INTERESTING CASES AND THEIR MANAGEMENT

CASE - 1

Mrs.S.R,26 years old woman, who was married for 7.5 years, came to GG Hospital in Aug'2004 anxious to conceive. Her menstrual cycles were regular. USG revealed a normal uterus with polycystic ovaries, diagnostic laparoscopy confirmed the same. Semen analysis of the Husband revealed oligoasthenoteratozoospermia with an FSH level of 29. 04 miu/ml and a normal physical examination. She underwent one cycle of ART (ICSI) which failed. Subsequently the next attempt was a dual procedure of GIFT and ICSI-ET. We retrieved 11 oocytes of which 2 oocytes with husband's sperms were transferred into the left tube and 3 ICSI embryos (remaining oocytes failed to fertilize) were transferred into the uterine cavity on day 2. "Her? BHCG levels on the 27th and 29th day were 71.5 and 171.9 mIU/ml respectively." On the 38th day an intrauterine gestational sac was visualized and both ovaries appeared moderately enlarged (left more than right) by TVS. At 7-8 weeks of pregnancy she was admitted for acute pain in the lower abdomen and giddiness. She was hypotensive and pale. She was immediately resuscitated and her vitals settled. An USG was performed which revealed a viable intrauterine pregnancy along with free fluid in the cul-de-sac with probe tenderness in the left fornix. The initial diagnosis was made as a twisted left ovary. An emergency laparotomy was decided, owing to her general condition. Per operatively there was haemoperitoneum which on evacuation revealed a left heterotropic pregnancy with a single twist of the left ovarian pedicle.

The pedicle was untwisted and left salpingectomy was performed. Postoperative period was uneventful. USG on the day of discharge showed viable intrauterine pregnancy corresponding to 8 weeks. The patient subsequently developed gestational diabetes mellitus which was controlled with insulin. She delivered a live female baby weighing 2.6 KG by elective LSCS on 30th June 2005.

Lesson Learned

In a case of mild OHSS with dual procedure an anticipation of heterotropic pregnancy should also be taken into consideration, although the adnexa may be obscured due to an enlarged ovary.

CASE - 2

Mrs.K.V, 28 years old woman, married for 8 years, a known case of polycystic ovarian disease, was seen by us for primary infertility on November 2003. Semen analysis of the husband was normal. She had undergone ovarian wedge resection by laparotomy in 2000 at another centre. Subsequently a diagnostic hysterolaparoscopy done at our centre revealed plastered pelvis and Arcuate but otherwise normal uterine cavity.

She underwent her first cycle of IVF with stimulation protocol using GnRh analogue and recombinant FSH and HMG. She developed moderate OHSS with retrieval of 30 oocytes and hence the cycle was cancelled. Since the husband's count and motility were normal on the day of aspiration, the oocytes were inseminated. However the next day none of the oocytes had fertilized and rescue ICSI was performed. It was noted that only 18 oocytes were of metaphase –II and hence were injected. 4 oocytes fertilized and were frozen. The hospital stay was uneventful and the patient returned for a frozen - thawed embryo replacement after 2 months. She was started on hormone replacement therapy and embryo transfer was done after thawing on day 18 of her cycle. All the four thawed embryos survived and were of good quality. After 12 days, the first BHCG was 232 mIU/mL and her second BHCG value was 676 mIU/mL. Her first ultrasound revealed a twin gestation on the 38th day and subsequently there was a spontaneous reduction to singleton at 9 weeks of gestation. Her antenatal period was uneventful and she was delivered of male baby. Weighing 2.7 KG by elective LSCS on 28th January 2005

Lesson Learned

Although oocytes recovered from cases of PCOD are plentiful, they are not always mature. It would have been worthwhile to have done ICSI on 50% of the retrieved oocytes, even though the sperm count and motility were normal. Normally rescue ICSI is not advocated by most infertologists, but in this case it proved to be worthwhile. Needless to say we have had only a handful of successful pregnancies following rescue ICSI.

DISTINGUISHED VISITORS - 2004 - 05

Prof. Peter Brinsden


Prof. Peter Brinsden

Dr.Partick Quinn & Dianna Paynne

Dr. Rohini Edirinsinghe

Our Hon'ble Chief Minister Dr.J.Jaylalithaa


SURROGACY – A TALE OF TWO MOTHERS

Surrogacy – A tale of two mothers

Since the birth of the first test tube baby, Louisa Brown in the year July 7th 1978, there has been a rapid advance in the field of assisted reproduction. Miraculous discoveries of micromanipulation and ET, cloning, genetic engineering, gametes freezing, and electro fertilization have been achieved and research being carried on testicular sperm fertilization and oocyte freezing. The more the scientific discovery, the more the newer indications! This has lead to the transfer of an embryo from the infertile couple to an unrelated recipient! The human embryo like other mammalian embryo is immunologically and genetically different from the mother and therefore a rejection phenomenon is present. Since the implantation physiology is the same in all, it should make no difference when the embryo implants in the mother or the host.

