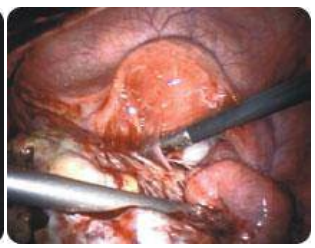
INTERESTING CASES AND THEIR MANAGEMENT

CASE – 1

Ms. VR, 19 year old girl came to us on 12/11/2005 with complaints of irregular periods since 3 years and chronic lower abdomen pain for the previous 3 weeks. She was a resident of Ludhiana (Punjab) and had an interesting medical history. She had approached a local gynecologist for the same complaints on 1/11/2005 for which an ultrasound abdomen at two different medical centres was sought. Two different reports suggesting an enlarged right ovary 85 mm X 80 mm X 65mm with an impression to rule out ovarian tumor at one centre and at the other, an opinion of a large midline pelvic mass with solid and cystic components, in favour of dysgerminoma or invasive mole, was given. Further investigations suggested were urine pregcolor, CA-125, and diagnostic laparoscopy. The gynecologist decided to do CA-125 and the level was 107.0 Uml (Ref.Range < 35 Uml.). An MRI was done on 2/11/2005 which suggested a large solid midline pelvic S.O.L measuring 9.5 x 6.4 cm with mass effect on the urinary bladder and uterus, requesting FNAC for further evaluation. Hence FNAC was proceeded with on 7/11/2005. Two attempts were made to obtain tissue giving a final cytology report of inflammation, and also suggesting that the tumor is non-yielding cytologically. By this time the young girl had to endure pain and emotional turbulence due to the fear of an ovarian tumor. In all this time she had been treated with antispasmodics and antibiotics.

At our centre on 12/11/2005 she was diagnosed as PCOS by history and on ultrasound, the left ovary was visualised with multiple small follicles and cysts while the right ovary was not imaged. Hence an opinion at a reputed centre (Mediscan) for sonology was advised in order to rule out ovarian torsion. We had suspected an ovarian torsion due to the fact that she was a case of PCOS where follicular cysts are common and the sudden pain could be due to torsion rather than an ovarian tumor, especially since her right ovary was not seen. The second opinion report suggested a normal left ovary with a 6.4 X 4.4 cms hypoechoic solid mass in the left adnexa just above the left ovary.The right ovary was not imaged in its normal position. Color doppler showed normal vascularity in the left ovary with absence of flow in the mass.





TWISTED PEDICLE OF RT OVARY

ADHESIONS

RELEASING ADHESIONS

They gave their opinion as chronic right ovarian torsion. She was then posted for operative laparoscopy on 14/11/2005. Uterus was normal in size with adhesions; right ovary was enlarged, necrosed and unhealthy with pedicle twisted twice and adherent to left adnexa. Left ovary was the seat of a huge cyst in adhesions.

INTERESTING CASES AND THEIR MANAGEMENT

CASE - 1

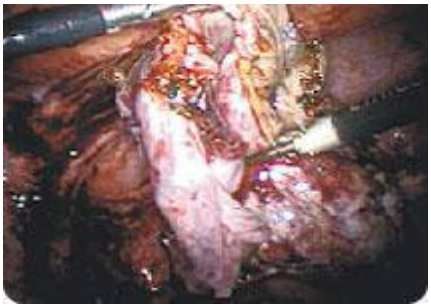
Both tubes were also in adhesions. Hence adhesiolysis and right salphingo-oopherectomy with transabdominal aspiration of left ovarian cyst was performed. Her left adnexa appeared normal following surgery. She reviews with us for follow up.

Lessons Learned

This young girl lost her right tube and ovary, incurred unnecessary expenses and unwarranted procedures coupled with emotional trauma due to negligence in simple history taking and diagnosis.

The most common types of ovarian cysts are follicular and corpus luteal, which are related to the menstrual cycle. Follicular cysts occur when the follicle does not rupture to release the oocyte. They are usually small and harmless, disappearing within two to three menstrual cycles or following a course of oral contraceptive pills. Sometimes they persist and give rise to pelvic pain which may be due to rupture, internal bleeding or torsion of pedicle. They are also seen in cases of PCOS. Corpus luteal cysts are more common during the ovulatory cycle and early pregnancy.

