Hence, it is recommended to give steroids late in pregnancy (between 28 and 34 weeks) to promote lung maturity⁶. The incidence of intrauterine growth restriction is 30 to 50%, because of adverse effects of preexisting hypertension and kidney disease^{6,10,14}. Therefore, along with mother, it is important to closely monitor fetal growth to diagnose fetal growth restrictionat earliest⁶.

Throughout pregnancy, fetuses of these patients are being exposed to immunosuppressive drugs which can affect organogenesis and fetal growth. The current recommendations are to avoid mycophenolate mofetil and rapamycin for 6 weeks before pregnancy because they are associated with severe structural deformities^{3,5}. There is a long list of immunosuppressive agents but most commonly used during pregnancy are steroids, tacrolimus, azathioprine and cyclosporine. Tacrolimus and cyclosporine are included in FDA category C, while steroids are included in FDA category B and azathioprine in FDA category D⁵.

Short acting glucocorticoids like prednisolone is preferred in renal transplant recipient. Its use in pregnancy is associated with increased risk for premature rupture of membrane and can aggravate hypertension. Cases of cleft palate and mental retardation have been reported with its use¹⁵. Serious maternal infection can occur with increased doses of prednisone (greater than 20 mg/day). Whereas azathioprine is a prodrug which is metabolized to 6-mercaptopurine, with increased rate of congenital malformations that ranges from 4-9%; however, these malformations have had no specific pattern. It can cause low birth weights babies, preterm deliveries, jaundice and respiratory distress syndrome. Azathioprine also been associated with a dose-related myelosuppression in the fetus¹⁶, but leukopenia does not causes problem in the neonate if the maternal white blood counts are maintained above 7500/mm3.

On the other hand, use of cyclosporine and tacrolimusduring pregnancy are associated with low birth weights and higher incidence of maternal diabetes, hypertension and renal allograft dysfunction. Cyclosporine metabolism increases during pregnancy hence, higher doses may be required to maintain plasma levels in the therapeutic range¹⁷, whereas metabolism of tacrolimus is decreased, therefore its level needs to be monitored biweekly or once in a month. Cyclosporine also increases production of thromboxane and endothelin, which are involved in pathogenesis of preeclampsia. Due to this reason dose of cyclosporine should be limited to 2–4 mg/kg per day¹⁸.

CONCLUSION

The number of females undergoing renal transplant are increasing with time and also longevity of life. Many of these patients are in reproductive age group who will sooner or later are going to conceive. Proper counselling regarding optimal time to conceive and effect of pregnancy on their grafted kidney is very important and should be individualized according to their graft functioning. These patients fall in high risk group, but can have good pregnancy outcome with regular antenatal and postnatal follow up.

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BRAIN MALFORMATIONS DIAGNOSED BY EARLY NEUROSONOGRAM: A CASE SERIES



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INTRODUCTION

Abnormalities of the central nervous system (CNS) constitute a significant group of antenatally-detectable malformations. Open neural tube defects are the most common CNS malformation, seen in approximately 1–2 cases per 1000 births.

The advanced assessment of the fetal brain before 16 weeks of gestation differs from that at 20-24 weeks on account of the rapidly developing CNS structures. Newer generation of high-resolution ultrasound technology has provided the opportunity to evaluate the subtle details of fetal anatomy earlier in gestation and has helped to improve our understanding of sono-embryology of the fetal brain.

Early fetal neuroimaging is relatively more accessible as the bones are thin and the brain tissue can be evaluated from almost all angles, using three-dimensional volume imaging with a high-frequency transvaginal transducer. Early appearing CNS anomalies are generally towards the severe end of the spectrum with a grave prognosis and therefore deserve special consideration.

According to the ISUOG guidelines, the approach of choice at 13–14 weeks of gestation includes assessment of the axial trans-ventricular plane, trans-thalamic plane, and the midsagittal plane. This, combined with the use of three-dimensional volume imaging, helps in accurate evaluation of the whole brain. The need to assess the axial planes is highlighted by the increasing evidence supporting early diagnosis of open spina bifida.