The first surrogate birth was reported in 1987. Since then around 180 births have occurred worldwide. India's first surrogate singleton was born on 23 June 1994 in our hospital. Our second surrogate conception was triplets who were born on 21 September 1995. Our third

surrogate conception were twins born to a case of Mayer-Rokintansky-Kuster-Hauser syndrome (A woman without uterus but with normal functioning ovaries).on 19 January 2001. This was the first reported pregnancy in South East Asia. Surrogacy is the only hope for a certain group of infertile couple. A surrogate carrier is a woman who gestates the embryo of a couple. The egg and the sperm of the genetic couple are fertilized outside and the resulting embryo is transferred into the uterus of the surrogate woman.

Types of surrogacy

- A woman is inseminated with the sperm of a man who is not her partner in order to conceive and carry a child to be reared by the biologic father and his partner. In this procedure, the surrogate is genetically related to the child.
- Another type is a gestational carrier, i.e. a woman who is implanted with the fertilized egg of another couple in order to carry the pregnancy. The gestator is not genetically related to the child in this case.

Patients without uterus

- Women with congenital absence of the uterus; Mullerian agenesis (Mayer Rokitansky -Kustner-Hauser syndrome).
- Women who have had hysterectomy for various reasons like uterine fibroids, carcinoma, Ante-partum or postpartum hemorrhage, uterine rupture, severe adenomyosis and so on.

Patients with uterus and functioning of one or both the ovaries

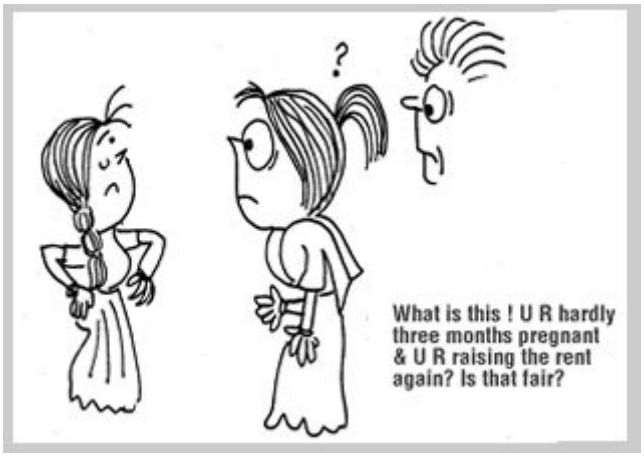
- Women who suffer from repeated miscarriages
- Repeated failures in IVF cycles- non-receptive uterus.
- Women with certain medical conditions making pregnancy life threatening.
- Women with a very busy career or for social reasons (should be discouraged)

Patient selection

The ‘genetic parents’ and the ‘host couple’ are usually seen together at the first consultation for a full explanation of all that is involved in the treatment, followed by a full history and medical examination of both the women. If there are no medical reasons stopping the genetic mother and the host to undergo super ovulation and oocyte recovery, they are further counseled on the medical details of the treatment as well as the potential complications. It is important that the host and her husband should be fully aware of all that is involved. If both the medical assessment and examination, as well as the counseling sessions are satisfactory, then reports are prepared by the Medical Director and the counselor who consider the suitability of each case in detail. If the arrangement is considered suitable, then preparations are made for the treatment of the genetic mother to start.

Screening and selection of surrogate

- Presence of infectious disease.
- Sexually transmitted Diseases.
- HIV and hepatitis-B.
- Family history of nontrivial malformation, mendalian disorders, chromosomal rearrangements.
- Health risk-multiple pregnancies.
- Attitude towards amniocentesis and abortions.



Screening of patients

The best surrogate is the 'genetic parent' mother or sister. Or it could be the best friend or cousin. The American Fertility Society provides specific guidelines to help identify and reject a potential surrogate. They are :

1. Infectious / transmissible diseases

a). Infectious diseases screening. b). Sexually transmissible diseases. c). High risk group for AIDS and persons who have had more than one sexual partners with in the last six months

2. Genetic factors

In addition , genetic screening of potential surrogate mothers is appropriate.The American Fertility society guidelines recommended rejecting prospective surrogate mothers with a family history of nontrivial malformation, nontrivial mendelian disorders, on a chromosomal rearrangement (unless the surrogate has a normal karyotype).

