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NEWS LETTER

Email: kjkhospital@gmail.com | www.kjkhospital.com

KJK HOSPITAL

FERTILITY RESEARCH AND GYNAEC CENTRE

Shawallance Lane, Nalanchira, Trivandrum-15

Phone: 0471-2544080, 2544705, 2544706 Fax: 0471-2543926

From the Editors Desk.....

Ovary tissue Transplants: Are They Possible?

Fertility preservation has emerged as a field of growing interest thanks to increasingly effective cancer treatments in women. Chemotherapy and radiation therapy for the treatment of cancer can compromise fertility. For young women with good prospects of surviving cancer, fertility preservation counseling before gonadotoxic treatment is imperative to offer them a potential chance of future childbearing. Ovarian tissue cryopreservation and transplantation emerges as a strategy for fertility preservation, especially for prepubertal girls, adolescents and women in whom cancer treatment cannot be delayed.

In a review of the largest series of ovarian transplants performed worldwide, Annette Jensen, MD, from the Laboratory of Reproductive Biology, Copenhagen University Hospital , and colleagues found that among 41 women undergoing the procedure, 31% of those who wanted to become pregnant had at least one successful pregnancy. Further, in some women, the tissue remained functional for almost 10 years. The longevity of transplanted tissue is variable, but many patients have so far experienced several years of ovarian function," the authors state. The functional life span of the grafts has been more than 10 years for some of the women.

The Ovarian club meeting and Controversies in Genetics was held in Paris from November 1-3, 2018.

I had an opportunity to participate in the Hands on Fertility preservation workshop and had the basic training in retrieving ovarian tissue and preparing the tissue for cryopreservation by slow freezing and subsequently transferring the tissue back by laparoscopy into the residual ovary or mesosalpinx. It is exciting !

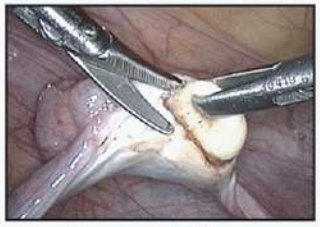
With this news on ovarian tissue transplantation to dwell upon I welcome you to the 18th Annual workshop of KJK Hospital on Video Laparoscopy.

Enjoy the academic feast

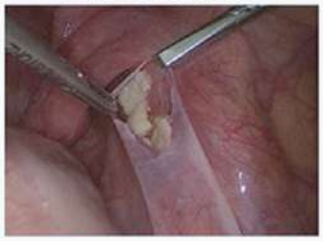
Wishing you a great Newyear in 2019.

Dr. K. Jayakrishnan

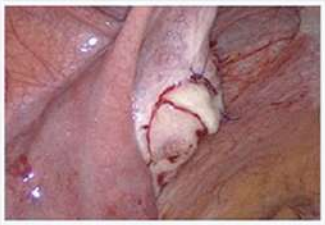
Removal of Ovarian tissue by Laparoscopy



Transplantation in to Mesosalpinx



Transplantation on the Ovary



The Road "NOT" taken...

Dr REVATHY PANICKER

31 year old Mrs X presented to KJK hospital with complaints of heavy menstrual bleeding. She was initially evaluated at a tertiary care center near her hometown. Wherein on evaluation she had an abdominal mass of 28 weeks size and ultrasound carried out depicted uterus enlarged to 28 weeks with multiple fibroids, tubes and ovaries appeared normal in the study. Owing to the large size and small duration mass, MRI was carried out -which was suggestive of Multiple fibroids with hyaline degeneration, Possibility of sarcomata's degeneration to be ruled out, to co relate the same with HPR was the final word. This MRI had a profound impact on the stands of her further management goals at the hospital. The hospital conducted a Tumor board survey and a final decision of Hysterectomy was taken up.

Since the patient was a nullipara and having not completed her family, the idea of hysterectomy stumped her. Thus they decided to vouch for a second opinion bringing them to our center. We had the USG repeated for her and findings were as follows, Uterus enlarged to 28 weeks with multiple large fibroids occupying both anterior and posterior walls, largest of them measuring 8 cm. There was no increased vascularity. Since she had an MRI already done we did not repeat the same. We proceeded with doing routine blood investigations. Later counseled the patient and took her up for Laparotomy myomectomy, explaining the possible chances of leiomyosarcoma and need for hysterectomy SOS.

