ISSUE 5 | Pages 16

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Newsletter of The Indian College of Obstetricians & Gynaecologists

ICOG campus

Advancing Standards of Education and Healthcare Practices

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Message from Vice Chairman, ICOG

Dr. Uday L. Nagarseker
Vice Chairman, ICOG
uday_goa@sancharnet.in

Dear Colleague,

I am happy that I could fulfill my promise to deliver a copy of the ICOG Directory and CD at your doorstep, all though a little late because of some technical problems.

This CD and Directory was released at PCOS update at Goa as the souvenir of our Current Opinion meet.

I wanted all the 951 ICOG family members to send their details but I could get only 520 filled forms after the second attempt. The details and photos of others are taken from office records which were available.

By now you must have seen and experienced the special features of the CD provided to you. I wish each of you should download the CD on your laptop/computer so that you can edit the addresses if they are changed and keep the Directory updated.

I am delighted to have received congratulatory messages from many members and fellows after receiving this directory.

We had more than 100 new Fellows / Members inducted during last Convocation at Guwahati. I expect to exceed that figure this year. My sincere request to all the ICOG Fellows and Members that they should try to induct at least one new Fellow / Member this year for the Hyderabad Convocation.

Dr. Uday L. Nagarseker

Vice Chairman, ICOG

Messages of appreciation recieved by Dr. Uday Nagarsekar

"Received the Directory of members and fellows of ICOG. Congratulations. It is very useful as it gives contact details of most of the seniors in our profession. Thanks a lot on behalf of all of us".
With regards,
Dr. V. P. Paily

"Hearty congratulations on keeping your promise.
I thank you sciencarly for sending the directory
My regards to the President & all the members of managing committee".
With Regards
Dr. Indira Devi

"I have received the Member's directory of ICOG just today
You have done an excellent job, congratulations.
The CD is very quick reference and very well done
Kudos to Santosh Kamat, for his excellent work."
Dr. Shraddhanand Thakur

Message from 2nd Vice President, FOGSI

Dr. Jaideep Malhotra
2nd Vice President, FOGSI
jaideepmalhotraagra@gmail.com

Dear ICOGians,

Sky is the limit for what you can do and achieve today. I feel that we are a privileged lot. God has been exceptionally kind to us and has endowed us with immense treasure of knowledge, given us ample opportunity to serve humanity, which very few professions can have the satisfaction of. But have we done our best? Do we know it all? Have we put all our efforts together? We are answerable only to ourselves.

Growing up with FOGSI from a young intern to the post of Vice President, with stars in my eyes and dreams of doing so much for the underprivileged, this unique federation has provided us with a basket full of opportunities. I feel proud to be part of such a wonderful organized mature federation, whose 25000 strong army is coming closer and joining heads and hands together to work towards helping create a healthy nation, through academics and their clinical application. ICOG has also contributed a lot towards dissemination of knowledge.

Friends you know this year our President Dr. Sanjay Gupte's theme is "Reaching the Unreached", sit back for a while and ponder how many different meanings we can derive from this little phrase and pick up something of our interest and work on it. I have also done the same, by picking up two subjects which I feel are relevant, have a lack of clarity, understanding and contain confusion in its management. There is also a paucity of its data in India. Hence, I have tried to organize a very practical and a multipronged approach to reach out to as many as possible and reduce a huge burden on the family and the nation.

5-10% of the girls in the world are having polycystic ovarian syndrome that sounds much less than anemia, but 60% of these will have menstrual irregularities, 66% will be obese and 50% of them will have infertility. Those who do get pregnant, 50% will have recurrent abortions and are more liable to have pregnancy induced hypertension, gestational diabetes and those who cross this age, 30% will land up into "metabolic syndrome" or "Syndrome X". You imagine, just lifestyle modification and dietary guidance can actually reduce the problem to half and I feel and strongly believe that with our endeavor of "PCOS-talk initiative", we will go a long way in preventing more numbers to be added to the diabetic capital of the world. There also is a questionnaire designed to collect Indian data from the young girls and our practitioners. www.PCOStalk.in is an interactive website. I gracefully acknowledge the support of Merck Serono towards this FOGSI MERCK SERONO PCOS talk INITIATIVE 2010.

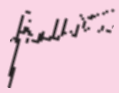
Congenital Birth defects, pose a lot of dilemmas in diagnosis – which ones you would like to terminate? Which ones are medically or surgically correctable? What is the prevalence in the Indian scenario? How to deal with them if you have by chance missed one? And is there any preventive aspect or not? The subject is confusion galore! FOGSI EMCURE Birth defects workshops are providing a lot of insight into this complex situation and very soon you will receive a FOGSI FOCUS on the same addressing these issues written by eminent members of our federation working on this subject.

Since 2008 FOGSI and FETAL CARE RESEARCH FOUNDATION have joined hand to have Birth Defects Registry of India (BDRI). I urge you to join this initiative, please register with www.mediscansystems.org or at bdrichennai@gmail.com as members of the BDRI and report all birth defects.

So dear friends, time has come when all of us have to do constant updating and ICOG with its CME'S and academic activities and the CME credit points is also encouraging all our members to keep on hooked to the newer literature available to us for furthering good, ethical clinical practice in our strive towards helping humanity and being personally satisfied.

Looking forward to a very happy long association.

Greetings and regards,



Dr Jaideep Malhotra
2nd Vice President, FOGSI
Please E mail your feedbacks to jaideepmalhotraagra@gmail.com

ICOG Chairman's Address

Dr. Duru Shah
Chairman ICOG
chairman.icog@gmail.com

Announcement New Memberships open

To become a **new Member or Fellow** of ICOG ...please log on to **www.icogonline.org** for details.

Your feedback will also be appreciated by e-mail **chairman.icog@gmail.com**

It is widely recognized today, that the 21st century will be driven by knowledge. A focused and innovative education agenda can drive our nation towards sustained advantage in the global economy. To meet the challenges of this century, India needs to usher in a knowledge revolution which will dramatically change the education and knowledge structures of the country.

Such a reform is critical because even though our economy has made significant strides, the education system has not kept pace with the aspirations of the millions of youth below the age of 35 years. Demographically, this human resource, which constitutes 25% of our population is huge. But it has not been well utilized. We have not harvested this huge asset, which could have been utilized effectively towards healthcare, if only we had developed a focused education and skill development program.

The Indian College of Obstetricians & Gynaecologists has taken a step forward in developing educational programs for our young members.

ICOG felt the need for a **"Post Graduate Review Course"**, the objective being to standardize a Review Course, which postgraduates would identify with, prior to appearing for their postgraduate exams. At present, there are various such excellent programs ongoing in the country, yet there seems to be a need for more. The first pilot of this course was conducted in April-May 2010, the proceedings of which have been enclosed in a CD and given as course material to the students. It was very well appreciated and we too learnt a few lessons from it. We hope to conduct more in different zones, at different times, so that a large number of students could benefit from it. This Course was a 3 day intensive course between 8.00am to 8.00pm extending to 10.00 pm, with 57 students enrolled, all stayed in the same venue where the course was held. The plan was to include only 50 students, but due to intense pressure we included 7 more. This Residential Course had been subsidized through an educational grant by MSD and was aimed at allowing the students to get the maximum benefit in the shortest possible time.

We appreciate the inputs of the faculty who gave their voluntary services towards this cause. We also to thank all those who were involved in making this Course successful.

There are various ways in which we can educate ourselves; through lectures, workshops, seminars and by just reading. A more interesting way to learn is to attempt a Quiz- it is challenging, stimulating and exciting!!

ICOG has initiated **the Online Quiz through the ICOG website**. The first Quiz is online from 10th April 2010 and will continue till 31st July 2010 on the subject of "Contraception" All postgraduate students and clinicians are invited to participate in this Quiz, sitting comfortably in their libraries, clinics or homes. This will be an innovative way of learning and every member who attempts the Quiz is entitled to get 1 credit point and 2 points for getting more than 75% correct.

The first 3 team winners (totally Six students) with the highest scores amongst the Postgraduates will get a free registration, accommodation and travel to Kolkatta in September for the FOGSI-ICOG Post graduate Quiz.

This will be a wonderful opportunity for all wanting to know more on the subject of "Contraception". So, get ready to go into cyberspace, log on to www.icogonline.org and attack the "Online Quiz!" The Quiz on "Contraception" will remain open online till the 31st of July 2010. All details of how to participate are available on our website under "ICOG Online Quiz"

If this experience works well, we will plan a quarterly Quiz on various subjects. I would like to personally thank Dr. Indrani Ganguly and her team for all the efforts she has put in, in developing the content for this first Quiz. I also thank Dr. Sarita Bhalerao for promoting this Quiz. I would also like to take this opportunity to thank Organon (I) Ltd. a subsidiary of Merck & Co. USA for their educational grant towards creating this very interactive educational activity.

With these 2 new programs for postgraduate education at ICOG, we have a total of four educational programs for postgraduates, (Satellite School, Ethiskills Course, Online Quiz, Post graduate Review Course).

We also have 4 Fellowship courses for those who wish to learn more in infertility, endoscopic surgery, perinatal medicine and ultrasonography. ICOG wishes to do more and more for skill based training. If any of you have any new ideas on how to improvise our programs, please do write to us at icog2005@rediffmail.com

Wishing you all a joyous monsoon!

Dr. Duru Shah
Chairman ICOG

Message from 3rd Vice President, FOGSI

Dr. P K Sekharan
3rd Vice President, FOGSI
drsekharanpk@hotmail.com

Dear Friends,

FOGSI with its theme of **"Reaching the Unreached"** has moved forward for the last six months and has achieved many of its goals for the year. Hearty congratulations to our President Dr. Sanjay Gupte and the team. It is only with the support of all of you that an organization like FOGSI can move forward.

I am aware of the services rendered by ICOG under the leadership and dedication of the Chairman, Dr. Duru Shah and her team to get the "ICOG Campus" published regularly and send to all the FOGSI members. We all gratefully acknowledge their contribution.