RT TUBE REMOVAL



RT OVARY REMOVAL

RT SALPHINGO-OOPHERECTOMY

FINAL PICTURE

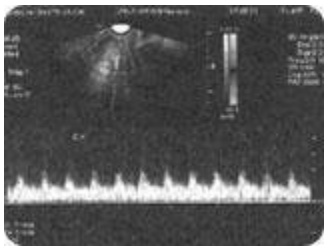
CASE – ||

Mrs. TH, aged 38 years, married for 20 years came to us on 27/8/2005 for primary infertility. Her menstrual cycles were regular. Her USG and diagnostic hysterolaparoscopy revealed a bulky uterus with normal ovaries and tubes. Her husband's semen analysis revealed severe oligoasthenozoospermia. The patient had tried one IVF cycle outside and due to failed fertilization, the cycle was cancelled. At our centre, the patient was advised IVF with donor programme based on her age and raised hormonal profile (FSH 9.67mIU/ml and LH – 8.6mIU/ml). On stimulation for IVF she was found to be a poor responder and with previous history of failed fertilization the couple signed for a donor oocyte programme. She was subsequently transferred, 4 grade II-III ICSI embryos in a down regulated hormone replacement cycle. Her ß-hCG values post procedure was as follows:

27/8/2006	29/8/2006	7/9/2006	9/9/2006	11/9/2006
28th day	30th day	38th day	40th day	42nd day
130.3	340.2	9971.7	14,824	23,741.2

On the 38th day she underwent transvaginal ultrasound and no intrauterine gestational sac was visualized. In view of rising ß-hCG values with an absence of intrauterine gestational sac, a diagnostic laparoscopy was performed on 10/09/2006 to rule out ectopic pregnancy. The findings were absolutely normal. A repeat ß-hCG was done on 11/9/2006 and the value was 23741.2mIU/ml. In view of the high level, she was referred to Mediscan centre for sonology, for their opinion to rule out any gestational sac that could have been missed. We were in for a surprise! The report revealed a 2.2×2.4cms sized cystic area with echogenic area seen in the cervix suggestive of cervical pregnancy. This was the first case at our centre following ET, ever since we started practicing ART. A dilatation and curettage was scheduled for 12.9.2006. The intra-operative findings were consistent with cervical pregnancy and the chorionic villous sample was also obtained for analysis. A repeat ß-hCG was done on 14/9/2006 and the value was 3614.5mIU/ml. The patient was then advised for repeat B-HCG after 10 days which was 46.4mIU/ml.

USG SHOWING CERVICAL PREGNANCY WITH DOPPLER FLOW



ISOLATING THE CHORIONIC VILLUS

Lessons Learned

The incidence of cervical pregnancy following ART procedures is not exactly known, although several case reports have been presented. It is found to occur more commonly following transcervical embryo transfer rather than tubal procedures. It can also occur as a finding in heterotrophic pregnancy. The management adopted, depending on the weeks of gestation and condition of the patient ranges from transvaginal aspiration followed by instillation of methotrexate, curettage with or without a cerclage and finally hysterectomy. Perhaps, along with the immediate suspicion of an ectopic, we could have also been aware of the possibility of a cervical pregnancy which we had totally missed. The precision of ultrasound diagnosis is so crucial since if we had thought of cervical pregnancy or referring the patient earlier, we could have definitely avoided the diagnostic laparoscopy.

MEDIA FOR SUSTENANCE- SINGLE OR SEQUENTIAL?

The evolution of culture media began from a basic salt solution designed by Ringer based on constituents of serum to the sequential media, catering to the needs of embryo metabolism, until the current trend of a single medium from day 1 to blastocyst. What exactly do we need to know before we decide the best for culture? To begin with, fertilization under natural circumstances takes place in the ampullary portion of the fallopian tube. Hence the constituents of the oviductal fluid play a vital role in metabolism and cell division. Basically there are 3 important components which may be classified as electrolytes (sodium, potassium, chloride and bicarbonate), non electrolytes (glucose, pyruvate, lactate and amino acids) and macro-globulins (albumin and immunoglobulin G). While the former act to maintain the pH and osmolarity, the latter (non electrolytes) enable cleavage of embryos. Of these lactate and pyruvate play an important role in days 1-3 and glucose takes over thereafter. The albumin provides the source of amino acids and the immunoglobulins act against microbial contamination. The commercially available media can only mimic as close as possible the components of the oviductal fluid, as the exact concentrations of its constituents cannot be accurately ascertained