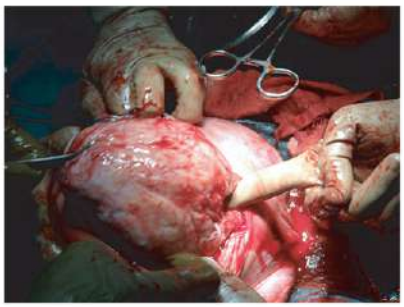
Intra Operatively a total of 15 fibroids of varying sizes was removed, thorough inspection of abdominal cavity was done and no suspicious area was noted. Post operatively we had the sample sent for HPE and it reported as Multiple Leiomyoma with no evidence of malignancy. The patient is awaited for her follow up.

Discussion : Uterine leiomyosarcoma is an uncommon malignancy accounting for approximately 1% of uterine cancer with an estimated annual incidence of 0.64 per 100,000 women. Although leiomyosarcoma can occur elsewhere in the pelvis, including the cervix and urinary bladder, it is more commonly found in the uterus. Most occur in women over 40 years of age who usually present with abnormal vaginal bleeding (56%), palpable pelvic mass (54%) and pelvic pain (22%).

Signs and symptoms resemble those of the far more common leiomyoma and preoperative distinction between the two tumors may be difficult. Uterine fibroids are not generally thought to develop into malignant leiomyomas but leiomyosarcomas frequently coexist within a fibroid uterus and approximately 0.5% of women who have hysterectomies for uterine fibroids are found to have leiomyosarcomas. It is difficult to accurately diagnose leiomyosarcoma before surgery because most women with leiomyosarcoma will have multiple fibroids making it difficult to know which ones should be biopsied.

Magnetic resonance imaging (MRI) might offer some information but is not entirely accurate. A special MRI exam in combination with a blood test for serum lactic dehydrogenase (LDH) level has been reported to be accurate in diagnosing uterine LMS. Surgery is the primary therapy for patients when they are first diagnosed with uterine LMS. This tumor tends to be aggressive. The 5-year survival rate is only 50% with patients whose tumor is confined to the uterus. Women with uterine LMS that has spread beyond the uterus and cervix have an extremely poor prognosis.

MRI-guided biopsy of suspected LMS has also been reported. Currently, there has been no proven overall benefit of using any further chemotherapy or radiation therapy after complete surgical removal of all visible uterine LMS. Follow-up is based on case-to-case basis. There are no known effective targeted therapies for uterine LMS. Clinical trials are investigating new treatment modalities.



LOOK OUT FOR - TRALI!!!!

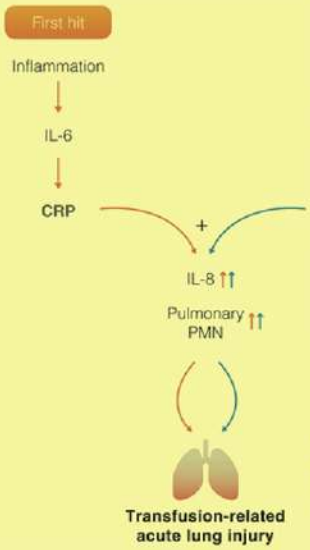
Dr ANJU

A 35 yr old lady, A1 presented to our OPD with infertility and Multiple fibroids, Multiple fibroids were detected during her 1st miscarriage and she was advised to undergo myomectomy for the same.

On ultrasound examination at our hospital - TAS - uterus 16x 14.3x10.6 cm, large Post IMF 10.2x11.5cm, post IMF 3.4x3.5cm, large posterior cervical fibroid 7.1x7.7cm, endometrium - 10mm, b/l ovary normal. So an impression of - multiple large fibroids with large cervical fibroid, was made. Patient was taken up for open myomectomy with diagnostic hysteroscopy after pre operative blood investigation and pre anaesthetic evaluation. Intra and immediate post operative period were uneventful.

On Post operative day 1 patient was asymptomatic, but her Hb - was 7 gms, so was decided on transfusing 2 units of PRBC, Post transfusion patient developed shortness of breath associated with wheeze, inj lasix 20 mg was given, and she became symptomatically better, again after half an hour patient developed shortness of breath associated with b/l wheeze and crepitation, with fall in SpO2, Inj Hydrocort with O2 inhalation at 5 lit /min with face mask was given. A D/D of TRALI, Pulmonary embolism/ oedema was made and patent was shifted to a tertiary center, there they did an X ray showed pulmonary oedema, echo was normal, so a non cardiogenic pulmonary oedema post transfusion with signs of ARDS was seen and a diagnosis of TRALI was made, patient was symptomatically managed and patient discharged from hospital on 6th day of admission.