Reducing Maternal Mortality in India – A FOGSI Project

Maternal mortality in India is continuing to be high and it is important for all of us to work together to reduce the MMR to the minimum so that we can reach the goal of achieving MDG-5. Unfortunately we do not have the correct figure of the MMR of our country. FOGSI has started a special project known as "Reducing Maternal Mortality in India". The first step is to collect the maternal mortality data of our country from nearly 25,000 members of our Federation working all over India. If all of us cooperate and contribute to this survey, we can have the data from at least Fifteen to Twenty thousand institutions in India where deliveries are taking place. I thank all of you who have contributed the data so far and request the others to participate in this survey. The maternal mortality data forms will be sent once again to all of you. Once we get the number and cause of maternal deaths, we can improve our strategies to reduce the MMR and will be able to request the government to take remedial steps.

The second aspect of this project is to initiate the "Confidential review of maternal deaths in India", an analysis of the maternal deaths by the expert team to find out the cause of death and to suggest steps to improve the outcome as it is being done in the UK. This system is based on the principle of "No Name, No Blame" and will be kept always confidential. We must get the government support and necessary orders and even legal immunity to the procedure. The core committee of the project will be working on this important activity. Here again FOGSI needs the support from all of you.

National Conference on High Risk Pregnancy and Labour

I take this opportunity to invite all of you to this important focused conference on high risk pregnancy and labour organized by FOGSI at Calicut. Four International faculties and many National faculties have agreed to participate in this conference discussing high risk situations in obstetrics with a practical approach. There will be two workshops, one on obstetric ultrasonography, diagnostic and interventional, coordinated by Dr. S. Suresh from Chennai and the other on Obstetric procedures coordinated by Prof. V. P. Paily from Thrissur. Please visit www.highriskpregnancycalicut.org for details.

Wishing ICOG and FOGSI all the very best

Dr. P K Sekharan
3rd Vice-President FOGSI

Message from 4th Vice President, FOGSI

Dr. Tushar Kar
4th Vice President, FOGSI
drtusharkar@yahoo.co.in

"The future depends on what we do in the present"
~ Mahatma Gandhi

At the outset I express my deep sense of gratitude & humbleness for electing me as Vice-president, FOGSI. All of us know that the theme of FOGSI for this year is **'Reaching the Unreached'**. The vision of our theme is to reach all members of FOGSI especially in term of knowledge and to unreached poorest of poor public. With this vision in my mind as vice president I have come with 5 points agenda for a noble cause. I do not know whether one year is sufficient or not!

Safe Surgical Workshop:

All of us are performing common OBGYN procedure in our day to day practice. Which procedure is best? Which is ideal? What is the safest procedure? Everybody must know. For this we have selected common procedure like episiotomy, MTP, Vacuum & Forceps, CS, TAH, NDVH, LAVH/ TLH, minimal laparoscopic therapeutic procedures, laparoscopic repair of vault prolapse and internal iliac liagation. All these procedures are shown in video backup with audio followed by powerpoint presentation. We are trying to do this workshop across the country at least two places in each state. The inaugural session was at Pune on 21st March in presence of Dr. Lora from Denmark and others and second one at Rourkela, third one at Vijayawada. This will benefit all of us a great in terms of knowledge for our day to day practice.

National Satellite Conference:

The 5th national satellite conference will be held at Bhubaneswar on 17th & 18th July 2010. Unlike other conferences this time 80% of coverage will be given to clinical case discussion which will be much beneficial to the practicing Gynaecologist & PG. It awaits your interactive participation.

FOGSI Focus:

Again a FOGSI Focus will be published which will focus mainly on our day to day surgical procedures in obstetric & gynaecology with special reference to safety guidelines.

Publication of Text Book:

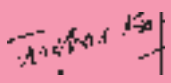
A text book on **"Do's & Don'ts in OBGYN"** will be published where more weightage will be given to what to do and what not to do in individual clinical situations which will be of much help to PG & practicing Gynaecologists.

Unfinished agenda for prevention of Cancer Cervix:

In India every 7 minutes there is a death due to cancer cervix. The problem is that in our country majority of cancer cervix cases come to us in a advance stage, where there is almost no treatment. Keeping this in mind we can reduce mortality only when this can be detected in pre-invasive stage. Therefore as per the WHO guideline every woman in India must be screened at least once in their life time around 35 years of age. Unfortunately in our country majority women including many lady doctors have never been screened for Ca cervix in their life time. For which since 2004 we have been celebrating 7 November each year as "FOGSI Pap Test Day" in memory of Madam Curie's birthday who sacrificed her life for the cause of this disease and on this I appeal to all the Gynaecologists across country to do pap smear free of cost or at subsidy at least to screen few unscreened who have never been screened in their lifetime.

In addition again I appeal all my fellow Gynaecologists and doctors in India to put routinely speculum in all cases of Gynaecology and new cases of obstetrics to downstage such a major killer.

"Coming together is beginning,
Keeping together is progress,
Working together is success".



Dr. Tushar Kar
4th Vice President, FOGSI

ICOG Secretary Speaks...

Dr. Hema Divakar
Hon. Secretary, ICOG
secretary.icog@gmail.com

Dear friends,

The contents of the Campus would reveal to you that ICOG is a "happening place"

"The Future belongs to those who believe in the beauty of their dreams" – Eleanor Roosevelt

The beauty of the vision of our chairman Dr. Duru Shah is that it is simple yet powerful ! This was prooven yet again by one of the recent activities of our organisation which conducted the residential PG reveiw course at Mumbai, giving an opportunity to young postgraduates to understand, communicate,share and help them move forwards with confidence.

"Lead your career in a way that it makes a difference to your society"
Narayan Murthy

We appreciate the enthusiasm and commitment of few of our ICOG members who lead the centers of excellence accredited by ICOG to offer six months certification courses in perinatology, minimally invasive surgery, ultrasonography and infertility.

By providing state of the art technical assistance, models and tools,knowledge sharing and hands on experience - they build the capacity of the Fellows trained under them in the respective specialities. We see a whole bunch of them with renewed confidence and competancy to offer a higher and better level of care.

We would encourage all of you to visit our website www.icogonline.org and know more about how to apply for accreditation of your center or your candidature for certification.

"A pessimist sees difficulty in every opportunity, an optimist sees opportunity in every difficulty "Winston Churchill

ICOG is challenged with its own mantra "setting standards and improving quality of healthcare practices"

We are well aware of the mismatch between health needs and composition of health workforce and insufficient skills tied to inadequate education and training capacity. Continued efforts to partner with the Government and scale up the Emergency Obstetric Care EmOC Programme is showing a perceptable impact on reduction of maternal mortality and morbidity. Persistant efforts by our leaders in FOGSI ICOG and the passion and energy of our members - certainly raise hopes for a better future for Womens Health Care in India.

Stay with us !

Warm regards

Dr. Hema Divakar
Hon. Sec ICOG

Congratulations!

Dr. Behram Anklesaria on being elected as **Chairman Elect ICOG – 2011**

Dr. Shyam Desai on being elected at **Vice Chairman Elect ICOG – 2011**

Dr. Rina Agrawal - Honorary Fellow of ICOG was awarded the **Indian Presidential Hind Rattan (Jewel of India) Award** on the Eve of Republic Day on the 25th January 2010 for Outstanding Achievements, Service and Contributions as a Non Resident Indian.

Dr. Duru Shah
Chairman ICOG

Dr. Hema Divakar
Secretary ICOG

Dr. Safala Shroff
Correspondent

Dr. Ameya Purandare
Correspondent

Online Quiz Report

Dr. Indrani Ganguli
Co-ordinator
First ICOG Online Quiz
icog2005@rediffmail.com

Dear friends,

I welcome you all to the first online ICOG Quiz. This quiz is not just a source of entertainment but it will simultaneously provide you an opportunity to test your knowledge. Since we all are gynaecologists/obstetricians we will find the subject of this first quiz very topical. We all know that despite the tremendous economic progress India has made since Independence, a major obstacle in the country's further development continues to be its burgeoning population. Keeping in mind the low Contraceptive Prevalence Rate amongst Indians, it has been decided to choose Contraception as the topic for this first online ICOG Quiz. Before we move on to the Quiz, let me provide you some statistics to ponder over:

- The Total Fertility Rate (TFR) of India, which is defined as the average number of children born to a woman by the end of her childbearing phase if she were to pass through all her childbearing years conforming to the age-specific fertility rates of a given year, is estimated at 2.83 for the year 2010. Undoubtedly, the TFR has shown a steady decline from over 6.00 during the 1960's. But did you know that the National Population Policy Document of 2000 had targeted a TFR of 2.1 to be achieved by 2010 so that the Indian population could be 'stabilized'?
- Often demographers quote that the low age at marriage leads to high fertility rate. How many of us know that the average age at marriage of an Indian girl is about 19 years? How many of us know that the average age at first birth of an Indian girl is barely 20 years?
- A very low age at child birth would mean a very high probability of maternal and infant mortality rates. Did you know that for every one lakh live births, as many as 540 Indian women die? Did you know that 66 infants out of every 1000 live births die within the first year of their birth?
- Most of our patients are married women. Did you know that almost 50% of Indian married women do not use any contraception?

The low usage of contraception stems from what we can call the absence of the four 'A's, viz. awareness, availability, accessibility and affordability. As gynaecologists/obstetricians, our role is limited to the first of the 'A's - awareness. But before we make our patients aware about contraception, how about checking how aware we ourselves are? So come let us all take us this challenge – not merely of answering all the questions in this Quiz correctly, but also to contribute our own little bit so that the population of the country becomes her strength, and not weakness.

To test your knowledge, this Quiz will be followed by some more quizzes on different topics. All post graduate students are invited to participate in these. The three teams with the highest scores will receive prizes. So, go on to the cyberspace, log on to **www.icogonline.org** and type **"ICOG Online Quiz"**. Test and increase your knowledge.

