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EDITORIAL



Covid 19

Riding the Second Wave

There is also an increase in the severity of infection among them, say experts. Doctors have been seeing a significant rise in the number of pregnant women testing positive for COVID-19 during the second wave of the infection. But this is not the only cause of worry - there is also an increase in the severity of infection among them and many pregnant women have been requiring oxygen support.

It is nothing like the first wave last year, say obstetricians and gynaecologists. In the meantime, we have discussed the need to shift women in households where any family member has tested positive to a separate facility. They should be moved out and quarantined in separate healthcare or care centres. We have also cut down antenatal visits and asked them to come for checkups during the third, fifth, seventh and ninth month of pregnancy, instead of monthly visits."

"Now, almost one in three pregnant women is testing positive for COVID-19." "At least 50% of them are having some symptom or the other. Last year, we never saw any pregnant woman going into the Intensive Care Unit (ICU). From April-end till now, we have seen one or two patients going into the ICU. There is rapid disease progression among pregnant women.

Both pregnant women and lactating mothers are currently not eligible for COVID-19 vaccination in the country. "All major societies and gynaecologists' bodies across the globe have issued guidelines to vaccinate all pregnant women and those planning to conceive to take vaccination seeing the mortality"

In the meantime, we have discussed the need to shift women in households where any family member has tested positive to a separate facility. They should be moved out and quarantined in separate healthcare or care centres. We have also cut down antenatal visits and asked them to come for checkups during the third, fifth, seventh and ninth month of pregnancy, instead of monthly visits."



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A Case of Leiomyosarcoma

Dr Abirami



CASE HISTORY:

A 29yr old female patient came with her husband to our centre wishing to conceive. She was married since the last one year and had not yet conceived. Her menstrual cycles were regular with no complaints of menorrhagia or dysmenorrhoea. No history of weight loss or decreased appetite over the last two months. There were no associated bowel or bladder complaints. She was evaluated previously at Bangalore where ultrasound revealed Fibroid uterus.

Examination: Patient was moderately built, comfortable and conscious. BMI - 24. Vitals were stable. no pallor or pedal edema was present.

Per abdominal examination, a soft to firm midline, irregular mass was palpable, which was about 24 weeks size, nontender with horizontal mobility.

Per speculum, vagina appeared healthy and cervix was pushed posteriorly

Bimanual examination uterus was anteverted, around 24 weeks size and mobile, anterior forniceal fullness and no tenderness was observed.

Investigations: Ultrasound repeated at our centre showed an anterior intramural fibroid 12.4 x 12.7 cm with cystic degeneration. Colour doppler showed increased peripheral vascularity. Fundal Intramural Fibroid of size with 5.9 x 6.2 cm with normal flow.

MRI revealed Fibroid - Internal T2W1 Hyperintense areas - cystic degeneration

She underwent Laparoscopic Myomectomy and Diagnostic Hysteroscopy.

Intraoperatively, the myoma had no clear margins due to which enucleation was very difficult. Due to penetration of tumour into surrounding myometrium, plane of cleavage was not made out.

Further as the myoma was soft possibly due to necrosis and degeneration, myoma screw insertion was difficult leading to difficult manipulation. Once myoma was resected, an in bag morcellation was done and specimen removed and sent for HPE.

HPE revealed highly cellular smooth muscle neoplasm with diffuse cellular atypia, increased atypical mitosis, karyorrhexis with mitotic index > 10/ 10 hpf (ruling out STUMP).

Patient was referred to regional cancer center for further management.

DISCUSSION

Uterine sarcomas account for 1% of all female genital tract malignancies and 3%-7% of all uterine cancers. Majority arise de novo, but rarely (0.2%) it may result from a sarcomatous transformation in a benign leiomyoma.

Leiomyosarcoma is the most common histological variant of uterine sarcomas and is an aggressive tumor with poor prognosis and a 5yr survival rate of 18.8% to 68%. Only early-stage tumors have an acceptable prognosis. Low-grade and serosal involvement seem to be significant prognostic factors. Reported risk of recurrence varies from 45% to 73%.