DISCUSSION : Transfusion-related acute lung injury (TRALI) is a serious blood transfusion complication characterized by the acute onset of non-cardiogenic pulmonary oedema following transfusion of blood products. TRALI is believed to occur in approximately one in every 5000 transfusions. TRALI is a syndrome characterized by acute respiratory distress resulting in acute lung injury within 6 hours upon blood transfusion. In the majority of the cases, antibodies against HLAs and/or human neutrophil antigen (HNA) present in the transfused product are thought to be responsible for initiating TRALI. Generally, TRALI is assumed to result from 2 hits, the first hit being caused by the underlying clinical condition of the patient(females more prone from pregnancies), whereas the second hit occurs when the antibodies or factors are transferred to the recipient during the transfusion. TRALI is a diagnosis of exclusion, for diagnosing TRALI, there should be a history of blood transfusion, Echo normal, chest X ray - signs of pulmonary oedema, low PAO2/FIO2 index <300.



So immediate diagnosis and treatment plays a major role in TRALI, and leuco filtered blood product has some beneficial effects to reduce TRALI, and to avoid unnecessary blood and blood product transfusion unless and until its indicated.

A CASE OF SINGLE FETAL DEMISE IN DCDA TWIN GESTATION

Dr AISHWARYA

Mrs X, aged 27 years, primigravida with IVF conception, came to our hospital for regular antenatal checkup. Her early scan showed DCDA twin gestation corresponding to the date of embryo transfer and normal cervical length. All follow up scans including the NT scan, Double marker done at 12 weeks of gestation and anomaly scans were normal. Subsequently, she wanted to have her regular checkups at her native place. She reported to us again at 30 weeks of gestation saying that a scan at her native place showed single fetal demise with large for gestation age surviving fetus.

Patient was extremely anxious once the diagnosis of single fetal demise was made since they were concerned about the neurological damage and the possibility of death of the surviving twin. It was explained to the couple that if an early LSCS is done, it would add to the existing problems by making the baby premature too. Fetal medicine consultation was done and diagnosis of single fetal demise with large for gestation age for the surviving twin, in DCDA twins was confirmed. Diabetic screening was done which was normal. She was followed up with weekly dopplers and daily fetal heart checkup with hand doppler. She underwent elective LSCS at 35 weeks of gestation age after a course of steroids, and delivered a live healthy male baby of 3.14 kg.

DISCUSSION :

Fetal loss of a twin during the first trimester is not an uncommon event. Loss of one twin in the first trimester does not appear to impair the development of the surviving twin. However, fetal death occurring after mid gestation (17 weeks) may increase the risk of IUGR, preterm labour, and perinatal mortality. The causes of fetal death vary and include twin twin transfusion, placental insufficiency, IUGR related to pre eclampsia, velamentous insertion of the cord, cord stricture, cord around the neck and congenital abnormalities. Consequently, serial assessments of fetal growth and well being should be considered.

Maternal coagulopathy, the most feared complication following twin demise, appears to be uncommon. However, coagulopathy has been reported to occur in about 3-5 weeks following fetal demise. Therefore, when fetal demise occurs in multiple gestation after the first trimester, an initial maternal clotting profile with reassessment in 2-3 weeks is not unreasonable. Monitoring of maternal coagulation factors is not necessary when fetal loss occurs prior to 13 weeks of gestation.

In general, chorionicity rather than zygosity determines the risk of mortality and morbidity. Hence, determining the type of placentation by ultrasound can help in predicting the outcome. The perinatal mortality of the monochorionic twin pregnancies is double that of dichorionic twin pregnancies. The prevalence of monochorionicity in single intrauterine death in twins is 50-70%. When fetal demise occurs after mid-gestation, there is a 17% chance that the surviving twin in a monochorionic gestation will either die or suffer major morbidity. Major morbidity is unlikely to occur in the surviving twin of a dichorionic gestation.

A twin growth discordance may occur in upto 25% of twin pregnancies. It is more common in monochorionic pregnancies.

MANAGEMENT :

If it has been established that the twins are dichorionic, management depends upon the gestational age and whether there is any underlying known pathology. Route of delivery will depend on the presentation of the live twin. If the dead twin leads, then it may be better to consider abdominal delivery, although it should be possible to monitor the second twin satisfactorily if a vaginal delivery is contemplated.

When death has occurred earlier than 34 weeks in a dichorionic pregnancy, delay in delivery to reduce the effects of prematurity should be considered. Monitoring the surviving fetus with CTG, Doppler and ultrasound should be undertaken and maybe found to be reassuring for the parents. Biophysical monitoring is generally unhelpful in these cases although measurement of amniotic fluid volume maybe of value.

