

INTERESTING CASES AND THEIR MANAGEMENT

CASE - 1

Mrs. SA, 26 years, married for 3 years 10 months came to us on 30/11/2004 for primary infertility. Her menstrual cycles were irregular. Her USG revealed a just normal uterus measuring 6.0 x 3.0 cm with polycystic ovaries. Her diagnostic hysteroscopy was normal. Her husband's semen analysis revealed necrozoospermia. Consent was obtained for donor insemination and after failing two cycles of TDI, the couple temporarily discontinued treatment. They once again reported to us in 2006 and opted for ART.

She underwent ART- ICSI cycle on 23/1/07 and had moderate to severe OHSS. We retrieved 34 oocytes from her and with stringent monitoring of all haemodynamic and biochemical parameters, 3 grade II embryos were transferred at patient's own request, while the rest were frozen. She conceived with a single intra uterine gestation. Owing to the OHSS, patient underwent transabdominal ascitic tapping twice and transvaginal aspiration of ascitic fluid thrice, but was hemodynamically and biochemically stable.



During the 8th week of pregnancy, she complained of severe abdominal pain and underwent a diagnostic laparoscopy for suspected torsion. Intra-operatively there was left ovarian torsion which was corrected and bilateral oophero- pexy was done by fixing the ovaries in the adnexa using 1-0 vicryl.

The antenatal period was uneventful until the 26th week when once again she developed left ovarian torsion which was untwisted yet again laparoscopically which has not been attempted at this stage in pregnancy. Two weeks later, to our own anguish and patient's despair, she had left ovarian torsion once again and this time we had no choice but to perform a mini-laprotomy and proceed with left salpingo-oophorectomy.



She was maintained with tocolytics and antibiotics and the rest of the pregnancy went by uneventfully. She delivered a healthy male baby on 12/9/2007 at 4.56pm weighing 2.40kg. This is a rare case where there was recurrent ovarian torsion despite bilateral oophero- pexy. It was also one where a challenging laparoscopic intervention was attempted in advanced gestation.

Points to Pointer

1. Should we have cancelled the cycle in the first place?
2. Would blastocyst transfer have helped to tide over the initial OHSS crisis?
3. Predicting one's response to OHSS does not really help in identifying those at real risk of repeated ascites and ovarian torsion.

Reference

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2. Salim Bassil, Ulrich Steinhart and Jacques Donnez¹. Successful laparoscopic management of adnexal torsion during week 25 of a twin pregnancy. *Human Reproduction* 1999; Vol 115: No 3, pp 855-857.

CASE - II

Mrs. MD, 32 years, married for 15 years first came to us on 13/4/07 for secondary infertility. She had undergone one D & C in 1993 for a missed abortion at 11 weeks of gestation at another hospital. In 1999, she underwent a diagnostic laparoscopy at a different centre which was found to be normal. This was followed by a HSG in 2005 which was also normal. The couple did not conceive since then despite follow up treatment with 6 cycles of ovulation induction and IUI. Her menstrual cycles were regular and local examination and USG of uterus and ovaries were also within normal limits. Her husband's semen parameters were all normal except for mild asthenospermia. She underwent her second laparoscopy with us on 18/4/2007. Uterus was normal with a small posterior wall intramural fibroid. Tubes and ovaries were normal on both sides. There was one strand of omental adhesion to the anterior abdominal wall. On chromotubation both tubes were patent. The first cycle of ovulation induction with IUI was unsuccessful. In the 2nd cycle she had Clomiphene citrate (CC) with gonadotropin stimulation and opted for an ART procedure, following a good response to stimulation. We retrieved 6 oocytes of which, 3 oocytes with pre-prepared husband's sperm were transferred into the right tube as GIFT procedure while ICSI was performed on the remaining oocytes. Two 4cells G-1 embryos were transferred on day2. Her 1st, 2nd and 3rd β -hCG values were 47.2 mIU/mL, 151.8 mIU/mL and 421.6 mIU/mL respectively. On the 40th day, during the routine ultrasound no gestational sac was visualized in the endometrial cavity and the repeat β -hCG was 3731.6 mIU/ml. There was a suspicious right adnexal echogenic area indicative of ectopic.