Popular medias have based the concentrations of the vital ingredients like lactate, pyruvate, glucose and amino acids on two principles " Back to nature" and "Let the embryos choose", justifying sequential culture. On the other hand, the switching of embryos from one medium to another may cause an osmotic shock and deprive them of any autocrine or paracrine factors that they may have secreted in to the surrounding media during culture. The challenge to this thought came in the form of a single medium devised on the basis of sequential simplex optimization, whereby the embryos studied were cultured in a "Start" media in which the concentration of essential constituents were varied and optimized to overcome the two-cell block. The results obtained from culturing embryos in sequential and single medium have been comparable according to studies. On one hand, although it seems less cumbersome there is always the question of the integrity of gene expression in cultured embryos which ultimately determines its normalcy and ability to implant and form a healthy baby. Hence this would be an ongoing food for our thoughts as we continue to decipher the appetite of embryos in need of the ultimate and optimum culture environment.

Reference

1. Michael C.Summers and John D.Biggers. Chemically defined media and the culture of mammalian preimplantation embryos : historical perspective and current issues. Human Reproduction Update, Vol. 9, No. 6, 2003, pp. 557-582.

2. John D Biggers and Catherine Racowsky. The development of fertilized human ova to the blastocyst stage in KSOMAA medium : is a two-step protocol necessary? Reproductive BioMedicine Online. Vol. 5, No.2, July 2002, pp. 133-140

3. John D. Biggers. History of KSOM, A single medium for Embryo culture. Fertility World Volume 3. www.ivfonline.com

DISTINGUISHED VISITORS 2005-06

Dr. Kamala Selvaraj MD DGO PhD
Dr. Jan I Olofsson MD PhD,
Associate Professor,
Medical Director, Reproductive Medicine, Organon Asia Pacific
Kuala Lumpur, Malaysia

Educational credits
GG Hospital, in the year 2000 (September – December) had organized a Training program for three Korean Doctors under the sponsorship of the World Health Organization which was very much appreciated. Similarly we are looking forward to the visit of seven doctors from Korea for a period of 3 months, commencing from January 2007. They will be on rotation through the various departments including the ART lab.
STATISTICS : Monthly pregnancy rates (June-Nov2006)

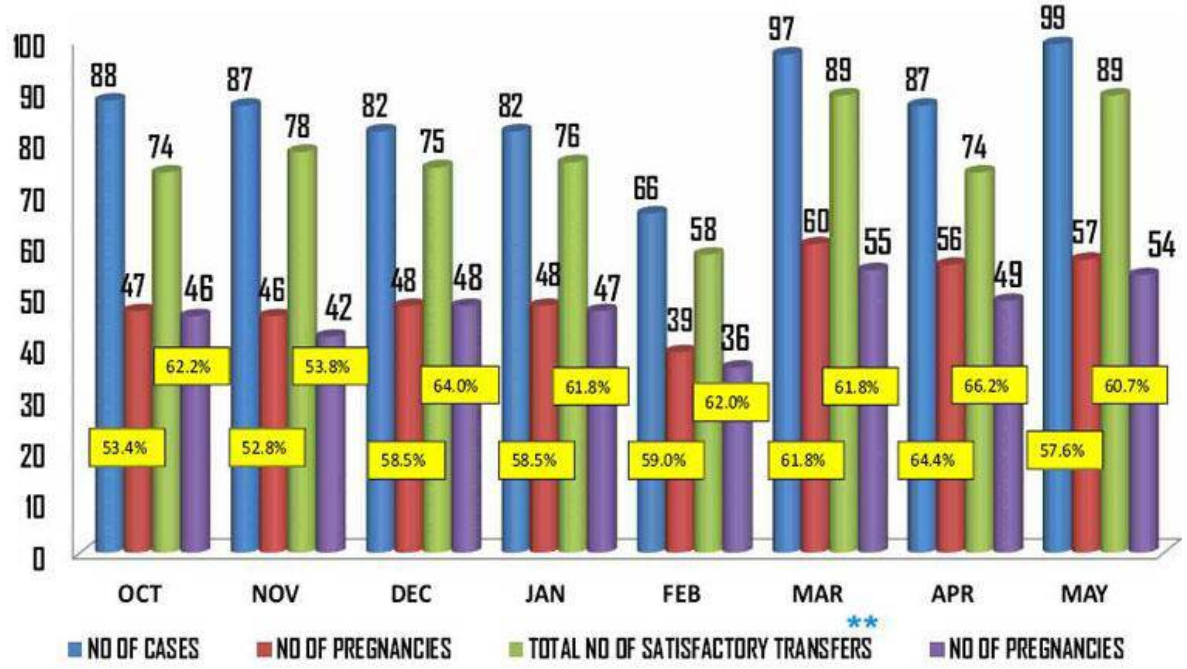
Month	ART	IUI	Others	Total
June	9	3	9	21
July	44	14	8	66
August	38	13	17	68
September	50	13	13	76
October	44	10	13	67
November	53	20	14	87
total	238	73	74	385

