



IFS VISION

Edited by: Dr Mangala Telang, Dr Surveen Ghumman Sindhu

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INDIAN FERTILITY SOCIETY

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President's Message



Dear Friends,

Greetings from IFS. Fresh issue of IFS VISION is in your hand. We are getting a very encouraging response to IFS VISION. Please share your critical feedback with us on the current issue. This will help us improve it further. Early bird registration for Fertivision - 2013, the mega event of the year is already open. We have got an excellent initial response from all over country. Do take advantage of early bird and register early.

I invite youngsters to send in your Research work for prime time and enrol for best paper awards in clinical as well as embryology. This time the theme of conference is "Seed, Soil and Beyond". Scientific committee is working hard to prepare an excellent academic feast for all. Special membership drive is on. I request all members to enrol at least one new member this month and contribute your input to society. I also invite suggestions from members to improve activities of IFS further.

Dr Kuldeep Jain,
President, IFS

From the Desk of the Web Editors...



Dear Members,

This issue pays homage to Professor Sir Robert Edwards who was a pioneer in IVF. The issue touches on an interesting technique for fertility preservation still in experimental stage and discovery of the protein which controls fertilization. We have raised issues on donor payment. We would like your opinion on it.

We appreciate the views given on controversial issues we had raised in the last issue by the experts. IFS activities and forthcoming events are listed.

Dr Mangala Telang

Dr Surveen Ghumman Sindhu

READER'S PAGE

Viewpoints on Legal, Ethical and Regulatory Issues

Dear Readers,

The last issue discussed controversy raised in vol 1 Issue 1 issues on whether parents should get the right to decide about post humous sperm retrieval and views on advertising in ART. This issue asks the experts the following questions

Question 1: The two questions which come up with this case are - Should fertility treatment be given the status of a human right? At what stage do we consider the embryo a 'person'?

Question 2: Should access to genetic heritage be considered a personal right?

Question 3: What are the implications if a biological father becomes a psychological parent and should a known donor be allowed to seek access to a child that he is biologically related to, even if he is not the legal father?

Opinion of the Experts On These Issues....



*Brig. R K Sharma
Executive members, IFS*

Question : The two questions which come up with this case are - Should fertility treatment be given the status of a human right? At what stage do we consider the embryo a 'person'?

Answer: yes , fertility treatment be given the status of a human right .It appears logical that only after implantation the embryo can be called a person but if one can see the future where there is a possibility of artificial uterus then there will be no true implantation as we know today so again we may have to change the definition of start of life.Other point of view that embryo belongs to a specific couple who have contributed the gametes or have taken the gamete/s from donor and such couples have the same psychological bonding and binding as with a new born so the resultant embryos has to be treated with the same diligence, care and respect.The embryo which has the potential to be human being also has the right to life, so should be considered as human being in making and its rights should be protected even before implantation.

.Question: Should access to genetic heritage be considered a personal right?

Answer: Yes, assess to genetic heritage should be considered a personal right but identity of the donor should be confidential otherwise no body will volunteer to be donor and may also harm the interest of the child as donor also may demand to know the identity of the baby with some ulterior motives,

Question: What are the implications if a biological father becomes a psychological parent and should a known donor be allowed to seek access to a child that he is biologically related to, even if he is not the legal father?

Answer - No.this will be potentially harmful to the commissioning parent,.donor, as well as the child at all stages of life.



*Dr Shweta Mittal
Executive member IFS*

Ques: The two questions which come up with this case are-should fertility treatment be given the status of a human right? At what stage do we consider the embryo a 'person'?

Ans: Yes, fertility treatment should be given the status of human right as every couple has the right to produce children. I would consider embryo a person from the stage of implantation

Ques: Should access to genetic heritage be considered a personal right?

Ans: The ICMR guidelines do not allow sharing of personal identity of the donor whether sperm or egg to the recipient. However, the child born out of sperm / egg donation can know the genetic information without the name & address of the donor after the child attains 18 years of age. Thus at the time of signing of consent form by the sperm/ egg donor they should be informed in writing that the child born out of this procedure has the right to procure the information of the sperm/egg donor barring the name & address of the donor.

Ques: What are the implications if a biological father becomes a psychological parent

Ans: The identity of sperm/egg donor should be kept anonymous, if the biological father also becomes the psychological parent it may lead to a lot of social trauma on the child

Homage to Prof Sir Robert Edwards



Professor Sir Robert Edwards passed away peacefully after a long illness on the 10th April. It was his pioneering work with Patrick Steptoe that led to the birth of the world's first "test-tube" baby, Louise Brown, on 25 July 1978,. His work has helped millions of infertile couples. He received the Nobel Prize for Physiology or Medicine in 2010 'for the development of in vitro fertilization.' In 2011, He was also knighted 'for services to human reproductive biology'