Dr. Indrani Ganguli

ICOG Post Graduate Residential Review Course

Dr. Geetha Balsarkar
Course Co-ordinator
First ICOG PG Residential Review Course
icog2005@rediffmail.com

The first ICOG FOGSI residential postgraduate review course was held on 30th April, 1st and 2nd May 2010 at Hotel West End, opposite Bombay Hospital, Mumbai. This was a 3 day intensive course between 8.00am to 8.00pm with 57 students, most staying in the same venue where the course was held. The objective was to standardize a Review Course which postgraduates will identify with and will attend prior to appearing for their postgraduate exams. The National Advisors were Dr. Sanjay Gupte, Dr. Uday Nagarsekar and Dr. Hema Divakar. The National Convenor was Dr. Duru Shah. The Zonal Advisors were Dr. V. P. Paily, Dr. Deepika Deka, Dr. Pankaj Desai and Dr. Ashish Mukhopadhyaya. The Course Co-coordinator was Dr. Geetha Balsarkar, Mumbai. The students who enrolled were from various parts of the country. Only 7 were from Mumbai. The faculties were excellent teachers from all over the country. In addition to senior teachers from Mumbai, Dr. VP Paily, Dr. Hema Divakar, Dr. Haresh Doshi and Dr. Ashish Mukhopadhaya were also faculty for this programme. The students have been given a CD with a compilation of all the course material for future reference.

This Residential Course had been subsidized through an educational grant by MSD and was aimed to allow the students to get the maximum benefit in the shortest possible time.

Dr. Geetha Balsarkar

ICOG Travelling Professorship

Dr. Priti Bala Sahay, HOD, Dept. of Obs & Gyn, RIMS, Ranchi visited Dept. Of Obs. & Gyn **CSM Medical University, Lucknow** from 15.02.10 to 20.02.10 (Monday to Saturday) as visiting Professor under the ICOG Traveling Professorship scheme. **Local hospitality including boarding & lodging was provided by Dept. of Obs & Gyn, CSMMU.** Each day she had an interactive discussion with a group of postgraduate students on any one special aspect of Obs & Gyn like electronic fetal monitoring, postpartum programme, colposcopy & infertility. She also graced the Lucknow Obs. & Gyn. Society (LOGS) annual day celebration as chief guest & gave an interesting talk on Management of Premenstrual Syndrome. This was an unique experience for the department. Her visit was interesting & there was a fruitful exchange of ideas.

Messages of Appreciation "

Dear Duru

"upon receiving the latest issue of the newsletter, I felt compelled to write and say a few things. The first is that I find it extremely useful because it really brings me up to date, not only on what has happened but what is going to happen. Second, the format is most enjoyable, easy to read and engaging. The use of pictures of everyone makes it very personal. Finally, if truth be told, it is the most interesting of the newsletters I get from all the Colleges to which I belong. Keep up the good work and many, many thanks. "
Prof. Louis G. Keith

ICOG CME

Dr. C. S. Dawn CME Report

Warangal

The Warangal Obstetric & Gynaecology Society on 4th April 2010 held at Hotel Suprabha, Hamankonda, Warangal. The topics of the CME highlighted on Gestional Diabetes and Metabolic Syndrome of Menopuase. The CME was inaugurated by Dr. Anandam, Vice Principal, Kakatiya Medical College, Warangal along with the faculty comprising of Dr. Uday Thanawala, Dr. Prathibha, Dr. Indiradevi, Dr. Sars Chandrika, Dr. Achanta Vivekanand and all Fellows of ICOG. There were lively discussions with the 50 participating members and the two hours of ICOG study was spent purposefully by the participants. Dr. Uday Thanawala spoke on Gestational diabetes and Parental iron Therapy with the recent trends. Dr. Achanta Vivekanand spoke on metabolic syndrome of menopause and also about the brief history of ICOG, the Eclampsia Registry and about the good practice guidelines been published by ICOG. Dr. Indiradevi spoke on Role of ECV at term: Dr. P V Saras Chandrika on gestational Trophoblastic disease: Dr. Prathibha on pre-eclampsia and update: Dr. A Narsimha Reddy on Obstetric ultra sound when and why? All the topics were well received by the audience and their feedbacks were encouraging.

The Dept of Obstetrics & Gynaecology, Christian Medical College & Hospital, Ludhiana, under the able guidance of Dr. Mary Abraham & Dr Kumkum Avasthi successfully organized the ICOG CME on 'Caesarean section: Changing Trends & Medical Issues' on 14th March 2010. It was well attended with 200 delegates. There was active participation for study hours on 'Diabetes in Pregnancy' & 'PCOS' guided by Dr. Uday Thanawala. Dr. Usha Saraiya deliverd the Dr. C.S Dawn lecture on 'Caesarean Section in Placenta Previa'.

Ludhiana

Navi Mumbai

The Navi Mumbai Obstetric & Gynaecological Society hosted a CME on Contraception & Gestational Diabetes organized by Dr. Sucheta Kinjawadekar, on 28th March 2010 at the Mayfair Banquets, Vashi, Navi Mumbai.

48 delegates attended the programme. The programme was highly successful and the audience enjoyed interaction with the speakers.

The Imphal Obstetrics & Gynaecology Society, on 24th February 2010, held the CME on topics of GDM, PCO in Adolescent, Early Pregnancy Problem and infertility. Prof. Kamal Ojha from London & Dr. D. K. Dutta from Bengal were invited speakers. 53 delegates attended the CME.

Imphal

Kolkata

The Bengal Obstetric & Gynecological Society organized a CME programme on 4th April 2010, inaugurated by Dr. Kalidas Bakshi, Hon Sec BOGS, Dr. Hema Divakar, Sec ICOG and Prof. Ashis Kumar Mukhopadhyay, Chairperson FOGSI-Medical Education Committee. The focus topics covered were on PCOS & Gestational Diabetes Mellitus.

A total of more than 120 delegates attended the CME who appreciated the programme and efforts taken by the organizers.

To all Organizers of Conferences, Workshops and Training courses.

Awarding Credit through Training Courses and Conferences. If you determine that your course, seminar or conference qualifies for credit points, please send details to **secretary.icog@gmail.com**

To participate in FOGSI 2010 initiative

Visit www.fogsi.org & click on **" I want to participate in FOGSI 2010"**

To participate in webenabled National Eclampsia Registry Visit www.abcofobg.com/Eclampsia

Cervical Cancer and Its Prevention

Dr. Harshad Parasnis
MD, DNB, FCPS, DGO, FICOG
Consultant Gynecolgic Oncologist, Pune
Chairperson, Oncology &
Trophoblastic tumours committee, FOGSI
Associate Professor,
Bharati Medical college, Pune

Carcinoma of the uterine cervix is the most common cancer in Indian women and occupies the top rank among cancers in women in most developing countries, constituting 34% of all women's cancers. A World Health Organization study reveals that every year about 1, 32,000 women are diagnosed with cervical cancer and nearly 74,000 die from the disease. In India 365 million women are over the age of 15 years and are at the risk of developing cervical cancer. The growing risk of cervical cancer in women in India (aged 0-64 years) is 2.4% compared to 1.3% for the world.

Despite these glaring statistics, uterine cervical cancer is a favorable site for an effective control program. It is easily accessible and there is usually a long natural history of preinvasive phase which is easily recognizable by screening techniques like the Pap smear. Furthermore, treatment at this stage is very effective.

Implementing an effective cancer control program in India to tackle this huge disease burden is difficult especially in the context of the additional problems of advanced disease at presentation, the country's limited resources and health infrastructure, and the paucity of trained personnel. Hence we need to evolve our own preventive strategies to address this issue. Education, screening and vaccination are the most important pillars in the preventing cervical cancer.

Primary Prevention

Evidence based on etiologic associations and the natural progression of disease. Though sexual hygiene and the use of barrier contraception (condom) are believed to prevent cervical cancer, however the same is also seen in higher socio-economic class where hygiene is not supposed to be a concern. Quite a few recent studies confirm the risk of transfer of HPV even with use of condom. Education or awareness may largely impact on reducing cervical cancer burden. Improvements in socio-economic standards may not automatically reduce morbidity and mortality hence to achieve this long-term objective of having a cervical cancer free society, prevention of HPV infection can be possible through many aspects of preventive health care like education of the population, mass media activity about sexual hygiene, life style management, barrier contraception and HPV Vaccination.

Control of HPV Infection

The leading etiologic factor in the development of preinvasive and invasive cervical cancer is infection with specific types of human papillomavirus (HPV), which is transmitted by sexual contact. About 95% of women with invasive cervical cancer have evidence of HPV infection. The IARC-sponsored case control study (Cancer Institute, Chennai) on HPV and cervical cancer in India documented that 99% of uterine cervical cancers were HPV-positive compared to only 22% in the controls.

Most HPV infections in women occur without any symptoms and go away without any treatment over the course of a few years. The immune system of most women will usually suppress or eliminate HPVs. Only HPV infections that are persistent can lead to cervical cancer.

Of the more than 100 types of HPV, over 30 types can be passed from one person to another through sexual contact. There are 19 "high-risk" HPV types that can lead to the development of cervical cancer or other genital/anal cancers, of which HPV types (16 and 18) cause about 70% of cervical cancers worldwide. Low risk HPV types 6 and 11 cause about 90 % of genital warts.

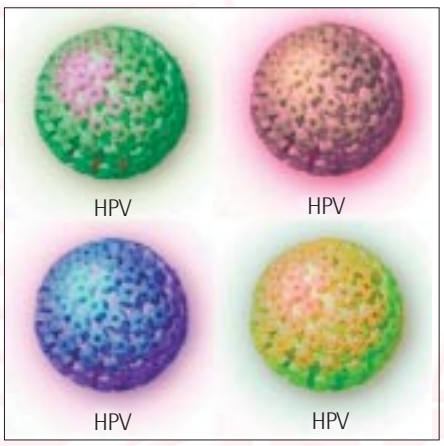
Avoidance of Human Papilloma Virus Infection

Based on solid evidence, the following measures are effective to avoid human papillomavirus (HPV) infection, and thus cervical cancer:

1. Abstinence from sexual activity
2. Barrier protection and/or spermicidal gel during sexual intercourse. Total use of barrier contraception decreases cancer incidence with a relative risk of 0.4 (95% CI, 0.2-0.9)
3. **HPV vaccination –** Vaccination against HPV-16/HPV-18 is effective to avoid HPV infection, and thus cervical cancer.
   Vaccination against HPV-16 and HPV-18 reduces incident and persistent infections with efficacy of 96.85 % and 93.35 % (95% CI, 45-100), respectively. Duration of efficacy is not yet known.
4. **Cigarette Smoke –** Cigarette smoking, both active and passive, increases the risk of cervical cancer. Among HPV-infected women, current and former smokers have approximately two to three times the incidence of high-grade cervical intraepithelial neoplasia or invasive cancer. Passive smoking is also associated with increased risk, but to a lesser extent.
5. **Reproductive Behavior –** High parity is associated with increased risk of cervical cancer.
   Among HPV-infected women, women who have had seven or more full-term pregnancies have approximately four times the risk of squamous cell cancer compared with nulliparous women and two to three times the risk of women who have had one or two full-term pregnancies.
6. **Long-term use of oral contraceptives** – Long-term use of oral contraceptives is associated with increased risk of cervical cancer.
   Among HPV-infected women, women who used oral contraceptives for 5 to 9 years have approximately three times the incidence of invasive cancer, and those who used them for 10 years or longer have approximately four times the risk.