Often diagnosed accidentally, the correct diagnosis is hampered by equivocal features similar to the far more frequent benign uterine fibroids.

Signs and symptoms are similar to those occurring with leiomyomas, and include abnormal vaginal bleeding (56%), palpable pelvic mass (54%) and pelvic pain (22%).

Less frequently, they can present as hemoperitoneum (due to tumor rupture), or symptoms resulting from extra-uterine extension or metastases. Although "rapid growth" of a presumed leiomyoma is considered a suspicious finding, the definition of the latter remains controversial.

Therefore, preoperative distinction between benign leiomyomas and malignant leiomyosarcomas is very difficult (if not impossible) based solely on clinical features, and remains a challenge for clinicians.

The clinical problems in the diagnosis of leiomyosarcoma and treatment are exemplified by our case report.

Do We Have Clinical and Diagnostic Tools to Distinguish Uterine Leiomyoma, STUMP and uLMS?

Following ultrasound information is to be recorded in every scan :-

- 1) Largest diameter of uterine lesion suspected to be a sarcoma,
- 2) Visible normal myometrium (yes, no),
- 3) Echogenicity of the solid tissue of the tumor as assessed subjectively (homogeneous vs inhomogeneous),
- 4) Presence of cystic areas within the tumor,
- 5) Regularity of the outline of cyst cavities (defining it as irregular if at least one cyst cavity had irregular contours),
- 6) Echogenicity of cyst content (anechoic, low level, hemorrhagic, ground glass or other),

- 7) Type of tumor (unilocular, unilocular?solid, multilocular, multilocular-solid or solid),
- 8) Presence of shadows, described as either 'fan-shaped shadowing' (as seen in adenomyosis) or 'internal shadows' (as often seen in leiomyomas), calcifications (defined as hyperechoic foci with shadowing behind), regularity of the tumor border (regular or irregular),
- 9) Endometrial cavity visible (yes, no or no reliable information),
- 10) Free fluid in the pouch of Douglas and
- 11) Ascites (defined as fluid outside the pouch of Douglas).
- 12) Color doppler.

Sarcomas onusly :

- a) Typically appear as isolated large solid masses with inhomogeneous echogenicity of the solid tissue, sometimes containing cystic (usually irregular) areas
- b) Not manifesting shadowing
 - Internal shadows and fan-shaped shadowing are characteristics of benign myometrial lesions, such as myomas and adenomyosis but seem to be rarer in sarcomas.
- c) Although most sarcomas were moderately or well vascularized, a third demonstrated minimal or absent vascularization.

MRI : Leiomyosarcomas commonly manifest as large infiltrating myometrial mass of heterogeneous hypointensity on T1-weighted images, with irregular and ill-defined margins.

On T2-weighted images, they show intermediate-to-high signal intensity, with central hyperintensity indicative of extensive necrosis (present in >50% of cases)

Hemorrhage is common and foci of calcifications may be present.

Contrast MRI : Early heterogeneous enhancement, due to areas of necrosis and hemorrhage.

Diffusion weighted imaging (DWI) - MRI :

Method of signal contrast generation based on differences in Brownian motion. DWI is a method to evaluate the molecular function and micro-architecture of the human body.

DWI may limit misdiagnosis of uterine sarcomas as benign leiomyomas and should be the first criterion to help radiologists characterize a unique uterine tumor.