Bilateral ectopi pregnancy



Endoscopic salpingectomy



Post salpingectomy

In view of all the above findings she was taken up for diagnostic laparoscopy, which to all our surprise revealed a bilateral ectopic pregnancy for which she underwent bilateral salpingectomy on 21/8/2007. This is the first case of bilateral ectopic pregnancy encountered in our clinical practice. A literature search revealed few interesting cases of bilateral ectopic pregnancy following ART procedure, in other parts of the world which we have sited below. This is an extremely rare condition for which prediction and risk factors are the same as in conventional ectopic. This case just proves that we should be aware of such occurrences and be stringent in examining the opposite tube.

References

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2. Phupong V, Taneepanichskul S, Rungruxsirivorn T. Bilateral tubal pregnancies after tubal sterilization in a human immunodeficiency virus seropositive woman. *J Med Assoc Thai.* 2002 Nov; 85(11):1236-9.
3. Tabachnikoff RM, Dada MO, Woods RJ, Rohere D, Myers CP. Bilateral tubal pregnancy. A report of an unusual case. *J Reprod Med.* 1998 Aug;43(8):707-9.

1. J I Tay, J Moore, J J Walker. Clinical Review: Regular Review Ectopic pregnancy. BMJ VOLUME320 1APRIL 2000. www.bmj.com. pp 916-919.
2. Kahraman S, Alatas C, Tasdemir M, Nuhoglu A, Aksoy S, Biberoglu K. Simultaneous bilateral tubal pregnancy after intracytoplasmic sperm injection. Hum Reprod. 1995;10(12):3320-1

CASE - III

Mrs. PM, aged 26 years, married for 3 ½ years first came to us on 22/08/2005 for primary infertility. Her height was 4 feet 7 inches (122 cms) and she weighed 45kgs with a normal gait. Her waist hip ratio was 88:100cms and arm span was 137cm. Her comprehension levels were satisfactory. She had no visual disturbances and gave a family history of the same physical characteristics for one brother. Her menstrual cycles were only on induction. USG revealed a hypoplastic uterus (5.0x2.4) and normal ovaries. Her previous hysterosalpingogram (X-ray) showed patent tubes as well as an asymmetry with narrowing of both pelvic joints. Since her prolactin levels were >200ng/ml she was advised a CT scan prior to her visit to our hospital and the reports revealed a smaller sized pituitary with no mass lesion. Her husband was also short statured. Semen analysis of her husband revealed severe oligoasthenozoospermia (idiopathic). The karyotyping of both husband and wife were normal.



Diagnostic Laparoscopy



Mrs.PM

Her Serum Prolactin levels were higher than normal. (>200ng/ml) and she was treated with cabergoline 0.5mg twice a week with a step down regime until it was normal. Diagnostic laparoscopy was done on 17/01/2006, which revealed a hypoplastic uterus, normal ovaries and beaded patent tubes. She was then prescribed 4 month of hormone replacement therapy with estradiol valerate tablets and hydroxyprogesterone caproate injections to grow the uterus to a normal size. Subsequently she underwent 2 cycles of IUI, but in vain. She was then advised for ART programme. She underwent her first cycle of ART, on 18/10/2006, where 4 poor quality oocytes were retrieved and did not fertilize. The procedure was done under general anesthesia using nitrous oxide, oxygen, inhalation anesthetics and spontaneous ventilation. Owing to her poor response and her phenotype with risks of similar characteristics in the offspring, the couple opted for a donor embryo programme. She underwent her second IVF cycle in February 2007 in a down regulated hormone replacement cycle. GIFT was done on 26/2/2007, 3 oocytes with donor sperms were transferred into the right tube under general anesthesia using nitrous oxide, oxygen, scoline and controlled ventilation. Since the expected time for the procedure was approximately 5 - 7 minutes and relaxation was required, short acting muscle relaxant (Scoline) was used. Patient did not recover from the relaxant effect; therefore she was diagnosed to have scoline apnea. Patient was ventilated using proseal for 45 minutes followed by transfusion of fresh blood and she recovered completely. ET was done on 28/2/2007, one 4 cells grade I-II embryo was transferred.