HPV Vaccination

The HPV vaccine is a prophylactic vaccine. The Indian Food and Drug Administration (FDA) have approved two prophylactic vaccines to prevent HPV infections:



Quadrivalent vaccine (Gardasil®) and bivalent vaccine (Cervarix®). Both vaccines are highly effective in preventing persistent infections with HPV types 16 and 18. Gardasil also prevents infection with HPV types 6 and 11, which cause 90% of genital warts. The HPV vaccine is not therapeutic. It does not treat existing HPV infection or cervical intraepithelial neoplasia.

Vaccination target group: both the vaccines have been approved for use in females aged 10 to 45 years. Routine HPV vaccination is recommended for females aged 10 to 12 years as it is best effective when given before onset of sexual activity. HPV vaccination may be offered to all up to 45 years, regardless of sexual activity, but offers less benefit if already sexually active. The decision is based on the informed discussion between the woman and her health care provider regarding risk of previous HPV exposure and potential benefit from vaccination.

Though Vaccination in males is recommended in countries like Australia and USA, at present it is not approved by Indian FDA.

Dosage schedule: Both vaccines have 3 doses to be given intramuscularly. The quadrivalent vaccine is given at 0, 2 and 6 month interval while the bivalent vaccine is given at 0, 1 and 6 months. At present there is no data to support the use of booster vaccination.

Testing for HPV is not recommended before vaccination. Sexually active women and women with previous abnormal cervical cytology can receive the HPV vaccine. But the benefits may be limited to the protection against infection of HPV genotypes with which they have not been infected.

Pregnancy and lactation: The use of the vaccine in pregnancy is not recommended, although no teratogenic effect caused by the vaccine has been reported. There is no evidence to show that the HPV vaccine adversely affects fertility, pregnancy or infant outcome. Women who are planning to conceive are advised to defer vaccination until after delivery. Women who become pregnant before completion of vaccination are advised to postpone the remaining dose until after the pregnancy. Termination of pregnancy is not indicated for women who become inadvertently pregnant during the course of vaccination. Lactating women can receive the HPV vaccine and still continue breastfeeding because it is a vaccine without live viral DNA.

Women who have been vaccinated with the HPV vaccine should continue with the cervical cancer screening and its corresponding management.

Secondary Prevention

Secondary prevention assumes vital importance in the context of the hurdles in implementing primary prevention methods. To make screening programs more cost effective, identification & screening of high risk group is important.

Identification of High-Risk Groups

Apart from sexual activity and promiscuity, the risk factors for cervical cancer in India are socio-economic, viz. they relate to education and income, personal lifestyle, religion, multiple partners and sexual exposure prior to the age of 18.

Accepted methods for early cervical cancer detection and control for a developing environment include:

1. Pap test
2. Visual Inspection with acetic acid (VIA)
3. VIA with magnification (VIAM)
4. HPV testing
5. Colposcopy

Pap Test: Estimates from population studies suggest that Screening Via Routine Gynecologic Examinations and Cytologic screening with treatment of precancerous abnormalities may decrease cancer incidence and mortality by more than 80%.

Screening is not beneficial in detecting invasive cancer in women younger than 25 years because of the low prevalence of invasive disease, and the harms outweigh the benefits. Regular screening with the Pap test leads to additional diagnostic procedures (like colposcopy) and treatment for low-grade squamous intraepithelial lesions (LSIL) with uncertain long-term consequences on fertility and pregnancy. These harms are greatest for younger women, who have a higher prevalence of LSIL, lesions that often regress without treatment.

Screening is not beneficial in women older than 60 years if they have had a history of recent prior negative tests. Screening is also not helpful in women who do not have a cervix as a result of a hysterectomy for a benign condition.

Reductions in cervical cancer incidence and mortality were proportional to the intensity of screening

Cervical Cancer Screening in Developed Countries

Cervical cancer screening has been documented to be effective in many developed countries. After the successful British Columbia screening campaign in 1949, it is estimated that annual screening of 85% of the population resulted in a sharp drop in the incidence (78%) and mortality of invasive cervical cancer. Organized screening programs in Nordic countries have demonstrated a 50% reduction in mortality in Iceland and Finland which have instituted nationwide screening. In Denmark, 40% coverage resulted in a 25% reduction in

mortality. In the UK cervical cancer screening program, it is estimated that 800 lives are saved annually, at a cost of over £100 million/year.

Cervical Cancer Screening in India

In a large populous country like India with its limited resources, population screening by Pap smear is neither pragmatic nor cost-effective. It is thus essential that we evolve our own strategies. The concepts of cancer control and prevention have to be based on the pattern of cancer incidence, health infrastructure and economy of the country. We cannot attempt to replicate the strategies of the developed countries. The incidence of late disease in most of the developed countries is about 10-12%, whereas in India it is almost 70%. Our highest priority will therefore be to identify disease earlier, at least Stage IB where the cure rate can be as high as 85%.

Visual Inspection with acetic acid (VIA)

From the available studies, the most useful and affordable methodology now appears to be visual inspection with acetic acid (VIA). Cytology, colposcopy and HPV DNA testing can be included wherever possible. The South Arcot study in rural India showed that a simple visual and digital examination by Village Health Nurses could detect 45% of early disease and that a cervical smear is desirable but not mandatory.

One-time screen-and-treat approach

Choice in methods of screening for cervical cancer in resource-limited countries has prompted the evaluation of one-time screen-and-treat approaches for cervical cancer screening.

A clustered randomized controlled study undertaken by the Nargis Dutt Memorial Cancer Hospital at Barshi, in collaboration with IARC, evaluated the impact of one-time visual inspection of the cervix with acetic acid (VIA) and immediate colposcopy, directed biopsy, and cryotherapy (where indicated) on cervical cancer incidence and mortality on healthy women aged 30 to 59 years. One arm received the intervention, while the other arm received counseling and education about cervical cancer screening. After 7 years of follow-up, the study demonstrated a 25% relative reduction in cervical-cancer incidence in the intervention arm compared with the control group and a 35% relative reduction in cervical cancer mortality rates in the intervention arm compared with the control group.

HPV DNA Test

The Barshi study group has subsequently reported that human papillomavirus (HPV) testing is superior at reducing cervical cancer mortality using the same cohort; however cost remains a major issue.

HPV DNA test is Hybrid Capture 2 (HC2) designed to detect 13 carcinogenic HPV types in cervical sample. The US FDA has approved HC2 for use in only two situations: (1) as a second test (in the triage test) following an equivocal cytology result of atypical squamous cells of undetermined significance (ASCUS); and (2) for primary screening in conjunction with cervical cytology for women aged 30 years and older.

Screening in rural India

The overall objective in rural cancer screening program is to integrate the screening and education program with the State's existent health infrastructure and delivery system, since this could significantly reduce cost.

As the majority of women at risk live in villages, the primary healthcare personnel in rural setup like all women doctors in the district and Taluka hospitals and primary health centers, the village teachers, block health inspectors and the village Health nurse (VHN) need to be motivated for early detection program. The VHNs must be trained in visual inspection with acetic acid and digital examination for detection of an abnormal cervix and to take a Pap smear or refer to PHC for one-time screen-and-treat approach. Educational material on cancer and early detection must be provided to the VHNs to motivate women to accept screening through health education. When trained and sufficiently motivated, these health workers are the pillars of rural screening program.

Questions for CME Credit Points

(More than one answer may be correct. Please refer to the answers which will be printed in the following issue of the newsletter. Credit Point Max 2
1 for attempt; 1 for answers > 50% correct) **Mail your answers to ICOG office at icogcme@gmail.com**

1. HPV subtypes responsible for CIN 3 & Cervical cancer are
- **a.** subtypes 7 & 9
- **b.** Subtypes 9 & 11
- **c.** subtypes 13 & 16
- **d.** subtypes 16 & 18

2. HPV vaccination is
- **a.** Prophylactic
- **b.** therapeutic
- **c.** both prophylactic & therapeutic
- **d.** none of above

3. HPV infection spreads through
- **a.** sexual contact only
- **b.** hand to genital route
- **c.** both sexual contact
- **d.** none of above and hand to genital route

4. World over, approximate percentage of cervical cancer patients in India
- **a.** <20 %
- **b.** 20 - 25%
- **c.** 25-30%
- **d.** >30%

5. The 5 year survival of early stage cervical cancer is 80-90%
- **a.** True
- **b.** False

6. A woman comes to your office with her 12-year-old daughter seeking information regarding the new human papillomavirus (HPV) vaccination. Which one of the following statements is not an FOGSI recommendation regarding the administration of this vaccine?
- **a.** Routine HPV vaccination is recommended for girls aged 11 or older
- **b.** Women should continue to cervical cancer screening, whether or not they have received the vaccine
- **c.** HPV vaccination is not currently recommended for women older than 45 years or for males
- **d.** HPV testing before initiating vaccination is recommended by FOGSI

7. Progression of CIN3 to Invasive carcinoma occurs in
- **a.** <25%
- **b.** 30%
- **c.** >35%
- **d.** Rarely

8. One time screen and treat approach includes
- **a.** Diagnosis with Pap & treatment with LEEP or Cryotherapy
- **b.** Diagnosis with VIA & treatment with LEEP or Cryotherapy
- **c.** Diagnosis with Pap & treatment with Radical hysterectomy
- **d.** Diagnosis with Pap & treatment with Radical hysterectomy

9. The method of choice for cervical cancer screening in developing countries is
- **a.** Pap test
- **b.** VIA
- **c.** Colposcopy
- **d.** HPV DNA test

10. False negativity of pap test is about
- **a.** 10%
- **b.** 20%
- **c.** 30%
- **d.** 40%

Answers: Issue 4 CME MCQ on Non Stress Test
(Credit Points: 1 for attempt; 1 for answers > 50% correct)

1. a **5.** c
2. d **6.** b
3. d **7.** c
4. b **8.** d

Ovarian Reserve, at the Core of Infertility Diagnosis and Treatment

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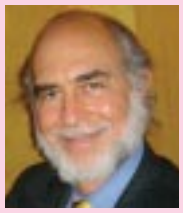

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CONFLICT STATEMENT: Both authors are listed as co-inventors on already granted or still pending U.S. patent applications, which claim therapeutic benefits from DHEA supplementation in women with diminished ovarian reserve, and claim diagnostic benefits from determination of CGG nucleotide repeats on the FMR[1] gene. Both authors received in the past research support, travel funds and speaker honoraria from various pharmaceutical companies, though none related in any way to the here covered topics.