Based on these results, DWI must be recommended in the setting of myometrial lesions, especially when high signal intensity is seen on T2-weighted images

MRI	LMS	Leiomyoma
Margins	Irregular and ill-defined	Regular
T 1 signal	Hypointense and heterogeneous (hemorrhage, calcifications)	Low-to-intermediate signal; high signal foci - hemorrhagic degeneration
T 2 signal	Intermediate-to-high signal	Low signal (non-degenerated); high signal - cystic, myxoid degeneration
Contrast enhancement	Early and heterogenous	Variable
DWI	Generally more restriction (lower ADC values)	Variable; generally higher ADC values than LMS

CONCLUSION :

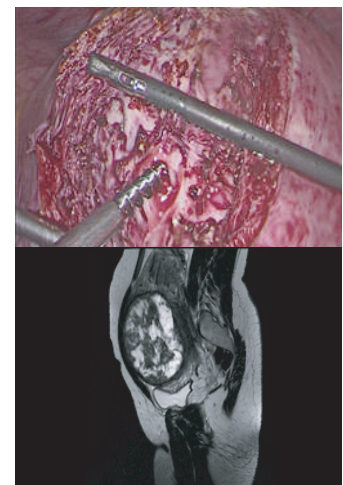
Diagnosis of uLMS means poor outcome and complete hysterectomy without tumor laceration and with clean tumor margins is the definite goal of surgical therapy.

Ultrasound, colour doppler and MRI (DWI) form an important preoperative diagnostic tool.

To decrease the number of incidentally diagnosed uLMS after operations, risk groups have to be defined preoperatively.

Cystic spaces in a myoma on ultrasound may not always mean cystic degeneration of benign leiomyoma. Vascularity to be checked with color doppler with color grading and RI values specified for each myoma separately (myoma mapping).

A large fibroid with irregular margins, increased vascularity and with cystic spaces with hyperintensity on T2 images on MRI is to be viewed with suspicion and the patient is to be counselled accordingly.

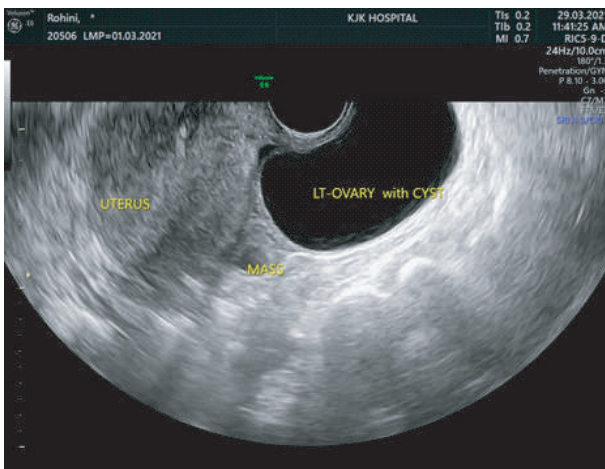


Dilemma in the Diagnosis of Ectopic Pregnancy - Presenting as AUB with regular cycles.

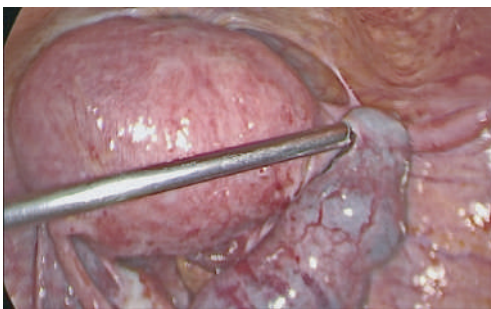
Dr Krishnapriya



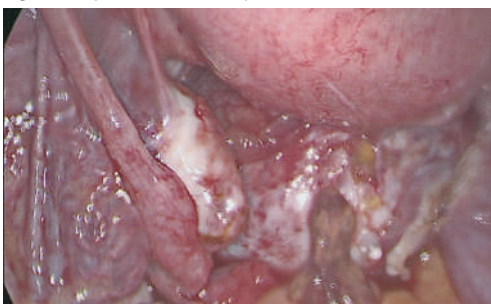
38 year old, with regular cycles, came to our hospital on 19/3/21 with ultrasound report showing left ovarian cyst. Her Last menstrual period was on 1 st of march. She had her regular cycles with prolonged and on and off complaints of bleeding, not stopping since her last menstrual period. She had no history of abdominal pain. She came with a scan showing left ovarian cyst. She was advised Beta hcg on the same day after a scan, but she did not give the blood test. Ultrasound showed a cystic structure in Left adnexa of 5.9 x6.7 cm. Uterus looked normal. No extrauterine or intrauterine pregnancy seen. She was started on Primolut N as she had bleeding for a month. On Primolut N, bleeding decreased but did not stop, so she was asked to return and advised to give beta hcg with other tumour markers which came as 133. Since bleeding was persisting, she was taken for laparoscopy.