During Anesthesia



At Birth

Her β -hCG values post procedure on 28th day was 105.9 mIU/mL and on 30th day was 330.5 mIU/mL. Cervical cerclage was done on 6/6/2007 at 16 weeks of pregnancy under short GA using nitrous oxide, oxygen, inhalation anesthetics and spontaneous ventilation. She subsequently became a gestational diabetic and was treated with insulin. At 34 weeks due to uncontrolled gestational diabetes despite treatment, as well as a non reactive NST, she was taken up for an emergency LSCS. Preoperative assessment of airway revealed difficult intubation. The thyromental distance was 4cm, Malampatti testing - Class IV, thick tongue, poor cervical movement and large breasts were all against tracheal intubation. Since the patient was short statured (122 cms) and had crowding of the spines, regional anaesthesia was deferred in view of very high or complete block. Patient was induced with Thiopentone 5mg/Kg 2.5% solution followed by mask ventilation using nitrous oxide and oxygen. Ventilation was difficult, due to poor cervical extension so one anesthetist elevated the lower jaw and held the mask in position while the ventilation was done by another anesthetist. Oxygen saturation was 88-90%. She was taken under with oxygen, nitrous oxide (1:1) and halothane, LMA insertion was attempted. Since the relaxation of the jaw was insufficient and mask ventilation was possible, long acting muscle relaxant (Atracurium 25 mg) was given hoping to achieve adequate relaxation (Scoline was not given since the patient had scoline apnea in the previous procedure). In spite of the relaxant, LMA insertion proved to be difficult. Laryngoscopy was impossible. Mask ventilation was continued, oxygen saturation (SPO₂) was fluctuating between 90-92%. Since we were able to maintain oxygen saturation at low normal level we proceeded with the surgery. After 10 full minutes of ventilation, LMA was introduced with great difficulty. Though it was an atraumatic insertion, the LMA was not in situ, but the O₂ saturation was maintaining at 94-95%. So the cesarean was completed with the delivery of a live female baby on 6/10/2007 at 5.20pm weighing 2.35Kgs. Recovery and post operative period was uneventful. This was a challenging case for anesthesia in a short statured woman.

Carry home message

This case was presented to emphasize the dilemmas in administering anesthesia to a short statured women with a short neck and with no antecedent history suggestive of risk for scoline apnea.

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NEONATAL UPDATE

Baby of SV was one of twins conceived by in vitro fertilization, delivered at 27 to 28 weeks gestation by Caesarean section following onset of preterm labor. The pregnancy was complicated by gestational diabetes mellitus well controlled with low doses of insulin. The male infant weighed 830g at birth. The infant had mild respiratory distress, that was treated with minimal supplemental oxygen for two days. Apnea of prematurity was treated with aminophylline. Antibiotics were started and stopped in 5 days, following negative sepsis screen. Feeds of expressed breastmilk by nasogastric tube were started on day 4 and gradually advanced. During this time, IV fluids were given to administer 4 to 6 mEq/kg/day of sodium and 2 to 3 mEq/kg/day of potassium. Electrolytes were normal in the first week. On the 9th day of life, the infant developed feeding intolerance with abdominal distension and bilious NG aspirate. Complete blood counts, C-reactive protein were within normal limits. Serum electrolytes showed serum Na of 125 mEq/l, and serum K of 3.1 mEq/l. The baby was hemodynamically stable with SpO₂ 96% in room air. Urine output was about 3 to 5 cc/kg/hour. X-ray showed dilated bowel loops. Pending cultures, antibiotics were restarted. Sodium and potassium supplementation were given.



At Birth



At Discharge

Although sepsis screen was negative, the baby continued to have large volumes of nasogastric bilious aspirate for 3 days which was replaced with Ringer Lactate. Serum potassium varied from 1.9 - 4 mEq/l over the next 3 weeks. Hypokalemia persisted even after decrease in nasogastric aspirate. Potassium supplements were given at 4 to 6 mEq/kg/day, initially parenterally and then orally.