What is ovarian reserve?

An important concept in reproductive medicine, ovarian reserve (OR) is routinely assessed in daily infertility practice, yet still only incompletely defined. OR attempts to describe, excluding other potential causes of female and male infertility, how much fertility potential is left in a woman's ovaries and is known to decrease as women age[1]. How OR is defined varies, however, considerably, and no universally accepted definition exists. Looking carefully at various methods of OR assessment, it is obvious that they assess different components of OR (Table 1). The principal difference between older [follicle stimulating hormone (FSH), estradiol and the clomid challenge test] and newer OR tests [anti-Müllerian hormone (AMH) and antral follicle count] lies in that the former primarily assess the more mature follicle pool at the end of folliculogenesis, while the latter assess the smaller, and more immature, follicle population of earlier folliculogenesis.

Earlier (smaller) follicles, of course, mature and turn into larger, gonadotropin-sensitive follicles. It, therefore, does not surprise that FSH and AMH in principle correlate[2]: For example, an FSH of 10.0 mIU/mL correlates approximately to an AMH value of 1.0 ng/mL. Yet, quite a number of recent studies have demonstrated that, overall, AMH, better than FSH, predicts oocyte yields and pregnancy chances in IVF[3] and that individual patients can differ to significant degrees in respective FSH and AMH values. Indeed, such discrepancies have clear predictive value for oocyte yields in IVF[4]: In very young women under age 32 years, oocyte yields do not differ whether women have normal FSH and AMH or only normal AMH. In other words, at very young ages elevated FSH does not matter much as long as AMH is normal. This, of course, correlates well with quite widely reported observations that elevated FSH levels in young women should not be considered reason to withhold treatment[5]. Women at such young ages with normal FSH and abnormally low AMH or with abnormal FSH and AMH do equally poorly and demonstrate significantly diminished oocyte yields.

Table 1. Selected methods to assess OR

Method	What it assesses
Follicle stimulating hormone (FSH)	Large post-antral, gonadotropin- sensitive follicles
Estardiol	Same as above
Anti-Müllerian hormone (AMH)	Small post-premordial, pre-antral follicles
Antral follicle count	Same as above
Clomid challenge test	Likely combined
Oocyte yields in IVF	Combined

Normal AMH is, therefore, up to age 32 years, more important in predicting oocyte yields than normal FSH, suggesting that the smaller, immature follicle pool at those ages better predicts clinical outcomes than mature follicles, which with traditional OR assessments, until recently, have been the mainstay. Beyond age 32 years, this becomes even more evident because from there until age 42 years, oocyte yields follow a statistically very obvious patter at all ages: Women with normal FSH and AMH in all age groups produce by far the largest number of oocytes, followed by those with normal AMH and abnormal FSH, followed by normal FSH but abnormal AMH and, finally, women with abnormal FSH as well as AMH, who demonstrate by far lowest yields.

These observations suggest that at very young ages a sufficiently large number of small pre-antral follicles is present in ovaries, post-recruitment, so that, even if diminished (low AMH), adequate follicle numbers still mature, leading to excellent oocyte yields whether FSH and AMH or only AMH are normal. After age 32, small follicles are, however, because of physiological aging, so reduced in numbers that any additional diminution, whether at small follicle stages (low AMH) or at later stages of gonadotropin sensitivity (high FSH), or at both, leads to progressively lower oocyte yields. AMH, however, as one would expect, outperforms FSH in importance at all ages in that normal AMH is always preferable over normal FSH.

Above age 42 years, AMH, however, loses this superiority and, indeed, better oocyte yields may be obtained if AMH is abnormal and FSH is normal[4]. Older women, of course, practically universally develop diminished OR (DOR) and all OR tests, therefore, lose specificity not only at very young ages because of excessive OR (see above) but also at older ages (Figure 1 demonstrates this fact by widening 95 % CIs for both, FSH and AMH, at both age extremes).

Oocyte yields are currently considered a gold standard in OR assessments because oocyte numbers, of course, correlate well with pregnancy chances in IVF. They, however, also do not represent a perfect test since, like other OR assessment tools, they are subject to multiple influences. After all, they only reflect end stages of folliculogenesis within the individual ovarian environments of patients. Consequently, malfunction in any one important contributing factor to this environment can negatively affect follucologenesis and, therefore, oocyte numbers as well as egg quality (for further detail, see below).

OR assessments also should entail all stages of folliculogenesis, which also includes the priomordial follicle pool, which really represents the "true" OR a woman is born with. Tools to assess primordial follicles, however, do not exist yet and, until these are developed, OR assessments are unlikely to further improve significantly.

Age-specific OR testing

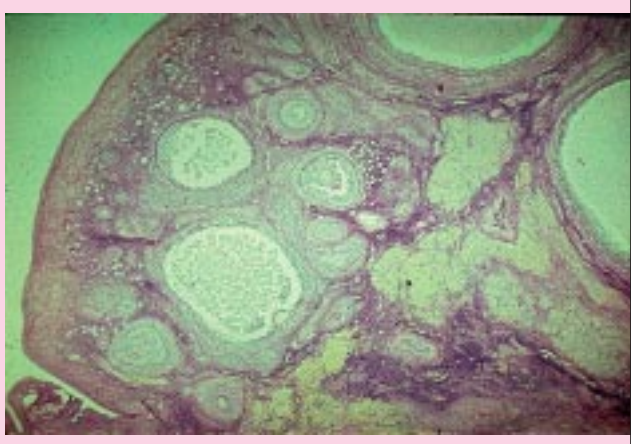
What we did not note before is that above cited FSH and AMH data were generated from so-called age-specific OR assessments. FSH, of course, increases and AMH decreases with advancing female age. Though this has been known for decades (at least for FSH), paradoxically the whole world has been using universal FSH ranges, independent of age. Consequently, most physicians consider an FSH of up to 10.0 mIUI/mL normal for all patients, and the possibility of DOR is suspected only if FSH values exceed this cut off.

Figure 1 demonstrates age-specific AMH (upper panel) and FSH (lower panel), as established at our center in an infertile patient population, based on 95% CI. The figure, of course, demonstrates well the rise in normal ranges of FSH and decline of normal ranges in AMH as women age, showing that universal cut offs for FSH or AMH (or - not shown here - antral counts, etc.) simply do not make physiologic sense.

We demonstrated that an age-specific definition of DOR much better defines oocyte yields than universal levels of FSH[6] and AMH[7]. It, therefore, also permits a more accurate and timely diagnosis of DOR than universal cut off levels, which is especially important in younger women where DOR is frequently misdiagnosed for so-called "unexplained" infertility[8].

Because our center's normal ranges were established in an infertile population, the in Figure 1 reported cut offs have to be considered conservative and should really be established in normal, fertile populations. Cut offs in such populations, likely, will be mildly higher for AMH and mildly lower for FSH.

Using age-specific testing, we, however, determined one AMH level which appears universal for all ages. For reasons not completely clear yet, an AMH of 1.05 ng/mL, at all ages, statistically discriminates between significantly lower and higher live birth chances with IVF[9]. It is important to note that this value relates to live births



and not to clinical pregnancies because there are distinct differences between these two outcome points. As we reported, pregnancies can be established at reasonable rates even in the absence of detectable AMH and at extremely low levels of up to 1.05 ng/mL[10]. Miscarriage rates, however, differ greatly, resulting in similar live births[9]. Even though this AMH level still denotes DOR at practically all ages (Figure 1), it, nevertheless, represents a major break point between low and good live birth chances and, therefore, has major importance for patient counseling and clinical management.

Treatment of DOR

Accurate assessment of OR and timely diagnosis of DOR are, of course, crucial to many aspects of infertility treatment. The diagnosis of DOR is usually overlooked in younger women, which does not only result in delay in diagnosis, inappropriate therapies and unnecessary costs, but, most importantly, in further time lost, and deterioration in clinical circumstances, with diminished chances for conception.

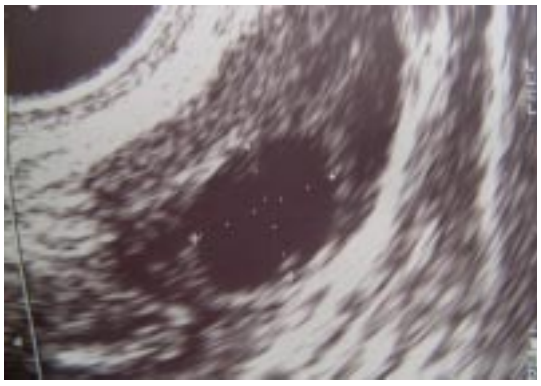
At our Center, once a patient is diagnosed with DOR, independent of age, she is advanced into in vitro fertilization (IVF) only after at least two months of supplementation with dehydroepiandrosterone (DHEA)[11]. Patients are stimulated with FSH preponderance (300-450 IU) and human menopausal gonadotropin (HMG) support (150 IUI) daily in a microdose agonist cycle.