3. Medical disorders

The surrogate should not have any severe medical disorders such as asthma, diabetes, hypertension, epilepsy, psychosis, rheumatoid arthritis etc.

4. Psychological factors

Psychological assessment, especially possessiveness.

Screening / selection of a surrogate

- Age <35 years.
- Personal habits like smoking, alcohol and drug abuse.
- No severe medical disorders
- Psychological risk-possessiveness
- Possibilities of change of mind.
- Possible maternal / binding.
- Mode of payment

The host may be treated in one of 2 ways

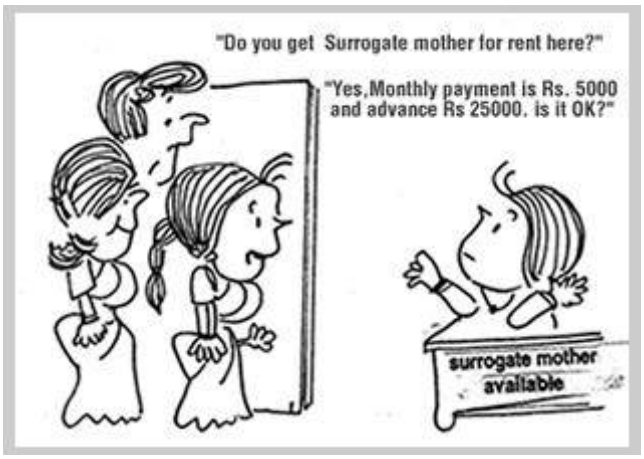
1. Frozen / thawed embryo replacement in a natural cycle

This method is only considered suitable for those women who have been sterilized, or whose husbands have had a vasectomy and who have been confirmed azoospermic. Replacement in a natural cycle is not considered suitable for women practicing barrier contraception because of the risk of themselves conceiving in the replacement cycle and the awful consequences of either giving their own child away, in the belief that it was from the transferred embryo, or there being a twin mixed conception. The risks of this happening are managed using a hormone-controlled cycle as described below. In a natural cycle replacement, the host is monitored daily from about day 8 of the cycle until the natural LH surge is detected. Frozen pronucleate embryos are thawed 24 hours after the LH surge and transferred to the host uterus after a further 24hours. Frozen cleaved embryos are thawed and transferred 48 hours after the LH surge. Luteal support is not usually necessary. 15 days after the transfer a serum beta-human chorionic gonadotrophin test for pregnancy is carried out.

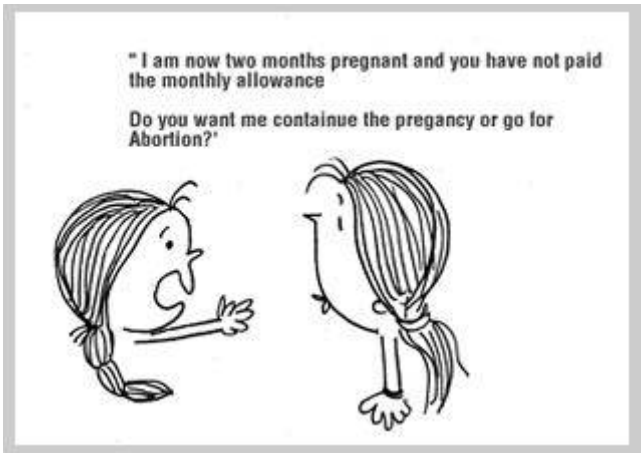
2. Frozen / thawed embryo replacement in a hormone controlled cycle

Control of the host's replacement cycle is recommended for two main reasons

- If the menstrual cycles of the host are irregular, or if they are found to be anovulatory, or if the luteal phase insufficiency is suspected.
- If the host is fertile and has to rely on barrier contraception.