ECG was continuously monitored. Serum sodium normalized in 2 weeks. The baby had intermittent hypoglycemia that necessitated administration of glucose at 8 to 10 mg/kg/min. Blood urea, serum bicarbonate, magnesium, calcium and creatinine were repeatedly within normal limits. Sepsis screen was negative. With supplementation of potassium, the ileus gradually resolved and the baby tolerated feeds. The baby was discharged on potassium supplements, which was stopped a week after discharge. The baby is now thriving well.

Hypokalemia results in paralytic ileus and feeding intolerance. However, the etiology of hypokalemia in a baby who received normal maintenance requirements of potassium, and who did not have vomiting, diarrhea, alkalosis or diuretic therapy is unclear. A combination of loss of K-rich gastric fluid, possible increase in beta adrenergic activity due to hypoglycemia, increased insulin sensitivity and renal tubular immaturity resulting in mild acidosis, polyuria and salt wasting, could have contributed to the hypokalemia. Serum electrolytes should be monitored and dyselectrolytemia treated carefully in extreme preterm infants. Dyselectrolytemia, primarily due to renal tubular immaturity, can result in feed intolerance or failure to thrive. A high index of suspicion is needed. Also, one needs to remember that all ileus in the NICU is not sepsis!

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NEW AGE MOMS

It has become a recent trend, for women to postpone their childbearing needs beyond the normal years, little realizing the speed of the biological clock or its impact. This being a common practice in the west has now found its way into the Indian scenario slowly but steadily. The demands on women during their peak reproductive years in the form of higher education, better career options and the need for stable relationships, although progressive, seems to be stretching the maternal age to beyond 35 for first pregnancies. What is the impact of age on fertility? For a starter, higher rates of chromosomal abnormalities and the resultant increase in spontaneous miscarriage rates, preterm labour, presence of medical disorders like hypertension and diabetes, a poor response to stimulation in ART cycles, an increase in the multifetal pregnancy rates and last but not the least a higher risk of neonatal morbidity and mortality (Trisomies/Growth Restriction/Respiratory Distress).

Recent literature have cited various methods to predict the ovarian reserve and prognosis for conception in treatment cycles, the most important and easily applicable ones being a day 2/3 serum FSH levels and ultrasound for antral follicle count and ovarian volume. In addition it may be noted that accelerated ovarian follicle depletion by apoptosis precedes natural menopause by 10 to 13 years, so much so that those women who attained menopause by 45 years had already started to lose their potential at age 32 despite regular monthly cycles! This can only be deduced retrospectively and possibly by determining the general age of menopause in the family. Poor responders can be attributed to this group where a normal FSH, antral follicle count and regular cycles, fail to respond to conventional stimulation regimes. Till date women in their perimenopause, menopause and those suffering from premature ovarian failure only had the option of donor programme or adoption and always fared very well with donor oocyte programme.



But with the current platter of oocyte cryopreservation, ovarian transplantation and stem cell research for use of progenitor cells that could replace the lost oocyte pool or reduce apoptosis rate,

we will get to keep our cake and eat it too! Well, as infertologists it is our responsibility and ethical commitment to carefully select older women presenting to our fertility clinic, who will most likely be fit physically, emotionally and financially to face motherhood. The mainstay of treatment being counseling and ensuring right choices be it own or donor programme or adoption. Ultimately the outcome of any decision would reflect on the well being of the child and his/her future, so it is not only the doctor but the responsibility of these couples/single women to ponder and make the right choices

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FIRST TEST TUBE BABY OF SOUTH INDIA



- **Name: Ms. Kamala Ratnam**
- **DOB :** 1/8/1990
- **Age :** 18 years
- **College :** B.Tech (1st year) - Information & communication technology. Since IT has been my field of interest My aim is to achieve some probable feats in this field.
- **Hobbies:** I love playing computer games, to hang-out with friends, reading novels, surfing the net etc.