Utilizing such an approach, we have, as noted above, seen so far over 30 patients conceive in the absence of detectable AMH or at extremely low AMH levels[9,10], while the whole world literature currently contains only one single case report of a pregnancy in the absence of detectable AMH[12].

DHEA not only improves pregnancy chances but also significantly reduces miscarriage risks[13]. Indeed, a 50-80% decrease in miscarriage risk appears so large that it cannot be explained without a potentially beneficial DHEA effect on aneuploidy. Preliminary preimplantation genetic diagnostic studies suggested such an effect [14]. Extremely low miscarriage rates at extremely low AMH levels (undetectable - 0.4ng/mL) are also supportive[9].

These low pregnancy loss rates, indeed, led us to reconsider the ovarian aging process: Since it appears unlikely that DHEA can restore an already damaged oocyte to health, we no longer believe that oocytes in primordial follicles age, as women grow older. Instead, our DHEA data suggest that the primordial oocyte remains relatively unaffected by female aging. What ages appears to be the ovarian environment into which the primordial oocyte is recruited, and where it, for months, undergoes maturation in the process called folliculogenesis.

It is this ovarian environment which DHEA appears to "restore," and, by doing so, at least in positively affected women, a more normal follucologenesis is allowed to progress than, otherwise, would take place in unreconstituted ovarian environments. Better-quality oocytes and embryos are the consequence, demonstrating less aneuplodiy and achieving better pregnancy and lower miscarriage rates.



Predicting OR

Using somewhat outdated criteria, it has been suggested that approximately 10% of all women age their ovaries prematurely. Approximately 10% amongst them (1% overall) develop premature ovarian failure (POF), now frequently given the acronym primary ovarian insufficiency (POI). The remainder develop what we have come to call premature ovarian aging (POA) [6] and others occult primary ovarian insufficiency (OPOI) [15].

Like POF/POI, POA/OPOI has been associated with various underlying pathophysiologies, though a majority of cases appear associated either with autoimmunity of abnormalities in CGG counts on the FMR1(fragile X) gene[16]. In contrast to neuro/psychiatric risks, which are associated with 55-200 (permutation) and over 200 CGG repeats (full mutation), we defined 26-32 CGG repeats as the normal range in regards to ovarian function, independent of race and/or ethnicity[17,18]. Women with more but also with fewer CGG repeats demonstrate progressively higher risk towards POA/OPOI the further they are removed from the normal range [19].

Whether a woman has one (heterozygous genotype), two (normal) or no (homozygous) normal allele counts matters, and predetermines ovarian aging patterns[18]. Indeed, it appears that heterozygous - and homozygous - abnormal women demonstrate lower than normal OR at younger ages but better than normal OR at more advanced ages. This observation suggests that the FMR1 gene is intimately involved in ovarian recruitment and, therefore, to a significant degree, controls OR. It also explains why, amongst so many various neuro/psychiatric conditions, associated with abnormal CGG counts, one, POF/POI, has been for decades associated with premutation range repeat numbers [20].

Recognizing that abnormal CGG repeat numbers on the FMR1 gene and autoimmunity predispose towards POA/OPOI, it is now possible to screen young women prospectively for at least two-thirds of POA/OPOI risk. Women with abnormal CGG counts and/or a personal or strong family history of autoimmunity can then be flagged as a high risk population, and can be carefully monitored with age-specific AMH, as the most specific OR test currently available.

It is important to emphasize that all FMR1 and autoimmune testing only establishes risk; it does not establish a diagnosis of DOR. Such a diagnosis can be only reached with appropriate OR testing. Only if a young woman, considered at risk for DOR, while monitored with serial AMH assessments, drops off her age-specific OR curve, can a diagnosis of, likely, DOR be reached.

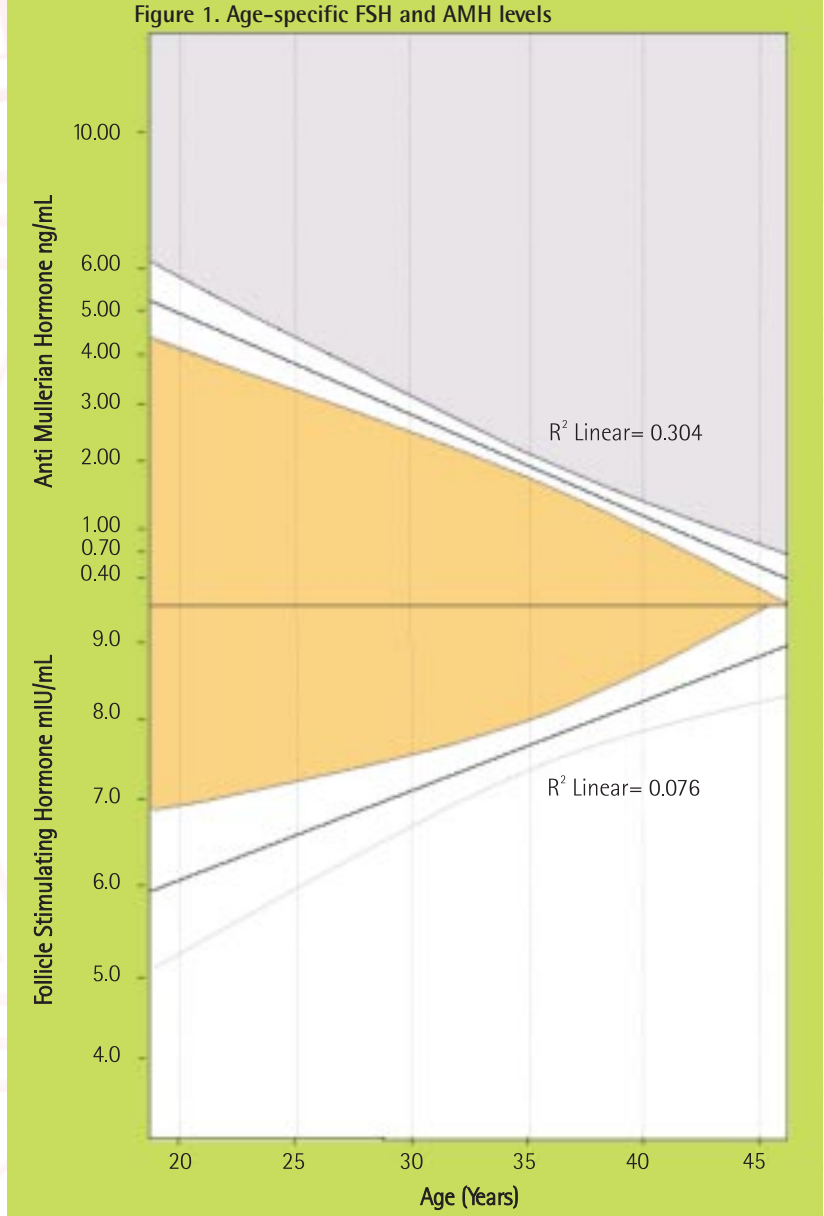
The sooner such a diagnosis is made, the better, of course, for the patient. Even if socially not ready to speed up her reproductive planning, the younger a woman is when she takes fertility preserving steps, like oocyte freezing, the more likely will her efforts be successful.

Conclusions

We have attempted to demonstrate in this contribution the importance of OR evaluations for diagnosis and treatment of infertility. Much progress has been made in recent years but much more still waits to be done.

Continued on page12

Figure 1. Age-specific FSH and AMH levels



Young Member's Column: Creating Guidelines

Dr. Nikhil Datar
National Coordinator
Medico-legal cell FOGSI

*Dr Nikhil Datar was awarded the prestigious **Commonwealth Fellowship** to study patient safety. He visited the UK and the WHO to study various aspects such as maternal mortality, risk management, health care management, and reducing medical errors.*

Visiting prestigious organizations in the UK and the WHO and working for the World Alliance for patient safety was life time experience for me. One of the prestigious organizations I visited was the National Institute of Clinical Excellence (NICE). We all know this organization for making guidelines which we read all the time from the text books and journals. Actually the National Institute for Health and Clinical Excellence (NICE) not only provides guidance, but also sets quality standards and manages a national database to improve people's health and prevent and treat ill health.

I, obviously had gone with my own baggage of thoughts. In India, It is not uncommon to see medical units in the same department of the same institute treating similar medical condition differently. This has on many occasions caused hardships and confusion in the minds of junior medical and nursing staff.... sometimes leading to chaos, mishaps, errors jeopardising patient safety. I, like many others always believed that compartmentalising medical practices through protocols is impossible and leads to "cook book" medicine. We all have seen associations, institutes and governmental departments making impractical practice guidelines which are thrown out by the practicing community. As a medico-legal expert, I was not very sure about the evidential value of "guidelines" in establishing the standard of practice in the court of law while dealing with cases medical negligence. Diversity in health care infrastructure in our country further adds to the problem of standardization.

At the NICE, I studied the process of making guidelines and implementing them. I found this process to be very robust in nature. The NICE forms " a guideline development group " which is a multi-stake holder group comprising of not only clinicians or professors but also of practicing doctors, nurses, public health consultants, administrators , members of public. The NICE then develops the review questions and assesses the evidence for the same. There are independent assessors who specialize in searching for evidence from the literature. A lot of efforts are made to choose valid evidence from research material published across the world. There is an in-depth process that looks at cost benefit ratios, cost analysis, risk benefit ratio etc. The NICE makes special efforts while writing the guidelines with special emphasis on wording the guidelines so that ambiguity is minimised and clear messages are sent across the board. The process of consultation with various stake holders, publishing the draft document seeking wider review makes the process further transparent and profound. The total amount of time spent per guideline is substantial and the process is done very seriously and professionally. There is a large component of resources diverted to dissemination and implementation of the guidelines. I was amazed to learn the amount of research work done on "how to disseminate and implement effectively" The NICE encourages and supports all the interventions done to implement the guidelines and also reviews the process on a nationwide scale.