Operative laparoscopy was done. Intraoperative findings- Uterus bulky. Left fallopian tube and ovary normal. Right tubal ampulla was the site of ectopic pregnancy with clots at the fimbrial end. Right tube was dilated with ectopic and hematosalpinx. Right ovary showed Corpus luteal cyst and was adherent to the posterior surface of uterus. Findings confirmed. Right Salpingectomy done.



Right Unruptured Tubal Ectopic Gestation



Left Fallopian Tube and Ovary - Normal

DISCUSSION

For any premenopausal woman presenting to the emergency department with abdominal pain and/or vaginal bleeding, a pregnancy test should be conducted. Serum β -human chorionic gonadotropin (β -hCG) is a more sensitive test than urinary hCG for confirming pregnancy, and negative serum β -hCG essentially excludes a live pregnancy. Patients with a positive pregnancy test and symptoms suggestive of an ectopic pregnancy should be evaluated with pelvic ultrasound to determine the presence or absence of an intrauterine pregnancy and to examine potential locations of the ectopic pregnancy.

If no intrauterine pregnancy is identified on Ultrasound, the sonographic findings should be carefully interpreted in the context of the patient's clinical information, particularly the estimated gestational age according to the last menstrual period and the serum β -hCG level relative to the discriminatory zone. The discriminatory zone is the serum β -hCG level above which an intrauterine pregnancy is expected to be visualized with Ultrasound. For transvaginal Ultrasound, the discriminatory zone ranges from 1,500 to 2,000 mIU/mL at most institutions. The discriminatory zone is higher for transabdominal US, at 6,000-6,500 mIU/mL. A patient with β -hCG levels below the discriminatory zone, in whom no Intrauterine pregnancy is visualized and has normal-appearing adnexa, may simply have a very early normal pregnancy below the detection threshold for Ultrasound. In such cases, clinical and Ultrasound follow-up are recommended. Serial serum β -hCG levels should be obtained to monitor the appropriate increase in the values as the pregnancy progresses.

When there is no sonographic evidence of Intrauterine pregnancy in patients with a β -hCG level above the discriminatory zone, an alternative source for the β -hCG must be considered. The bilateral adnexae must be carefully scrutinized, as ectopic pregnancy can have variable, and often subtle, sonographic findings. Even in such patients with apparently normal bilateral adnexa, ectopic pregnancy should be included as a part of the differential diagnosis. It is estimated that 15%-35% of patients with ectopic pregnancy do not have an extrauterine mass identified on transvaginal Ultrasound.

CONCLUSION

All women presenting with irregular uterine bleeding, irrespective of whether she had missed her periods or not need to have a pregnancy test done as ectopic can have varied presentation.

Ovarian Torsion

Dr Seetha Mohan



20-year-old unmarried girl came with complaints of abdominal pain since last two days. She consulted at an outside hospital and an ultrasound scan then revealed torsion of right ovarian cyst. MRI also was done which revealed multiloculated cystic lesion of size 10.3x 6.3x 12.3 cm, arising from right ovary. In view of pain abdomen she was taken for emergency laparoscopy. Peroperatively, uterus was found to be normal size. Left tube and ovary was normal. Right ovary was enlarged to 12 x 10 cm with a haemorrhagic cyst, tube and ovary was torsed thrice over its pedicle. Right tube and ovary appeared gangrenous, necrotic with friable tissue. Minimal haemoperitoneum seen in the POD. Right salpingo-oophorectomy was done. Postoperative period was uneventful. Patient was discharged on 3rd postoperative day.