The fibrinogen level seems a sensitive guide to the extent of the process and should perhaps be monitored on a weekly basis together with PT, APTT and maternal platelets.

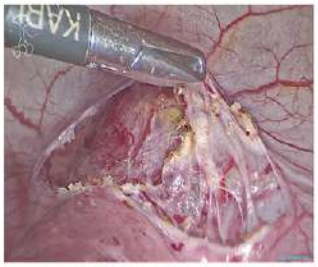
When discordancy is noted in the twins, the main objective should be to achieve the best outcome for both fetuses. The timing of delivery is generally the major issue in severe IUGR and policies about delivery vary widely. There is still not enough evidence about the optimal timing for discordant twins, but data from the GRIT study suggest that delivery should be delayed if the condition of the smaller fetus permits in order to increase the gestational age of the normal growth fetus.

CONCLUSIONS:

The sequelae of a single fetal death in a twin pregnancy depend on the gestation and placentation. Death in the late second or third trimester is associated with significant morbidity and mortality in the surviving twin especially in monochronic twins, Therefore, all twin pregnancies with one dead fetus should be managed in tertiary referral centers with sufficient neonatal support. The management plan should be individualized. Intensive fetal surveillance is required and the determination of chorionicity should be done early in the pregnancy. Proper care and management can salvage a good number of babies.

INTERVAL LAPAROSCOPIC ABDOMINAL CERCLAGE FOR RECURRENT PREGNANCY LOSS

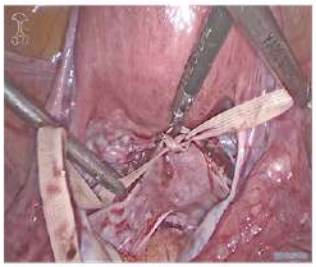
Dr ABHILASH ANTONY V



1 Opening of UV fold of peritoneum

2 Posterior window creation

3 Mersilene at the level of internal os



4 Mersilene suture is then tied posteriorly

According to the definition of the American College of Obstetricians and Gynaecologists, the cervical incompetence is defined as the inability of the cervix to retain the pregnancy on the second trimester, in absence of contractions. Cervical incompetence is present in 0.1 to 1% of all pregnancies, showing a recurrence rate of almost 30%, and constitutes about 15% of recurrent miscarriages and preterm births. The risk factors for this pathology are widely studied and includes congenital malformations of uterine cervix, cervical postpartum trauma, intrauterine exposure to diethylstilboestrol, mechanical dilatation of cervix, and elastin and collagen insufficiency.

Case report - A 30 year old lady with a history of 2 consecutive spontaneous miscarriage including one mid trimester pregnancy loss in spite of cervical cerclage for her two pregnancies. Her cycles were irregular with Trans vaginal ultrasound showing normal size uterus with polycystic pattern of ovaries without any adnexal pathology. All her blood investigation results are normal. Male partner had normal semen parameters without any coital problems. In view of previous failed cervical cerclage, she was planned for laparoscopic transabdominal cerclage.

Procedure- The placement of cerclage via the laparoscopic approach is performed under general anaesthesia. The patient is placed in the dorsal lithotomy position. Some surgeons prefers a uterine manipulator inserted in nonpregnant uterus, followed by placement of a Foley catheter in the bladder, Vesicouterine peritoneum is opened using the HARMONIC ACE and dissected off the lower uterine segment, exposing the uterine vessels anteriorly on both sides. A 5-mm non absorbable Mersilene polyester suture, with adjacent blunt needles to allow passage through the trocar, is introduced into the abdominal cavity.

The stitch is placed by passing each needle medial to the uterine vessels from anterior to posterior, at the level of the internal cervical os. The needles are then cut off and removed, and the Mersilene suture is then tied posteriorly around the cervix.

The vesicouterine peritoneum is then approximated. Tying the knot posteriorly theoretically allows the surgeon to release the cerclage through a posterior culdotomy in the event of pregnancy loss or cerclage failure.

When an abdominal cerclage is recommended, the laparoscopic approach offers the benefits of minimal post-operative pain and faster patient recovery.

Special situations like in first trimester miscarriage, cervical dilation and evacuation of the uterus can be safely and effectively performed without removal of the transabdominal cerclage, In case of late foetal demise, the removal of the cerclage can be performed laparoscopically or by culdotomy.