It was heartening to learn that the professional organizations such as Royal Colleges, British medical association and other professional bodies collate their efforts to create guidelines and recommendations which are not confusing to the professionals. The courts in the UK are increasingly acceptant of guidelines as "a source" for determining the "standard of care" in the matters of medical negligence. I interacted with many clinicians in the UK ranging from the general practitioners to the specialist consultants. The way of working is dominated by the guidelines and strict adherence to guidelines is expected. When NICE guidelines on particular subject are not available, professionals resort to the Royal college guidelines. The hospitals have their own protocols when none of the above are available or in extension to the above. I was curious to find whether the consultants find this way of working "abridging the professional autonomy "or otherwise. I tried to ascertain the role of personal discretion or individual experiences in professional medical practices. I did find some lamenting this evidence based, guidelines governed style of working. While studying the history of guidelines I realised the UK has also gone through a rough patch where doctors just did not accept the idea of guidelines and vehemently opposed it. However the position now is settled. The individual's discretion does have a role to play where deviation from the protocol is allowed with adequate reasoning for the same is available. Another interesting question that came up was," how can all the clinical situations of individual patients with different expectations can be slotted in a protocol zed management?" The profound research carried out on this aspect by NICE answers the question. The chairman Mr Mark Rawlin's states that there will be around 20% situations which shall fall out of protocols.

Most of the medical teachers, practitioners and doctors were rather happy to realize the limitations and preferred to stick to this evidence based working as it gave them a clear sense of ethical practice and necessary medicolegal protection. In all, making reasonable and practical guidelines, reaching them to the people, helping them to implement the guidelines and providing necessary protection for those who use them has significantly improved the standardisation of practice.

I returned back with a daunting question: when will we be able to make and implement such evidence based guidelines in India?

Ovarian Reserve, at the Core of Infertility Diagnosis and Treatment

Continued from page 11

DOR represents one of the last unresolved challenges in the practice of infertility but is assuming increasing importance as the number of older women, wishing to conceive, rapidly grows.

Reference

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Cancer Cervix Project of FOGSI the RTU and the GARD Trial

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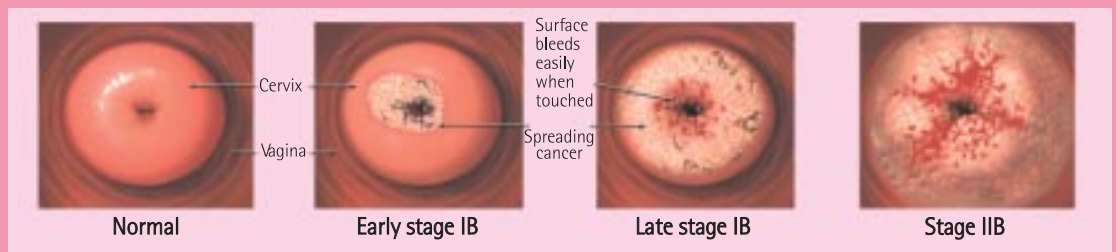


Cancer cervix continues to be the commonest cancer in Indian women and also India is the major contributor to the world cancer cervix burden. We detect these cases much late and therefore the highest mortality due to cancer cervix also is in India. Now we have the vaccines against cancer cervix proposed to be effective and also preventive especially in that larger group which is caused by the HPV virus. We don't have any satisfactory screening program and only 2.6% women are screened.

There are many questions which need to be answered now especially with the advent of the vaccines. What is the prevalence of HPV in India? Which type of HPV is seen in the Indian women? Does cancer cervix affect the urban woman from better socioeconomic strata as it seemed to be a disease of the poor and the rural Indian women?

Under the Reaching the "Unreached" Initiative of FOGSI the program, "Fighting cancer cervix" was initiated. Which was a training as well as a research program. The program had many arms. Initiation of 72 members was done primarily and then 250 secondary members in the project. All of them were trained in the various screening methodologies of cancer cervix. They also had to screen women, perform VIA wherever necessary, take a PAP smear and HPV in about a 1000 women. KAP questionnaires were evolved for both the patients and the doctors involved to understand the awareness regarding cancer cervix. All these facets are yet under evaluation but what we have is an interim data today of the samples that were evaluated as under.

This is a population based multicentric observational study on current status of cervical cancer screening programme in India. Primary objective was to study HPV serotype prevalence in urban married sexually active Indian women between 18 to 45 years of age and Secondary objective was to study the same in relation to socioeconomic class and to compare the outcome results of cervical screening by Pap test and VIA. In this open, multicentric study of duration of 6 months approximately 2854 women were enrolled & 50% of which were from socioeconomic class A. Total 2854 samples were studied using Pap smear and 208 samples studied using HPV DNA PCR. 76% PAP smears reported negative while 7% were abnormal (4% LSIL, 1% HSIL and 2% ASCUS. What also was observed was that 17% samples were inadequate which means that a good number were not sampled correctly. The HPV DNA test reported overall positivity of 11.8%. Amongst total positive HPV infection, high risk was 83.3% & low risk was 16.7%. This was found to be a little higher than the WHO data which has estimated a prevalence of 7.2%.

To reduce mortality due to cervical cancer in India, we need to have a two pronged approach, i.e., popularizing primary prevention to avoid new cases and aggressive secondary prevention program with regular PAP smears & VIA screening with the help of ObGyn associations at state and country level.

On similar lines the GARD trial a pan India project which included awareness and screening was started. 4034 samples for HPV DNA testing were taken. This revealed the 6.4% prevalence of HPV infection. Overall risk type positivity was approx. 4.1% for high risk types and 2.3% for low risk types respectively. (Fig1) It also was found that high risk serotype contribute 70% of all HPV 16 & 18 contributes to 70% of all high risk serotypes. Low Risk Serotype contribute 30% of all HPV while6 & 11 contributes to 28% of all low risk. Other low risk types are not relevant from clinical stand point. The highest prevalence of high risk infection was seen in age group of 20-60 with highest in the age group of 35-40 (75%).

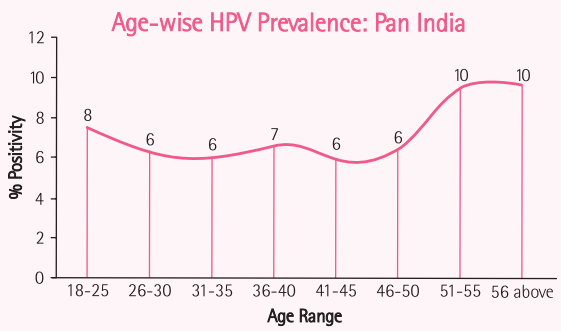
These observations assert the need of vaccines in our population as the infection is prevalent. Country wide screening would be an ideal intervention but unreachable to the entire population.

This project also gave an insight into many other facets regarding the disease. There is a sheer lack of awareness of this disease amongst the populace. Many gynecologists are not regularly practicing even opportunistic screening due to unsatisfactory reports from the cytologist. Mass screening takes place in camps but such occurrences are rare.

This project helped increase the awareness about cancer screening, use of alternatives like VIA which suit poor resource settings better, teaching the correct method of taking a PAP and HPV testing. A lot needs to be achieved to be able to fight this disease. There has to be a stress on increasing awareness amongst the population and also the clinicians to be able to fight cancer cervix in India.

Res:
WHO/ICO Information Centre on HPV and Cervical Cancer (HPV Information Centre). www.who.int/hpvcentre

Figure 1



FIGO Guidelines on HPV Vaccination and Screening to Eliminate Cervical Cancer

Introduction and background

1. Cervical cancer is the most common cause of death from cancer for women in developing countries and is increased within developed countries for women who have decreased access to health care.
2. Women have a right to the highest attainable standard of physical and mental health and to have their health rights addressed by their governments.
3. HPV subtypes 16 and 18, are the proximate cause of 70% of cervical cancer worldwide with regional patterns that include multiple other oncogenic subtypes.
4. HPV is a sexually communicable disease for which the burden of death and disability falls disproportionately on women.
5. Cervical cancer is now a virtually preventable disease through a combination of early vaccination and screening strategies to identify and treat pre invasive disease.
6. In order to be effective the present vaccines to HPV16, 18 must be given at an age before like viral exposure.
7. Delay in vaccination roll out will result in additional generations being at risk for cervical cancer.

Recommendations

1. Education of both health professionals and communities about prevention of cervical cancer through both vaccination and screening strategies is an obligation of health professionals, in particular Obstetrician/Gynecologists.
2. The development and maintenance of screening strategies must be addressed for women regardless of vaccination strategy, due to the ongoing risk for unvaccinated women, women who were exposed prior to vaccination, or those with an uncovered oncogenic HPV subtype.
3. Obstetrician/Gynecologists should advocate for youth friendly approaches to vaccination and screening that include primary care, pediatrics and other health professionals and address the unique issues of privacy and confidentiality for this age.
4. Development of community/national/NGO/WHO partnerships is needed to create affordability for vaccination and screening programs to prevent cervical cancer.
5. Obstetrician/Gynecologists have an obligation to advocate for vaccination and screening and to assist in the creation of coalitions to address prevention of cervical cancer.

– Lyon, June 2007

Congenital Heart Disease Overview

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Introduction

Relevance of Foetal Cardiac Disease to Obstetricians

Structural congenital heart diseases (CHD) are a challenge to obstetricians. A neonate with CHD is at risk for hypoxia, acidosis and even hydrops /congestive heart failure. Specialty care should be available for co management during foetal life and for immediate newborn resuscitation, administration of cardiac medications or even for immediate cardiac surgery for some infants. Many obstetricians perform prenatal anatomical ultrasound in the office. A basic knowledge of Foetal cardiology including functional cardiology is required to diagnose congenital heart disease and channel the patient to a specialized team.