RECENT RESEARCH

Dehydration - The new technique for preservation of oocytes in powder form

An experimental oocyte preservation method consists of reducing oocytes to powder and storing eggs anywhere. An experiment on cow's eggs by an Israeli biotechnology firm Core Dynamics reported viability in 23 out of 30 eggs The preservation process is a concept similar to vitrification using ultrarapid cooling. However, initially eggs are immersed in a media which prevents cold damage. Then residual frozen water is allowed to sublime and get converted to vapour by storing vitrified cells at -55°C for a day under low pressures. The resulting powder after water has been removed can be stored in a dark vacuum packed container. It has been tested successfully on red blood cells and on human mononuclear cells from umbilical cord blood. The viability in animals of frozen oocytes is confirmed. However it yet needs to be confirmed in humans. Also it need to be established that despite remaining viable they can fertilize and form normal embryos which can implant and develop into a healthy baby

Fetuin B – A new protein which controls fertilization

The protease ovastacin is stored in vesicles within the egg cell and when the first sperm penetrates the ovum, the protease is explosively discharged into the gap between the egg cell and the zona pellucida in what is known as the cortical reaction which causes hardening of the zona to prevent further sperms from entering thus preventing abnormal fertilization by many sperms. However, small amounts of ovastacin continually seep from unfertilized egg cells and this would cause the zona to harden before the first sperm can penetrate. It is the role of blood protein fetuin-B to ensure that these constantly escaping small quantities of ovastacin are inactivated so that oocytes can be fertilized. However, once a sperm has penetrated an egg cell, the cortical reaction will be unleashed and the amount of ovastacin will overwhelm the inhibition capacity of fetuin-B and initiate the hardening process.

BRCA Mutations Affect Age at Menopause But Do Not Increase the Incidence of Infertility

US and Canadian researchers from the Hereditary Breast Cancer Study Group have found that although women carrying the BRCA 1 or BRCA 2 mutations reach menopause at an earlier average age than women who do not carry one of the mutations, BRCA carriers do not experience an increased incidence of infertility. By age 40, 4.7% of BRCA carriers had gone through menopause compared to 1.4% of non-carriers. There was no difference in the proportions of BRCA positive and BRCA negative women who reported fertility problems- 12.5% vs. 13.7%

ETHICS & ART

UK takes a public opinion on mitochondrial replacement therapy - Should the public have voice in deciding ART regulations?

Mitochondrial replacement therapy, where a small amount of a mother's genetic material is removed and replaced by that from a donor to avoid genetic disease transmitted through mitochondria in offspring. This is considered a controversial treatment and UK decided to take a public opinion on the matter. There was a broad support for permitting mitochondria replacement, to give families at risk of mitochondrial disease the chance of having a healthy child. HEFA supported the public as latest studies show it to be safe. The Government is considering change of law so that these techniques, could be used clinically and not just in research setting.

Question: In recent developments of surrogacy and ART regulations in India should a public opinion be sought like UK did and is India ready for such democracy in ART?

Payment of Donors – HFEA allows only fixed sum

The HFEA has decided that donors should be paid fixed sums, and that these sums should be £35 per clinic visit for sperm donors and £750 per cycle of donation for egg donors. Furthermore, there will also be provision under the new regime for 'donors who incur excessive expenses like travel from rural area to claim additional compensation' beyond the fixed sum. The HFEA has now decided to make donors travelling from overseas eligible to receive the new fixed compensation sums. However, donors travelling from overseas will be ineligible for any additional claims of 'excessive expenses'. The HFEA permits donors to receive benefits in kind for their donation with no limit on the monetary value of such benefits

Question: In India there is no fixed sum for donors. Do we need to define donor compensation in terms of a fixed amount?

With HFEA guidelines revealing donor identity – What is the best age for a child to be informed?

The Nuffield Council on Bioethics has recommended that parents of donor-conceived children are best placed to tell them about their biological origins, but should not be mandated to do so. The openness with children about their conception contributes to their well-being and the quality of family relationships. There is evidence that children who discover their donor-conceived

origins in late adolescence or adulthood are more likely to be distressed and suggests the optimal time to inform children is in their preschool years. Other recommendations include that counseling should be routinely offered to parents and donors, and that donor-conceived children should be supported when they apply to the Human Fertilisation and Embryology Authority (HFEA) for identifying information about their donor.

Questions: In countries where child can be informed what would you consider the best age at which it should be done.?

NEWS

Fertility and Sterility Rolls Out International Live Online Cyber Journal Club – India participates

For the first time, using the latest in video technology, ASRM participated in a live online transcontinental Journal Club for practicing physicians, academics and students. The Journal Club Live platform featured a ten-way discussion of fellows and professors from the USA, Europe, and India as well as the article's author. Prerna Gupta MD All India Institute of Medical Sciences, New Delhi, India participated as a fellow. The entire event was live-streamed on YouTube with platform that was open to comments and questions and free participation from anyone around the world. This technology can transform medical education. The conversation among academics, patients and students can be shared worldwide and disseminated in real time. The sessions are archived at <http://fertstertforum.com/journalclubmarch2013/> and <http://fertstertforum.com/journalclubfeb2013/>