Trans abdominal cerclage can be performed either in pregnant uterus or as an interval procedure. Advantages of interval procedure include-Reduced foetal and maternal risk, Easy manipulation with good exposure of the uterus, Less chance of bleeding during the procedure This procedure can be done concomitantly with other surgeries like excision of endometriosis, dye studies, adhesiolysis, and myomectomy. Only disadvantage is that unavoidable elective caesarean section and its morbidity.

Dr ABIRAMI

CASE OF SEVERE OHSS

A 26 year old lady with married life of 6yrs was undergoing treatment in our hospital for primary infertility. She had regular cycles and is a k/c/o hypothyroidism on tab thyronorm 25mcg OD. Her AMH is 8.3 and her other blood parameters were normal. The patient had previously undergone diagnostic laparoscopy and hysteroscopy. Significant intraop finding was complete uterine septum for which resection was done.

After 6 cycles of failed IUI and one cycle of failed ICSI in 2017, second cycle of ICSI was done in October 2018. GnRH antagonist protocol was used. Inj Ovitrelle was used for trigger. E2 level on day of trigger was 3906 pg/ml, LH - 2.36mIU /ml, P - 1.26 ng/ml. Ovum pick up was done on 18/10//18. 10 oocytes were aspirated out of which 9 fertilised. On 23/10 - fluid in POD and paracolic gutter was present, hence only one D5 embryo (Blastocyst) was transferred.

On 25/10, 2 days after ET, pt had vomiting, giddiness, mild tachycardia and abdominal distension. Her TC was raised- 1940 with neutrophilia. Na -127, B. urea - 39 Alb - 2.6, Glob -2.2,TP -4.8. Usg showed enlarged ovaries and ascites. Started on i.v fluids, inj albumin and inj heystar. Inj enoxaparin was also started. Paracentesis was done and 1350 ml removed. She was discharged on 26/10 in a stable condition.

Readmitted at our hospital on 2/11 with with severe abdominal pain, vomiting and abdominal distensiion along with oliguria. On examination she had mild tachycardia with a normal BP,R.R - 32, chest was clear. Per abdominal examination showed abdominal distension. Her urine output was also low. Usg showed gross ascites. Inj albumin, inj heystar and Inj enoxaparin were given. Paracentesis was done. Urine output and overall general condition of the patient improved after paracentesis. Her Beta HCG on 5/11/18 was 331 and 48hrs later was 646. OHSS chart (pulse rate, B.P, R.R, A.G, input/output) was maintained on a daily basis. Serial monitoring of serum electrolytes, LFT, blood counts were done. She further underwent paracentesis seven more times over a period of 2 weeks. She was managed with high protein diet, Inj albumin, heystar and enoxaparin. Her USG on 20/11 showed a SLIUG of 6weeks with foetal pole and cardiac activity.

Diagnosis: The typical patient presents with abdominal pain, distension, vomiting and discomfort following the trigger injection used to promote final follicular maturation prior to oocyte retrieval.Time of presentation following trigger injection divides patients into two groups: early and late OHSS.

o Early OHSS presents within 3 - 7 days of the hCG injection It is an acute consequence of the exogenous HCG administration before oocyte retrieval and is usually related to an excessive ovarian response to gonadotrophin stimulation.

o Late OHSS typically presents 10 or more days after the hCG injection and is usually the result of endogenous hCG derived from an early pregnancy. Late OHSS tends to be more prolonged and severe than the early form.

Primary prevention: 1) Insulin sensitizing agents 2) Reducing dose of gonadotropins 3) GnRH antagonists protocols 4) Low dose of hCG /r hcg / r LH 5) Alternative agents to hcg 6) Avoiding hCG for luteal support 7) In vitro oocyte maturation (IVM)

Secondary prevention: 1) Cycle cancellation 2) Coasting 3) Cryopreservation 4) Intravenous albumin and HES 5) Dopamine agonists 6) Calcium gluconate infusion 7) Luteal phase antagonist

Treatment: Careful assessment by an experienced clinician is needed, along with full blood count, serum electrolytes and osmolality, pelvic ultrasound scan and abdominal imaging. The combination of elevated haematocrit and reduced serum osmolality and sodium is indicative of OHSS. Aim of initial assessment is to establish the diagnosis and grade the severity of OHSS. Body weight, abdominal girth, respiratory rate and fluid intake and output should be measured on a daily basis, along with full blood count, haematocrit, serum electrolytes, osmolality and liver function tests. Depending on the clinical features, arterial blood gases, ECG, chest X-ray and other imaging modalities may be required.