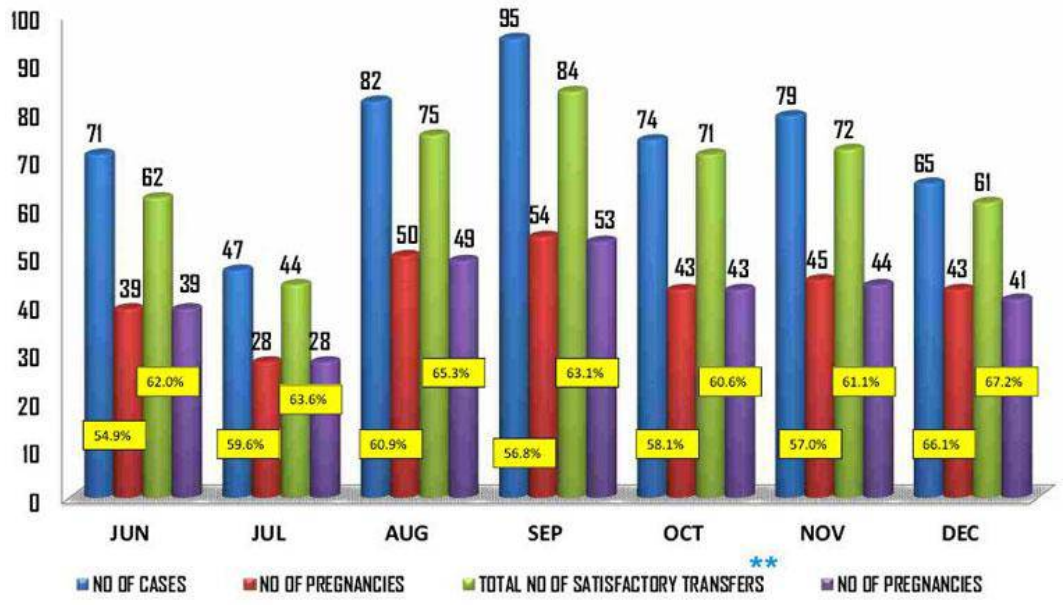
IUI WORKSHOP

An IUI workshop was conducted at GG Hospital on September 1st and 2nd 2006, in collaboration with IRRH (Institute for Training and Research in Reproductive Health), Kolkata mediated by Dr. Vishwas Sovani (V.P, Med & Regulatory, Organon India Ltd). We had 7 participants, 1 from Kerala, 4 from Chennai and 2 from Rajasthan. The workshop was flagged off by Dr. Kamala Selvaraj's inspiring welcome address. The two day event consisted of lectures and demonstrations on Basic approach to infertility, Ultrasound in follicle monitoring, basic semen analysis and sperm preparation methods, conducted by Dr. Kamala Selvaraj, Dr. Suresh (Mediscan systems) and Dr. Priya Selvaraj. The participants were also given an IUI manual, certificate and were taken for a tour of our lab. The feedback forms rated the workshop as "good to excellent" which made our

LECTURES

PRACTICALS




100
90
80
70
60
50
40
30
20
10
0
71
39
62
39
47
28
44
28
82
50
75
49
95
54
84
53
74
43
71
43
79
45
72
44
65
43
61
41
54.9%
62.0%
59.6%
63.6%
60.9%
65.3%
56.8%
63.1%
58.1%
60.6%
57.0%
61.1%
66.1%
67.2%
JUN
JUL
AUG
SEP
OCT
NOV
DEC
NO OF CASES
NO OF PREGNANCIES
TOTAL NO OF SATISFACTORY TRANSFERS
**
NO OF PREGNANCIES