- **Name :** J. Hari Babu
- **DOB :**4/3/1993
- **Age :** 15 years
- **Hobbies :**Reading scientific books and technology based books about space & Rockets, Computer science and practicing Taekwondo (martial art)
- **SPORTS :**National &State level in Taekwond, District level player in basket ball, volley ball, Khokho and Kabadi.
- **Ambition :** To become a Heart specialist



- **Name :** Dimple & Hiren (Twins)
- **DOB :** 7/5/1995
- **Age :** 12 years 7th Standard
- **Hiren :** Cricket- State Board level, Long jump& Running (Ist - Inter School level -7 cups)
- **Dimple :** Art & Craft & Folk dance (Ist - Inter school competition)
- **Ambition:** Computer software engineer

- **Name : Divya Jain**
- **DOB : 03/09/1993**
- **School:** 8th Standard
- **Age : 15 years 8th Standard**
- **Hobbies :** Dancing & Reading story books
- **Ambition:** Computer software engineer



South India's FIRST baby(triplets) from frozen embryo, 19/11/1998.



- **Name : Ajay Adhip, Aja Salonee & Anujskand**
- **DOB : 19/11/1998**
- **Age : 9 years**
- **School:** 6th Standard
- **Ajay Adhip :** Yoga Champion in District & State level (Ist - Inter School level -7 cups)



- **Hobbies:** Swimming, cricket, foot ball, reading books and painting
- **Aja Salonee :** champion in State level -Selected in Tamilnadu Yoga & participated in National Yoga Championship held at Ranchi in 2007
- **Hobbies :** Dancing , Singing, Reading books, drawing and swimming
- **Anuj Skand:** Rank holder in Study Yoga Champion in District & State level
- **Hobbies:** Swimming, cricket, foot ball, reading books and painting

Asia's First (twins) born to a patient with Mayer-Rokitansky-Kuster-Hauser- Syndrome through a surrogate -2001

- **Name : Sarath Varshan & Saran Viswa**
- **DOB : 19/1/2001**
- **Age : 7 years**
- **School: 2nd Standard**
- **Sarath Varshan :** Class 1st in studies & Very much interested in sports
- **Saran Viswa:** He is interested in sports especially in Tennis



DESIDERATA

GO PLACIDLY

amid the noise & haste & remember what peace there may be in silence.

As far as possible, be on good terms with all persons. Speak your truth quietly & clearly & listen to others, even the dull & ignorant, they too, have their story. Avoid loud & aggressive persons, they are vexations to the spirit. If you compare yourself with others you may become vain & bitter. For always there will be greater & lesser persons than yourself.

Enjoy your achievements as well as your plans. Keep interested in your own career, however humble; it is a real possession in the changing fortunes of time. Exercise caution in your business affairs for the world is full of trickery. But let this not blind you to what virtue there is. Many persons strive for high ideals & everywhere life is full of heroism. Be yourself. Especially do not feign affection. Neither be cynical about love. For in the face of all aridity & disenchantment, it is perennial as the grass. Take kindly the counsel of the years, gracefully surrendering the things of youth. Nurture strength of spirit to shield you in sudden misfortune.

But do not distress yourself with imaginings. Many fears are born of fatigue & loneliness. Beyond a wholesome discipline be gentle with yourself. You are a child of the universe no less than the trees & the stars.