Human albumin and hexaethyl starch (HES) have been used for correction of dehydration in women with severe OHSS. Diuretics should be avoided as they further deplete intravascular volume, but they may have a role in a multidisciplinary setting if oliguria persists despite adequate fluid replacement and drainage of ascites.

Indications for paracentesis include the following:

o Severe abdominal distension and abdominal pain secondary to ascites

o Shortness of breath and respiratory compromise secondary to ascites and increased intra-abdominal pressure

o Oliguria despite adequate volume replacement, secondary to increased abdominal pressure causing reduced renal perfusion.

Women with severe or critical OHSS should receive LMWH prophylaxis. Duration of LMWH prophylaxis should be individualised according to patient risk factors and outcome of treatment.

Dr. SIJA CHANDRAN L.J.

DVT - THE RARE, THE UNWELCOME!

27 yr old Mrs. X, married since 3 years, primi, spontaneous conception, with BMI-27, presented at 10 weeks pregnancy with atraumatic pain of 3 days duration over the medial side of left thigh, and the pain was increasing in intensity making even walking difficult unaided. On physical examination, there were no clinical signs suggestive of DVT like pedal edema or redness or tenderness. Homans sign was negative. On evaluation, colour doppler scan revealed DVT in external iliac vein, Common femoral vein, Superficial femoral and deep femoral vein. Normal blood flow was documented in Popliteal vein, Proximal tibial vein, anterior tibial vein and calf veins. There was no previous history of any thrombotic episodes or any family history of young stroke. ECHO was normal. APLA screening was negative. Patient was started on LMWH (enoxaparin) 0.6ml twice daily and ecospirin 150mg daily. Duplex Ultrasound was repeated after 2 weeks, which showed minimal blood flow in common femoral vein, Saphenofemoral junction, suggesting recanalization. Patient is now under follow up.

Saphenofemoral Junction showing Occlusive Thrombus

DISCUSSION: Venous Thromboembolism (VTE) in pregnancy includes Deep Vein Thrombosis (DVT) and Pulmonary embolism. The incidence of DVT among pregnant women is 1.1 per 1000 deliveries. The risk of VTE in pregnancy is about 4 times the risk among non-pregnant women of child bearing age. It is highest in the third trimester and increases further in the first 6 months of postpartum. The risk of pregnancy related DVT is 3 times higher than pregnancy related pulmonary embolism. In pregnant women, proximal DVT is more likely (62%) than calf DVT (6%), compared to non-pregnant population where 80% DVT occurs in the calf. It is more likely to involve the left lower extremity (80%) and this is attributed to the increased venous stasis in left iliac vein by the right iliac artery (May Thurner anatomy), coupled with compression of vena cava by the gravid uterus.

Pregnancy is associated with hypercoagulability and the pregnancy changes are consistent with virchows triad (hypercoagulability, venous stasis and vascular damage). Pregnant women with DVT, most commonly present with discomfort and edema in the lower extremity and rarely can also present with abdominal pain or pelvic pain. Risk factors for VTE in pregnancy include previous history of thromboembolism, thrombophilias, high BMI (>25), immobility, superficial thrombophlebitis, ART, Family history, hyperemesis, pre-eclampsia, smoking, age>35 years, Post partum infections, and Emergency caesarean section.

Compression Duplex Ultrasound should be undertaken where there is clinical suspicion of DVT. If ultrasound is negative and there is a low level of clinical suspicion anticoagulants can be discontinued. If ultrasound is negative and there is high level of clinical suspicion anticoagulant therapy should be discontinued but the ultrasound should be repeated on day 3 and day 7.

The aims of treating DVT are to prevent extension of thrombus, to restore venous patency thereby reducing the occurrence of post phlebitis syndrome with features like chronic pain, swelling and sometimes ulceration of leg. The most important aim is to prevent the most feared complication of pulmonary embolisation.

Anticoagulation is the mainstay of treatment, with Low Molecular Weight Heparin (LMWH) being the preferred agent and should be initiated upon diagnosis. LMWH does not cross placenta or enter breast milk and has largely replaced unfractionated heparin as it has a better pharmacokinetic and safety profile in pregnant women. Guidelines recommend anti-Xa monitoring only in women <50kg or >90kg. LMWH treatment is continued until at least 6 weeks postpartum and for minimum of 3 months. The optimal duration regimen and dosing have not yet been established.