By 'down-regulating' the host and controlling the cycle with a GnRH analog and then replacing estrogen in increasing doses, creating an artificial proliferative phase, the chance of implantation of the embryo is increased. Similarly by taking control of the cycle, natural conception with the host's partner is prevented. This control is achieved by the administration of buserelin 500 micro gram subcutaneously from the 20th day of previous cycle until the day 2 of the following menstrual period. The down regulation is found to be adequate when the serum estrogen level is less than 50 pg/l, the LH is less than 4 IU / l and the progesterone is less than 0.3 pg/l and the ovaries are inactive, then the dose of buserelin is reduced to 250micro gram. Estrogen is supplemented in the form of estradiol valerate tablets in the step up dose from day 2. Progesterone is supplemented in the form intramuscular injections or vaginal pessaries from day 15 onwards and the embryos are transferred on any one day between 16th to 19th of the artificial cycle. Estrogen and Progesterone are continued till 30th day. Serum βhCG is done on 27th and 29th day to confirm pregnancy. If it is positive, then estrogen and progesterone are continued until 14 -16 weeks gestation, by then the placenta takes over.



The most difficult aspect of treatment by IVF-surrogacy is in fact the extreme care with which the host needs to be selected by the genetic couple and also the great detail in which both couples need to be counseled on all aspects of the arrangement. Surrogacy is made easier in USA because it is ethically acceptable in most states for surrogates to receive payment for their services, in the same way as ovum donors may be paid there.

There are certain basic principles in considering any surrogacy case

1. The clinical indications of host - surrogacy must be clearly defined and will probably be limited.
2. Careful and extended counseling should be provided.
3. Proper independent legal advice should be sought by genetic and host couples.
4. Cases should not be considered if there is any doubt that the genetic couple will not be able to adopt the child.

OUR SURROGACY STATISTICS (Jan 1994 – Dec 2005)

No of cases done	24
No of cases pregnant	14 (58 %)
Number of Ongoing Pregnancies	5
No of cases delivered Singleton -2,Twins-4,Triplets-1	7(50%)
Missed Abortion	2

M

Hand-made babies for the chi

The Hindu dated May 25,1997:A tale of two mothers(Egg and Surrogacy)Mrs.V.Aged 44 yrs was postmenopausal and her husband married her relative,as he wanted a child. He was then diagnosed at our centre to be a case of severe Oligozoosperima. The 2nd wife provided the donor eggs for the 1st wife. ICSI was performed and embryo transfer was done on both women. The first wife became pergnant and delivered a child.

BREAKING NEWS

First South Indian ICSI triplets born at GG Hospital on 13/6/2005 (2 females and one male baby)

weighing 1.43kg, 1.27kg & 1.6kg

STATISTICS

November 2003 – April 2005

Procedures	Patients	Pregnancies	Pregnancy Rate (%)
IUI	2228	196	9
General IVF ET ICSI RI ICSI (Rescue)	364 119 12	83 35 3	22.8 29.4 25.0
Tubal GIFT / PROST	82	17	20.7
DualDUAL (GIFT + ET)DUAL (GIFT + BT)	86 3	35 2	40.6 66.6
FROZEN EMBRYOS Frozen – thawed (IVF-ET)Frozen – thawed (ICSI)	469	144	30.444.4
Sequential Transfer (Day 2 & blastocyst)	23	7	30.4
Donor Oocyte Programme(DOP) ET ICSI **Tubal** GIFT / PROST / SOFT **DUAL** GIFT+ET GIFT+ ICSI **Frozen – thawed ET**	218 29 52 27 6 16	63 9 26 9 1 4	28.89 31.03 50 33.33 16.66 25
Donor Embryo Transfer (DET) IVF ICSI **Dual** GIFT / SOFT + ET GIFT +ICSI	134 4 18 1 27	35 1 9 1 12	26.11 25 50 100 44.44

Frozen – thawed Frozen ET Frozen ICSI **Blastocyst Transfer**	2 4	1 1	50 25
OWN +DOP Own + ETOwn + GIFT & ET (Dual)**Own + DET**	4 2 1	1 1 1	25 30 100

	1600
• Total Number of pregnancies achieved	754
• Total Number of Babies delivered by ART	
• Total Number of Ongoing Pregnancies	209
• Total Number of Fetal wastages	637

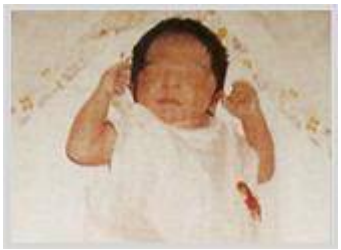
PROUDLY ANNOUNCING OUR INSTITUTE IVF BABIES