CASE 1: HYDRANENCEPHALY

A 21-year-old primigravida patient was referred with a singleton 14-week gestation with suspected prosencephalic cleavage disorder. The pregnancy was conceived by a non-consanguineous couple, without any significant family history of genetic or neurological abnormality. The patient had a history of hypertension since onset of current pregnancy, well controlled on medical management.

Ultrasound findings were:

- 1. Massive enlargement of head, disproportionate to body size -- Macrocephaly.
- 2. Midline falx intact.
- 3. Severe ventriculomegaly, thin compressed choroid.
- 4. Thalami non-fused, appropriate for gestation.

5. Cerebellum and posterior fossa structures appropriate for gestation. Midline structures of face intact, however nasal bone hypoplasia noted.

Findings were diagnostic of Hydranencephaly - a rare, encephaloclastic disorder with absent cerebral hemispheres, replaced by fluid filled dilated ventricles.









Midline, brainstem, and posterior fossa structures are intact. Etiology includes foetal vascular compromise, foetal viral infection, 2% risk of genetic abnormalities including Fowler's syndrome. Couple was counselled and genetic evaluation was recommended, but the couple declined for further investigations.

CASE 2: CEPHALOCELE

A 23-year-old primigravida patient was referred with a singleton 13-week gestation for review of increased nuchal translucency measurements. The pregnancy was conceived by a non-consanguineous couple, without any significant family history of genetic or neurological abnormality.

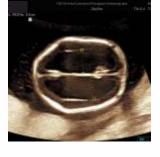
Ultrasound findings were:

- 1. Approx. 4mm sized defect in midline of occiput.
- 2. Cephalocele size approx.4.5mm x 5mm x 5mm, content cerebrospinal fluid (CSF); neural matter herniation could not be demonstrated in current study.

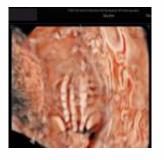














- 3. Choroid plexuses appear shifted towards posterior, p/o evolving ventriculomegaly.
- 4. Thalami and midbrain structures appear displaced posteriorly.
- 5. Cerebellum could not be well visualized.
- 6. IT reduced and displaced inferiorly.
- 7. Raised NT 3mm at 99th centile for gestational age.

Findings were suggestive of cephalocele – meningocele with possible communicating leak of CSF to amniotic cavity, leading to evolving Chiari II changes. The foetal spine appeared normal. Couple was counselled regarding the poor prognosis and risk for associated genetic abnormalities. Patient was lost to follow-up and outcome is unknown.

CASE 3: OPEN SPINA BIFIDA

A 26-year-old third gravida patient was referred with a singleton 15-week gestation for evaluation of suspected ventriculomegaly. The pregnancy was conceived by a nonconsanguineous couple, without any significant family history of genetic or neurological abnormality. First two children were healthy 7-year-old and 4-year-old vaginal births without any complications.

Ultrasound findings were:

- 1. Frontal bone scalloping lemon sign.
- 2. Both lateral ventricles moderate ventriculomegaly.
- 3. Posteriorly displaced thalami car crash sign.
- 4. Posteriorly displaced, hypoplastic cerebellum banana, with obliterated 4th ventricle and cisterna magna.
- 5. Large lumbosacral spinal defect with multiple segment involvement.
- 6. Kyphotic spinal angular abnormality at level of defect.

Findings were diagnostic for open neural tube defect with significant Chiari II malformation, suggestive of extremely poor prognosis for foetus. The couple was counselled regarding the prognosis and available options discussed. Genetic testing was offered in view of 4% risk of aneuploidy but was declined by the couple.