Warfarin, a Vitamin K antagonist commonly used for long term anticoagulation outside of pregnancy, has been associated with potential harmful effects especially in the first trimester exposure. Warfarin embryopathy has been linked with exposure at 6-12 weeks of gestation highlighting the importance of pre-pregnancy and early pregnancy care in patients using warfarin. Therefore for most patients receiving warfarin who become pregnant, it is recommended that LMWH be used in place of warfarin. Neither heparin nor warfarin is contraindicated in breast feeding. Graduated elastic stockings is thought to be effective for reducing DVT related pain and edema but current evidence of its use is limited.

Although VTE is not so common during pregnancy, obstetricians should be alert for the possibility because the complications like pulmonary embolism can be life threatening. Diagnosis of VTE and particularly PTE requires a high index of clinical suspicion. Early diagnosis and prompt treatment with anticoagulants results in less complications and good maternal and fetal outcome.

Lookfor the twin outside.....

Dr Nishita

Heterotopic pregnancy is the simultaneous coexistence of an intrauterine and an extra uterine gestation. Heterotopic pregnancy is a rare complication usually seen in populations at risk for ectopic pregnancy or those undergoing fertility treatments. It is a potentially dangerous condition occurring in only 1 in 30,000 spontaneous pregnancies. With the advent of Assisted Reproduction Techniques (ART) and ovulation induction, the overall incidence of heterotopic pregnancy has risen to approximately 1 in 3,900 pregnancies. Other risk factors include a history of pelvic inflammatory disease (PID), tubal damage, pelvic surgery, uterine mullerian abnormalities, and prior tubal surgery. Heterotopic pregnancy is a potentially fatal condition, rarely occurring in natural conception cycles. Most commonly, heterotopic pregnancy is diagnosed at the time of rupture when surgical management is required. Heterotopic pregnancy should be suspected in patients with an adnexal mass, even in the absence of risk factors. Clinicians must be alert to the fact that confirming an intrauterine pregnancy clinically or by ultrasound does not exclude the coexistence of an ectopic pregnancy.

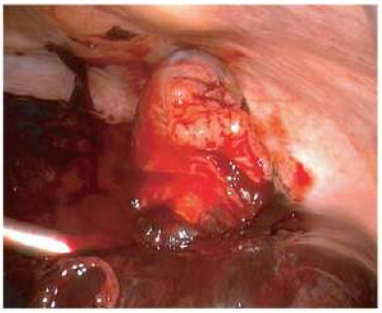
Transvaginal ultrasound is the key to diagnosing heterotopic pregnancy. However, it continues to have a low sensitivity because the diagnosis is often missed or overlooked. Therefore the diagnosis is often delayed leading to serious consequences. The goal is to remove the ectopic pregnancy without jeopardizing the intrauterine pregnancy. Laparoscopic salpingectomy is the standard surgical approach of heterotopic pregnancy. Other management options mentioned in the literature include local injection of hyperosmolar glucose into the sac under ultrasound guidance followed by aspiration of the ectopic pregnancy.

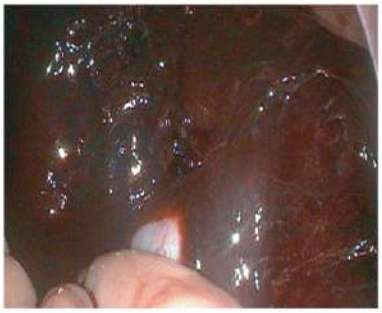
This is a case report eliciting occurrence of heterotopic pregnancy after IVF and the subsequent obstetrical outcome of the patient.

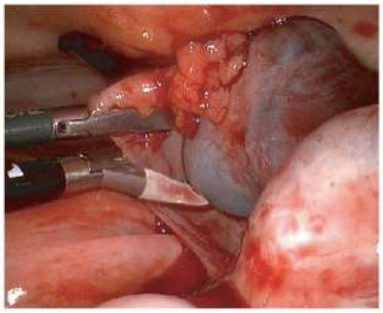
30 year old G2A1 of 8 week 5 days gestation, with previous h/o ovarian pregnancy, conceived after IVF treatment (2 embryos transferred) for severe endometriosis reported to hospital with complaints of abdominal pain, bloating sensation, gastritis and spotting per vaginum. The patient was noted to be pale and her abdomen was tender. On vaginal exam, the cervix was found to be closed, long, and posterior, with brownish discharge from external os. Uterus 10 week size with bilateral adnexal tenderness. No adnexal masses were appreciated. There were no other pertinent significant physical findings. Pelvic ultrasoundrevealed a single live intrauterine pregnancy of 8 weeks and 6 days with good cardiac activity and an ectopic pregnancy was seen in the right adnexa. A large amount of free fluid was present, consistent with the blood loss.