DISCUSSION

Ovarian torsion (OT) is a well-known but poorly recognized clinical entity that can involve the tube, ovary, and ancillary structures either separately or together. Ovary and adnexal structures twists around the vascular pedicle compromising the circulation. OT is the fifth most common gynaecologic emergency, with a reported incidence of 3% in one series of acute gynaecologic complaints. Diagnosis of OT is a diagnostic dilemma, caused by the nonspecific clinical presentation. Early diagnosis and laparoscopic treatment is recommended for suspected OT, particularly to salvage the ovary and adnexa in women desiring to maintain fertility. An ovarian salvage rate of only less than 10% has been reported. However, if nonspecific but severe lower abdominal pain is seen, OT can be an important differential consideration. The majority of patients with OT have a delayed diagnosis as a result of failure to consider the possibility of OT at presentation. Although ovarian necrosis could potentially be fatal, no mortalities have been reported resulting from a missed diagnosis.

It can be intermittent or sustained and results in venous, arterial and lymphatic stasis. The result of vascular compromise secondary to ovarian torsion is haemorrhagic infarction and necrosis, which can occur as rapidly as within hours of torsion onset. Once necrosis sets in, ovaries cannot be salvaged.

Ovarian torsion has a bimodal age distribution occurring mainly in young women (15-30 years) and post-menopausal women. Approximately 20% of the cases occur during pregnancy. Torsion occurs due to two main reasons; hypermobility of the ovary (<50%, especially in children) and adnexal mass (~50-80%, most lesions are dermoid cysts or para ovarian cysts. Large cystic ovaries undergoing ovarian hyperstimulation are also at high risk. The "classic" history in OT is the abrupt onset of colicky pain in a lower quadrant, with radiation to the flank or groin, mimicking renal colic. Only 44% of patients in one study had such crampy or colicky pain. Objective findings are also variable and rarely impressive in patients with OT. In fact, this paucity of objective findings may be a clue that OT should be considered. Temperature and WBC count were unremarkable in the majority of patients in our study.

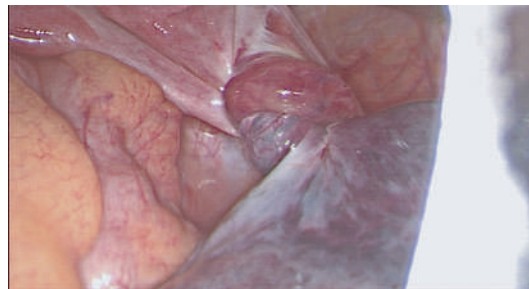
In one series, Pain characteristics were variable: the onset was sudden in 59% of the patients; "sharp" or stabbing in 70%; and radiated to the flank, back, or groin in 51% patients. Only ~3% had peritoneal signs at presentation. The majority of patients (70%) had nausea or vomiting. Fever was rare. OT was considered in the admitting differential diagnosis in 47% patients.

Ultrasound is the initial imaging modality of choice. Ultrasonography frequently but not invariably shows an enlarged ovary. Doppler flow imaging with morphologic assessment (eg, ovarian masses) has been reported to improve the accuracy of diagnosing OT to more than 66%. Ultrasound findings include enlarged (>4 cm) ovary, peripherally displaced follicles with hyperechoic central stroma, midline ovary position, free pelvic fluid etc. An underlying ovarian lesion may be seen. Doppler findings in torsion are widely variable. Little or no ovarian venous flow shows sensitivity of 100% and specificity of 97% for OT. Absent arterial flow is less common, and is sign of poor prognosis. Normal Doppler flow does not completely rule out torsion. Twisted vascular pedicle may give rise to whirlpool sign.