STATISTICS -MAY 2006 - OCTOBER 2006

STATISTICS : Monthly pregnancy rates (June-Nov2006)

procedures	no. of cases	pregnancies	preg.rate (%)
IUI (OWN /DONOR)	831	62	7.46
GENERAL IVF ET	20	5	25.0
ICSI ET	171	53	30.99
IVF & ICSI	10	6	60.0
DUAL GIFT + ET	23	14	60.86
GIFT + ICSI	41	20	48.78
PROST + ICSI	2	0	0.0
GIFT + RI ICSI	1	1	100.0
FROZEN EMBRYOS FROZEN ET	20	3	15.0
FROZEN ICSI	22	5	22.72
FROZEN ICSI(DET)	1	0	0.0
FROZEN DUAL (ICSI/IVF+PROST)	2	0	0.0
SEQUENTIAL TRANSFER(OWN/DONOR) DAY 2 & BLASTOCYST TRANSFER	10	2	20.0
DONOR OOCYTE PROGRAMME (DOP) IVF ET	44	11	25.0
ICSI ET	46	14	30.43
	25	7	28.0

FROZEN ET **IVF & ICSI**	**3**	**1**	**33.33**
TUBAL **GIFT / PROST / SOFT**	**13**	**1**	**7.69**
DUAL **GIFT / SOFT + ET** **GIFT + ICSI** **GIFT + BT**	**24** **10** **0**	**12** **6** **0**	**50.0** **60.0** **0.0**
DONOR EMBRYO PROGRAMME **IVF ET** **ICSI** **GIFT** **IVF & ICSI**	**22** **1** **0** **0**	**10** **0** **0** **0**	**45.45** **0.0** **0.0** **0.0**
DUAL **GIFT+ET** **GIFT+BT**	**3** **0**	**2** **0**	**66.66** **0.0**
OWN + DOP **IVF** **ICSI** **GIFT/PROST & ET (DUAL)**	**1** **5** **4**	**0** **1** **2**	**0.0** **20.0** **50.0**
OWN + DET	**2**	**1**	**50.0**

Total Number of pregnancies achieved : 2107
Total Number of Babies delivered by ART : 943
Total Number of Ongoing Pregnancies : 164
Total Number of Fetal Wastages : 930

FAMILY

Family

I ran into a stranger as he passed by, "Oh excuse me please" was my reply.

He said, "Please excuse me too; I wasn't watching for you."

We were very polite, this stranger and I. We went on our way and we said goodbye.

But at home a different story is told, How we treat our loved ones, young and old.

Later that day, cooking the evening meal, My son stood beside me very still.

When I turned, I nearly knocked him down. "Move out of the way," I said with a frown.

He walked away, his little heart broken. I didn't realize how harshly I'd spoken.

While I lay awake in bed, God's still small voice came to me and said,

"While dealing with a stranger, common courtesy you use, but the family you love, you seem to abuse.

Go and look on the kitchen floor, You'll find some flowers there by the door.

Those are the flowers he brought for you. He picked them himself: pink, yellow and blue.

He stood very quietly not to spoil the surprise, you never saw the tears that filled his little eyes."

By this time, I felt very small, And now my tears began to fall.

I quietly went and knelt by his bed; "Wake up, little one, wake up," I said.

"Are these the flowers you picked for me?" He smiled, "I found 'em, out by the tree.

I picked 'em because they're pretty like you. I knew you'd like 'em, especially the blue."

I said, "Son, I'm very sorry for the way I acted today; I shouldn't have yelled at you that way."

He said, "Oh, Mom, that's okay. I love you anyway."

I said, "Son, I love you too, and I do like the flowers, especially the blue."

FAMILY Are you aware that if we died tomorrow, the company that we are working for could easily replace us in a matter of days.

But the family we left behind will feel the loss for the rest of their lives.

And come to think of it, we pour ourselves more into work than into our own family, an unwise investment indeed, don't you think?

FAMILY = (F)ATHER (A)ND (M)OTHER (I) (L)OVE (Y)OU