Provisional diagnosis of a heterotopic pregnancy with ruptured right ectopic gestation was suggested in view of clinical history, moderate amount of free intraperitoneal fluid, and an intrauterine gestation. The patient underwent emergency laparoscopy. There was ruptured right sided isthmo-ampullary tubal pregnancy with massive haemoperitonium. Findings noted, clots suctioned out and proceeded with right salpingectomy and peritoneal lavage done. The intrauterine live gestation was allowed to continue. 2 units of PRBC and 2 units of FFP transfused intraoperatively and postoperatively. At present patient is on follow up with a single live intrauterine gestation of 10 weeks.

These cases highlight the fact that as clinicians, we should be aware of the possibility of a heterotopic pregnancy in any patient presenting with pelvic pain, even when an intrauterine pregnancy has been confirmed. This is even more imperative after induction of ovulation or ART procedures. We would also like to emphasise that an early diagnosis is critical to safeguard the intrauterine pregnancy and avoid maternal morbidity and mortality due to the ectopic pregnancy.







STATISTICS

AUGUST to NOVEMBER 2018

TOTAL SURGICAL PROCEDURES	388
TOTAL LAPAROSCOPY	96
TOTAL HYSTEROSCOPY	101
DIAGNOSTIC HYSTEROSCOPY	86
OPERATIVE HYSTEROSCOPY	15
HYSTEROSCOPIC PROCEDURES	
SEPTAL RESECTION	07
SMF RESECTION	04
POLYPECTOMY	01
ENDOMETRIAL SAMPLING	01
ADHESIOLYSIS	02
LAPAROSCOPIC PROCEDURE	
TLH WITH BILATERAL SALPINGECTOMY	04
TLH WITH BSO	05
TLH WITH RSO	03
LAP MYOMECTOMY	16
LAP MYOMECTOMY + OVARIAN CYSTECTOMY	03
LAP STERILIZATION	01
OVARIAN CYSTECTOMY	18
ADHESIOLYSIS + ENDOMETRIOTIC CYSTECTOMY	01
ADENENOMYOMECTOMY	00
LAVH+PFR	01
PARA OVARIAN CYSTECTOMY	04
LAP CERCLAGE	02
LAP TUBAL RECANALIZATION	01
LAP PARATUBAL CYSTECTOMY	02
LAP SACRO-COLPOPEXY	01
LAP SACRO-CERVICOPEXY	01
LAP CERVICO-PECTINEOPEXY	01
PCO PUNCTURING	14
LAP ENDOMETRIOTIC CYSTECTOMY+ LEFT ADNEXECTOMY+ TUBAL STERILIZATION	01
EUA+ VAGINOSCOPY	01
LEFT SALPINGOOPHORECTOMY+ ADHESIOLYSIS	01
REPAIR OF LSCS SCAR DEFECT	01
BILATERAL PLICATION OF OVARIAN LIGAMENT	01
SURGERY FOR ECTOPIC-	
SALPINGECTOMY	04
SALPINGOSTOMY	05
SURGERY FOR ENDOMETRISIS	
CHOCOLATE CYSTECTOMY	09
FULGURATION OF ENDOMETRIAL DEPOSITS	06
OTHER MAJOR SURGERY	
TAH+ BILATERAL SALPINGECTOMY	01
TLH CONVERTED TO TAH	01
VAGINAL SURGERY	
VH + PFR	01
MINOR PROCEDURE	53
SUCTION EVACUATION	10
CERVICAL ENCIRCLAGE	27
MIRENA INSERTION	03
PIPELLE	02
FRACTIONAL CURRETAGE	01
PPS	04
ERA	4
OBSTERTRICS	
TOTAL DELIVERY	133
LSCS	90
FTND	30
VACUUM DELIVERY	13
MALE SURGERY	
TESA	03
PESA	04
TESE	04
CIRCUMCISION	01
NAB	1
CONCEPTION +IUI STATISTICS	
TOTAL CONCEPTION	104
TOTAL IUI CONCEPTION	39
IUI CONCEPTION %	13.3%
SPONTANEOUS	09
COH ONLY	17
IVF / ICSI STATISTICS	
TOTAL NO OF CASES	104
FROZEN ET	45
IVF CONCEPTION RATE (AUGUST TO OCTOBER)	40.9%
CONCEPTION RATE AFTER FROZEN ET (AUGUST TO OCTOBER)	42.2%

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