A tilting embryo culture system –improves blastocyst quality

A culture system that produces high-quality blastocysts capable of implantation is critically important for IVF and embryo transfer. Human embryos normally experience mechanical stimuli during development *in vivo*. To apply appropriate stimuli to embryos, tilt embryo culture system (TECS) by placing a culture dish on an automatically tilting plate to move embryos back and forth along the bottom of the dish was developed. The dishes were subjected to a maximum 20° tilt for 10 min in each direction at 1° per second. The rate of blastocyst formation and growth of blastocysts graded 3BB or higher were significantly higher in the TECS group than in the control group: 45.3% (67/148) versus 32.1% (51/159) Embryo movement or mechanical stimulation during embryo culture may be beneficial for human embryonic development

Age limits for fertility treatment change – Is UK progressive and Japan regressive?

Women over the age of 40, same-sex couples, and people with disabilities have been addressed for the first time in the updated NICE (National Institute for Health and Clinical Excellence) guideline on fertility treatment. Due to medical advances many fertility problems are treated successfully and all women should have access to these treatments. Between 40 and 42 women should be offered one cycle of IVF

Japan in the meanwhile is recommending that the government should have an age limit of 39 years when it comes to giving public aid for fertility treatment. Their study showed that fertility treatment is riskier and less effective for women who are above 40 years old.

For Women Trying to Conceive - Fertility Yoga

A yoga specific for fertility has been developed by Sherry Longbottom, a registered nurse and yoga instructor. In her classes she is careful to avoid yoga poses that could strain the body; instead, she favors simple gentle poses that help lessen anxiety. The goal is to get blood flow in the pelvic region. While, practicing fertility yoga is not exactly as beneficial as in vitro fertilization (IVF) treatments or hormone therapy, but since IVF is an extremely stressful situation, yoga would help to relieve stress.

New Factors Affecting Sperm Quality

Television watching – A risk factor for low sperm count

The British Journal of Sports Medicine study found that men who do little exercise and spend much of their spare time watching TV have lower sperm counts than more active men. The study looked at 200 students in the United States, and found that clocking up more than 20 hours of TV viewing time a week is detrimental to sperm count.

Poor Sperm Counts Due to Lack of Sleep

The men who had poor sleep had a 25 percent reduction in sperm count, and fewer sperm that were morphologically normal, compared with men who reported low levels of sleep disturbances. What remains to be seen is if sperm counts would improve in these men with better sleep patterns. Testosterone levels did not differ in these groups. This may be due to the fact that sleep disturbances alter night time testosterone rhythms, without affecting overall testosterone levels.

Sperm quality seasonal – Best in winters

Human semen quality may rise and fall in seasonal variation, with the best quality and motility being produced in the winter and spring. Research has shown that the highest concentration and best motility and morphology are seen in this season. In men with oligospermia seasonal variation was less marked. The findings have not been directly linked with increased conception rates in the winter although Israeli birth statistics do show an increase in births during the autumn. In India also, peak number of deliveries occur during sept most conceptions taking place in December.

Conferences and Events

National

1. The 3rd training module on infertility and ART is being held on 14th, 15th and 16th June 2013 organized by Chandigarh chapter of IFS at “Tarika’s Jungal Retreat” at Chail Himachal Pradesh.
2. Conference on Infertility and Endoscopy on the 10th & 11th August in Gurgaon, Organized by Gurgaon Obst & Gyne Society and Neelkanth Hospital
3. Fertilisation 2013, Annual Conference of Indian Fertility Society to be held on 6th 7th 8th December 2013 at India Habitat Centre, New Delhi
4. 19th National Conference of Indian Society of Assisted Reproduction (ISAR) to be held from 14th to 16th Feb 2014 at Gujrat University Convention and Exhibition Centre, Ahmedabad

International

1. 12th World Congress on Endometriosis April 30th to May 3rd 2013 Sao Paulo, Brazil
2. ASPIRE India regional conference at Chennai on ‘What do successful clinics and clinicians do differently’, a highly

interactive conference awaits your participation from 17th -19th May 2013

3. BCGIP Building consensus out of controversies in Gynecology, infertility and perinatology Istanbul Turkey 30th May to 2nd June 2013 along with Indian Fertility Society
4. 69th ASRM Annual Meeting to be held Conjoint with IFFS in Boston Exhibition and Convention Centre, Boston, Massachusetts, USA on Oct 12 – 17 th 2013 For more information asrm@asrm.com <http://www.asrm.org/IFFS-ASRM2013>
5. IVF worldwide live congress Invitrofertlization clinics growing in the digital age berlin Germany 31 oct – 2nd Nov 201

IFS Activities

1. ‘Dilemmas in Infertility’ CME organized by MAMC on 9th March 2013 at Maulana Azad Medical College under aegis of IFS
2. Myoma and infertility Current options and emerging strategies CME organized by Ridge IVF under aegis of IFS on 17th March in India Habitat Centre under aegis of IFS
3. Combined IFS ISAR CME at Indore on 24th March 2013
4. Inauguration of UP Chapter of IFS at Lucknow