Magnitude of the problem

CHD is the most frequent anomaly contributing to almost half of the childhood deaths due to congenital anomalies. The overall incidence is 8-9/1000 pregnancies and 4/1000 babies are born yearly with a CHD. Majority of CHD occurs in normal mothers and are 6.5 times more prevalent than chromosomal abnormalities; 4 times more prevalent than neural tube defects. There is 26-30% association with extra cardiac anomaly. Only 25% of infants born with CHD are alive at six months of age (Table I). They are responsible for 20% -30 % of intrauterine deaths and 40-60% of neonatal deaths.[1]

Table I: Outcome of pregnancies with CHD

Spontaneous abortion	48%
Perinatal death	22%
Intrauterine deaths aneuploidy or fetal hydrops	7%
Infants born with CHD Alive,well at six months	25%

N=300
Yale 1984-96
Simpson L , Comprehensive Pregnancy Care : Columbia University 3rd Annual Vincent Frieda Honorary Symposium , 2004

(Simpson) 50% of childhood deaths occur as result of CHD (Table I). It is estimated that 17000 foetuses examined ultrasonically in USA will have CHD. However, NIH sponsored RADIUS study reported accuracy of diagnosis to be only (5/22) or 23% at tertiary centres and none at non tertiary locations[2] accordingly only 3900 foetuses with CHD would be detected. Todros[3] summarized world literature showing that 23% of 631 cases of CHD were prenatally diagnosed among 108,182 patients screened a prevalence of CHD 5.8/1000. Current trends appear to indicate a change towards better diagnostic abilities by screening for CHD in most foetuses.

Recent Trends in Diagnosis of Congenital Heart Disease Screening Low Risk population

The purpose of foetal heart screening is to confirm a normal cardiac status, detect abnormalities of cardiac position, size, basic structural components, function and rhythm. The purpose of a comprehensive Foetal Echocardiography is to detect and define life threatening congenital heart disease, detect congestive heart failure and foetal arrhythmias. It offers an accuracy of detection of virtually 90-100%. In a review of 915 prenatal echocardiography's in Northern California, overall detection rate was 15% (Cooper[4]). Majority of CHD occur in normal mothers. Hence screening all mothers in mid trimester is the most effective way to diagnose CHD. A four chamber view of the foetal heart is the single most useful screening test in detection of CHD, with a 40-50% detection rate (Copel, Simpson, Simpson)[5,6,7]. DeVore [8] found addition of outflow tracts to improve detection to close to 80%. Outflow tracts examination is now recommended by the American College of Obstetrics and the American Institute of Ultrasound in Medicine[9, 10]. Inclusion of Ductal and Aortic arches may improve detection rate even further more.

Recently it has been suggested by many to perform full echocardiography in all foetuses[14, 15] (Stumfplen, Yagel). In an editorial to this, Kleinert[16] estimated need for 400 additional cardiac specialists in Great Britain alone to provide this level of care to all pregnant patients. World wide this would be an impossible task. As many as 30-40% of Echo Cardiac Examination are associated with CHD. Foetal Echocardiography is then is essential in this foetuses.[17, 5] (Copel, Simpson.)

Relationship with Genetic Diseases

Cardiac and genetic anomalies are often intertwined with an incidence of 12-35%. Conversely, abnormal karyotype is associated with CHD in 50-80%. CHD is multifactorial in over 90% and recurrent rate after one affected child is 2-5%. A hypothesis of cytoplasmic inheritance or teratogens may be operative in it's origin. Monogenic inheritance may account for 1-2%. (Nora, Yates [18, 19])

First Trimester Diagnosis of CHD Using Nuchal Transluscency

First trimester nuchal translucency (NT) of greater than 95th percentile, appears to be a clear risk factor in genesis of CHD. Prevalence of CHD for NT greater than 2.5 mm increases from less than 3/1000 to 50/1000 at NT of >3.5mm with a 95% confidence limits. (Maverides, Hyet)[20, 21] Transvaginal 2D and color Doppler screening for CHD used during a first trimester screening can result in detection of 25% of the cardiac defects.

Hook [22] has reported up to 92% detection rate of CHD with complete cardiac exam at 13-14 weeks.

Most frequent anomalies, Diagnosis and Limitations (Table II; Sanders[34])

Abnormalities such as Atrial septal defect (ASD) and patent ductus arteriosus (PDA) are difficult to diagnose prenatally. Ventricular septal defects (VSD) valvular and pulmonary venous return abnormalities may not be identified until change to extra uterine circulation occurs. Prenatal obstruction to blood flow may result in foetal hydrops or ventricular hypoplasia resulting in CHD in late pregnancy.

Does Prenatal Diagnosis Improve Outcome?

'WHO' criteria for need for screening are all applicable to screening for CHD, however its benefits are not very clear at this time. Theoretically prenatal diagnosis should include reduction of Perinatal Mortality and Morbidity Copel [23] compared outcome of 45 prenatally diagnosed and 54 post natal diagnosed newborns with structural CHD at Yale University between Jan 1991-June 30, 1996. New born survivals were 80% and 66 % among prenatally and postnatal diagnosed infants, while length of hospitalization was 16 days among the former and 11 days among the latter group. With the cost of hospitalization being proportionately greater in the prenatally diagnosed infants, 45-50% of the parents chose to terminate the pregnancy resulting in a reduced cost. The study failed to demonstrate any benefits in survival, cost of hospitalization or length of stay. However it was concluded that parental benefits are certain and that the foetal benefits may be emerging as management of anomalous foetuses improves with time.

Long term neurologic and developmental outcome in children with CHD are adversely affected by hypoxia due to vascular and blood flow abnormalities particularly if optimal care is not available immediately at birth. Specific events including strokes, seizures, coma, and change in level of consciousness contribute to poor mortality and morbidity outcomes.

Approximately 5000 babies yearly require cardiac surgical repair in the newborn period. 10% will have perinatal hypoxic injury from ductal closure (Wernosky [24]). These infants can theoretically benefit from prenatal diagnosis. More severe the anomaly, less the benefits of prenatal diagnosis appears to be. Prenatal diagnosis with appropriate new born management is the most crucial approach to CHD and can be even beneficial in cases requiring perinatal manipulations of ductal dependent anomalies with prostaglandins, treatment of foetal heart arrhythmias and for immediate life saving surgical treatments such as atrial septostomy to restore circulation after birth for obstructive defects. Certainly a case can be made for prenatal screening for CHD. (Table III)

Table II Common Fetal Cardiac Malformations

Defect	No/1000
Ventricular Septal Defect (most common, 20-30%)	0.4-2.7
Atrial SEptal Defect	0.1-0.4
Transposition of Great Arteries	0.2-0.4
Double Outlet Right Ventricle	0.03-0.07
Tetralogy of Fallot	0.2-0.3
Cooactation of Aorta	0.2-0.6
Epstein's Anomaly	0.012
Aortic Stenosis	0.05-0.34
Pulmonary Stenosis	0.07-0.66
Hypoplastic Left Heart Syndrome	0.1-0.2
Endocardial Cushion Defect	0.1-0.4
Tricuspid Atresia	0.04
Truncus Arteriosus	0.03-0.21

Sanders RC, et al. In: Structural Fetal Abnormalities. The Total Picture Publisher Mosby, An Imprint of Elsevier Science, St Louis, Missouri, USA Second Edition! 996:Pages 75-133

Table III Ductal Dependent Congenital Heart Diseases

- Epstein's Anomaly with pulmonary Stenosis
- Tricuspid Atresia with VSD and Pulmonary Stenosis
- Hypoplastic Right ventricle with Pulmonary stenosis
- Tetralogy of Falot with Pulmonary Stenosis
- Transposition of Great Arteries with Pulmonary Stenosis
- Truncus Arteriosus with Pulmonary Stenosis
- Hypoplastic Left Ventricle with Aortic Stenosis
- Coarctation of Aorta with VSD

Freed MD, Heyman MA, Lewis AB, Reicher S, Kensey RC.. PGE1 in infants with ductus arteriosus dependent cyanotic heart disease; The US Experience , 1981,Circulation,64:899-905

Evolution of Foetal Cardiology: Present and Future

Prenatal sonography is a newer science with just a few decades of history. Prior to 1970s, our present knowledge of foetal heart was limited to and was extrapolated from animal experimentation by Rudolph [25] and others. Basics of foetal circulatory physiology and its relationship to transition at birth were postulated. 1970s marked beginnings of high resolution 2D ultrasound to detect structural cardiac abnormalities. Thereafter, 1980s were marked by detection of foetal heart arrhythmias by foetal M-Mode echocardiography. Normal data for foetal heart size and rhythm were developed from M-Mode images by Devore et al [26].

Echo anatomy depiction and cross sectional anatomy were described by Lange, Sahn, and Allan and others in England [27,28,29]. Along the same time, Kleinman et al [30] documented foetal arrhythmias to be major causes of foetal hydrops. Foetal heart screening programs came into being in the UK and systematic foetal cardiac evaluations began to be practiced. Population studies at this time revealed a higher incidence of the disease than encountered in birth statistics. Mid 1980s marked the arrival of pulsed and continuous Doppler to assess quantification of blood flow velocities. Foetal and placental physiology and foetal heart hemodynamic assessment became a reality in clinical setting. Diagnosis of placental insufficiency, stenotic and other obstructions to foetal cardiac blood flow became possible (Sahn [32]. At the World Congress in late 1980s Japanese clinicians presented potential of colour Doppler use for evaluation of foetal hemodynamic.

Recent decade will be known for advent of 3D-4D imaging and tissue harmonic technology. 3D and 4D machines offer a unique vision of volume based organ examination particularly cardiac anatomy enabling one to evaluate ventricular function flow through great vessels. Ability to post process computer imaging is a God sent when the foetus is not so cooperative. A single acquisition of 3D anatomy of the heart could be processed to allow views of the entire heart and great vessels by Spatio-Temporal Image Correlation technology (STIC). These and other technological advances allows one to obtain "any plane" image of the foetal heart in acquisition of its anatomy in a multi planar imaging later to post process for examination in a very short time making it possible to routinely examine the heart in great detail similar to the MRI technique. When widely used, these and other computerized processing will allow consultation by experts in major centres by interpretation from imaging performed and acquired in small clinics when complex cases pose difficult diagnostic problems .

This overview of the status of foetal cardiology in the early third millennium is just the beginning. One imagines a screening cardiac echocardiography for each and every baby born in the world to address the needs of this most commonly occurring abnormality, and perhaps with more skilled and better management in future, survival and quality of life of infants with CHD will improve and efforts at diagnosing CHD will be all worth while.

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