SUMMARY

Certain demonstrable ultrasound signs of neuropathology can give conclusive evidence regarding the CNS malformations as early as 12-16 weeks. This diagnosis can empower the patient and the clinician in their decision-making regarding termination for a foetus with grave prognosis. In cases where the prognostication needs testing for genetic abnormalities or foetal infection, the early diagnosis can give the patient that extra few weeks for time-intensive tests e.g., exome sequencing. However, many CNS abnormalities may need follow-up neuroimaging (ultrasound with/without MRI) in the second trimester.

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My Journey of Endoscopy...



Dr. Raxita PatelProfessor
AMC MET Medical College
Sheth L.G. Hospital

During Residency time, exposure to endoscopy was not much. Laparoscopic Tubal Ligation and Diagnostic laparoscopy were majorly performed, in endoscopy. When I joined institution as a consultant, the era of non-descent vaginal hysterectomy was on horizon. As learning curve, abdominal hysterectomy followed by vaginal hysterectomy, and then after proper practice, endoscopy were the surgeries, needed to be mastered in chronology.

With the help of Administration, Corporation purchased endoscopy equipment, including bipolar to Vessel Sealers, in the year 2006-2007. We started doing endoscopy in patients with previous abdominal/pelvic surgery. With the advent of endoscopy, rates of complications of abdominal/vaginal hysterectomy were drastically reduced.

Personally, I am grateful to Dr. Nimish Pandya sir, Dr. Niruben Shah madam; for their constant support and encouragement. I am grateful to Dr. Pragnesh Shah, Dr. Chetan Panchal and my husband Dr. Deepak Patel for taking their time out from their commitments to private clinics and for teaching us with their affiliation to Shardaben Hospital, with all the patience. They used to bring their own instruments when they were not available at hospital. Dr. Satish Kadiker sir helped as fatherly figure; and was always keen to learn as well. He used to even assist for long hours of surgery during initial days of my learning. Dr. Aarti Patel madam has been of great support with her tender care and all the support. I was fortunate to have received great support at LG, from Dr. Diptiben Shah madam and Dr. Yamini Trivedi madam during my working days at LG.

We used to customize manipulator/blocker, during initial days of our learning. Few of the points I started doing were: Hydrodissection for pushing down the urinary bladder. To begin with, suturing of vault was done vaginally, then gradually after getting good grip at endoscopy, started taking endosuturing of the vault. We learnt to take care of the instruments ourselves by cleaning and assembling them.

Whenever we encounter challenges/complications, we need to recognize it, and manage it optimally; to keep learning newer things. Knowledge of Anatomy is of utmost importance before proceeding for any kind of surgery. Team work makes everything possible, more so in endoscopy. It is always a gradual process to learn anything new. We used to do total laparoscopic hysterectomy in 3-4 hours when we began, and then gradually, the duration got shortened. The focus of the team and assistants always need to be on screen, mainly so while using sharp and electric instruments. Staying updated with newer advances is always going to benefit patients as well as our own growth. Clear base, observation, knowledge and practice will make the person perfect!



Dr. Himanshu Bavishi MBBS, MD - Obstetrics & Gynaecology Infertility Specialist, Gynecologist

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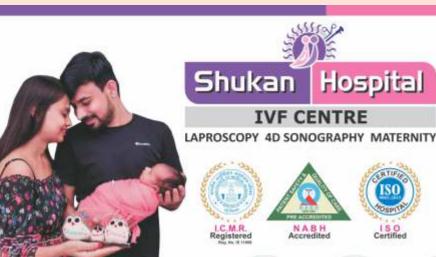
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Dr. Rajesh Punjabi M.D., Gynec Diploma in Gynec Endoscopy, (C.I.C.E - France)



Dr. Shital Punjabi M.D., D.G.O. (Gold Medalist) Art Specialist (USA)



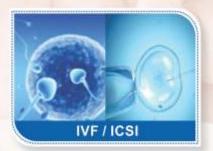
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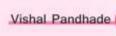
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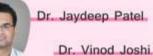




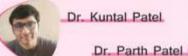




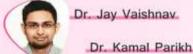
















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