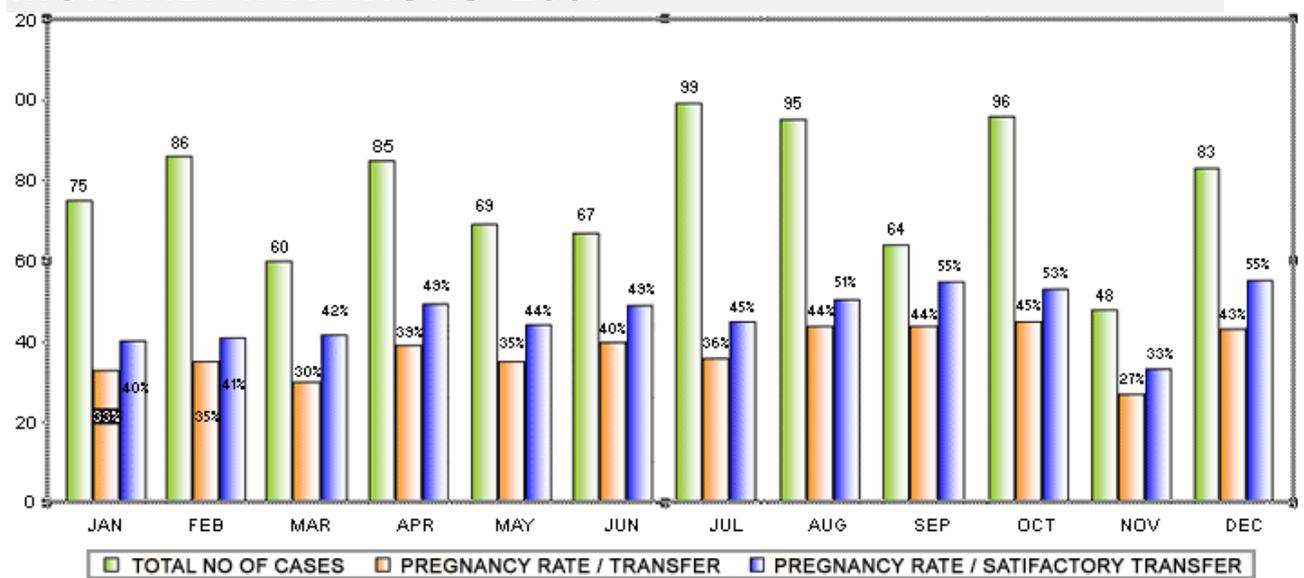
You have a right to be here. And whether or not it is clear to you no doubt the universe is unfolding as it should.

Therefore be at peace with God, whatever you conceive,
Him to be & whatever your labors & aspirations in the noisy confusion of life,
keep peace with your soul. With all its sham & drudgery broken dreams,
it is still a beautiful world.

Found in old Saint Pauls Church,

Baltimore, Dated 1692

MONTHLY VARIATIONS- 2007



MONTHLY PREGNANCY RATES (JUNE 2007 – DECEMBER 2007)

Months	art	iui	Others	total
January	25	16	16	57
February	30	9	12	51
march	18	11	17	46
april	33	11	15	59
may	24	14	26	64
june	27	6	17	50
july	36	8	17	61
august	42	8	20	70
september	28	11	19	58
october	43	8	17	68
november	13	8	19	40
december	36	17	28	81
Total	355	127	122	705

STATISTICS

STATISTICS(June 2007 - Dec 2007)

PROCEDURES	NO OF CASES	PREGNANCIES	PREG.RATE (%)
IUI (OWN/DONOR)	1135	65	6
<i>General</i>			
IVF ET	4	0	0
ICSI ET	186	83	45
IVF & ICSI	13	6	46
BT	6	3	50
<i>DUAL</i>			
GIFT + ET	17	9	53
GIFT + ICSI	69	37	54
GIFT + RI ICSI	2	0	0
<i>FROZEN EMBRYOS</i>			
FROZEN ET	10	2	20
FROZEN ICSI	37	11	30
FROZEN ICSI (DET)	21	9	43
SEQUENTIAL TRANSFER (OWN/DONOR) DAY 2 & DAY 5 TRANSFER	15	10	67
<i>DONOR OOCYTE PROGRAMME(DOP)</i>			
IVF ET	18	5	28
ICSI ET	66	17	26
FROZEN ET			
IVF & ICSI	8	2	25

	1	1	100
TUBAL			
GIFT / PROST / SOFT	2	0	0
DUAL	71	8	47
GIFT / SOFT + ET	6	2	33
GIFT / SOFT +ICSI			
DONOR EMBRYO PROGRAMME IVF ET	11	8	73
ICSI	7	1	14
DUAL			
GIFT + ET	11	3	27
OWN + DOP ICSI + ET	9	3	33
GIFT / PROST & ET (DUAL)	2	1	50
OWN +DEP	4	2	50

- Total Number of pregnancies achieved : 2530
- Total Number of patients delivered by ART : 1245
- Total Number of Babies delivered by ART : 1598
- Total Number of Ongoing Pregnancies : 187
- Total Number of Fetal wastages : 1098