FIRST IVF BABY OF SOUTH INDIA

Kamala Ratnam, 1st August 1990

KAMALA RATNAM IS NOW 15 YEARS

She stood School First in her Secondary Examinations



FIRST PROST BABY OF SOUTH INDIA

12th August 1992

FIRST GIFT TWINS OF SOUTH INDIA

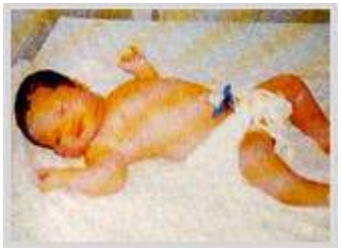
21st September 1992

FIRST TUBAL EMBRYO TRANSFER(TET)

Baby of South India 5th July 1992

INDIA'S FIRST IVF ET BABY

Born to a 49 year Old lady on 10th October 1994

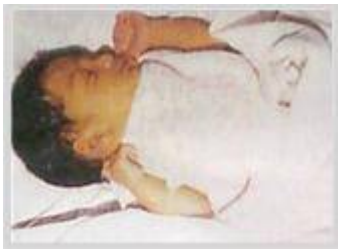


FIRST SOUTH INDIAN ICSI BABY

9th May 1997

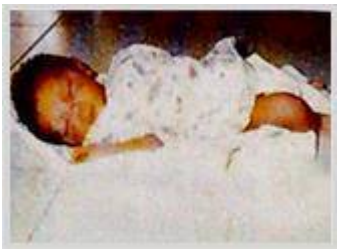
SOUTH INDIA'S FIRST ICSI

Triplets 16/5/2005



INDIA'S FIRST SURROGATE BABY

23rd June 1994



FIRST SPERM ATTACHED OOCYTE FALLOPIAN TUBE TRANSFER(SOFT)

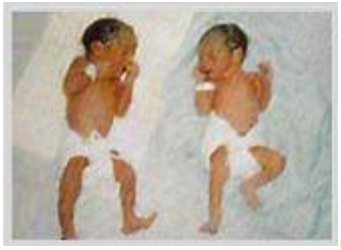
Baby of India, 4th July 1992

SOUTH INDIA'S FIRST FROZEN ET TRIPLETS

19th November 1998

***TAMIL NADU'S FIRST BABY BORN TO* A PREMATURE OVARIAN FAILURE**

Lady, on 19th October 1994, by Donor Oocyte Programme



FIRST SOUTH EAST ASIAN BABY BORN TO A PATIENT WITH MAYER ROKITANSKY KUSTNER HAUSER SYNDROME(MRKH-S)

Through a surrogate on 19th January 2001

INDIA'S FIRST QUADRUPLETS DELIVERED ON 8TH SEPTEMBER 1996

The first baby in India with the FROOTI (Fallopian Replacement of pre-ovulatory Oocytes with Timed IUI) technique pioneered by Dr.Kamala Selvaraj was born on July 25th 1995

13-8-96 மாலை மலர் ★★★

செயற்கை முறையில்

ஒரே பிரசவத்தில் 4 பெண் குழந்தைகள்

இந்தியாவில் முதல் தடவையாக சென்னையில் சாதனை

டாக்டர் கமலா

சென்னையில்

அதிநவீன 'ப்ரூட்டி' முறையில் சோதனைக் குழாய் குழந்தை

டாக்டர் கமலா செல்வராஜ் சாதனை

மாலை மலர்

சென்னை 13-8-96 தாது ஆண்டு ஆடி மாதம் 29-ந் தேதி செவ்வாய்க்கிழமை

ஒரே பிரசவத்தில் 4 பெண் குழந்தைகள்

A SMILE

A Smile

A smile costs nothing, but gives much.
It enriches those who receive, without
making poorer those who give.
It takes but a moment, but the memory of it
Sometimes lasts forever.
None is so rich or mighty that he can get
Along without it, and none is so poor but
That he can be made rich by it.
A smile creates happiness in the home,
Fosters good will in business, and is the
countersign of friendship
It brings rest to the weary, cheer to the
discouraged, sunshine to the sad, and it is
nature's best antidote for trouble.
Yet it cannot be bought, begged, borrowed
or stolen, for it is something that is of no
value to anyone until it is given away.

The Road to success is not straight

There is a curve called failure.
A loop called confusion…
Speed bumps called bad friends…
Red lights called enemies…
Caution lights called family….
You will have flats called jobs.
But, if you have a spare wheel called determination..
An engine called perseverance..
Insurance called faith..
A driver called GOD..
You will make it to a place called SUCCESS.

Simplicity and Humility

Be simple and humble like a grass. Even if somebody steps on it, it never gets hurt. It never huts others too. When a mild storm attacks, all the big trees get uprooted. But the simple grass survives. Be noble and humble like that grass.

Simple but strong.