CT is good at ruling out ovarian torsion if a normal ovary/adnexa is seen on ultrasound. The twisted ovarian pedicle is pathognomonic for ovarian torsion if demonstrated. Torsion appears as a complex adnexal lesion.

Diagnosis of OT warrants emergency surgery. There are two surgical methods, laparoscopy and laparotomy. A laparoscopic approach has become a popular procedure. However, if cancer of the ovary or fallopian tube is suspected, a laparotomy should be done. While performing the surgery, it is necessary to assess ovarian viability and preserve its function. The only way to determine the viability of a torsed ovary during surgery is by gross visual inspection. In the conventional view of point, dark and enlarged ovaries may have vascular and lymphatic congestion, and may seem nonviable. However, multiple studies have suggested that even those black or blue-like ovaries may retain ovarian function following detorsion. Detorsion and ovarian conservation are almost always recommended now rather than salpingo-oophorectomy. An ovarian cystectomy is often performed for a benign ovarian mass. If malignancy is highly suspected, a salpingo-oophorectomy is needed. Detorsion is mostly associated with preserved ovarian function. The earlier the approach to torsion, the higher is the chance to preserve function. No evidence suggests that detorsion increases adverse events postoperatively. Management in pregnant women is similar to that in nonpregnant patients, and laparoscopic surgery is safe for torsion in pregnant women. Conclusion.

Ovarian torsion is a clinical entity which is often missed in initial clinical diagnosis due to non-specific presentations. Ultrasound is the initial imaging modality of choice. Once ovarian torsion is suspected, surgery or detorsion is the mainstay of diagnosis and treatment. As far as possible preservation of the ovary should be done unless the ovaries have undergone necrosis.



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PLACENTA ACCRETA: BE SUSPICIOUS ALWAYS..

Dr Reshma



37 year old G3P1L1A1 with history of previous CS 10 years back presented to antenatal OPD. Routine ANC done and at 20 weeks anomaly scan showed placenta covering the internal os. Ultrasound repeated at 32 weeks and placenta previa confirmed. No evidence of adherent placenta was there in ultrasound. Patient presented with spotting PV at 36 weeks, admitted and ultrasound repeated to rule out accreta as it was anterior placenta previa in a previous cesarean. Placenta left lateral extending to lower segment covering the internal os. Myometrial lining noted upto the internal os anteriorly and posterior part obscured. No abnormal blood flow noted. Bleeding stopped by itself and the patient was admitted, betnesol given and monitored. An elective cesarean was planned at 37 weeks and 2 pints each of PRBC and FFP were arranged. At 36 weeks 6 days patient started second bout of bleeding which was heavy and the decision for emergency Cesarean section was made

Intraoperatively tortuous vessels seen on the anterior surface of uterus covering the thinned out lower uterine segment. Placenta seen covering anteriorly. A classical CS was done.. a transverse incision made in the upper segment. Despite being a classical CS, upper edge of placenta was cut through while incising the uterus. After delivering baby it was found that parts of placenta were densely adherent to anterior wall of uterus and bladder and no plane of separation seen in the lower segment and part of placenta removed in piecemeal. Separation of placenta was tried only after ligating the uterine and ovarian vessels. In view of severe bleeding and deterioration of clinical condition, immediate decision for hysterectomy was taken . After informing the patient and husband, proceeded with hysterectomy. It was noted that in one area placenta went through and through and entered the bladder. Specimen taken out by subtotal hysterectomy. Rest of the cervical tissue also taken completely. A small rent of 0.5 cm noted in the bladder and repaired. 4 PRBC, 2 FFP and 2 Platelet transfused intra operatively and post operatively. Post operative period was uneventful.

DISCUSSION

The major risk factors for placenta accreta spectrum are history of accreta in a previous pregnancy, previous caesarean delivery and other uterine surgery, including repeated endometrial curettage. This risk rises as the number of prior caesarean sections increases. Women requesting elective caesarean delivery for non-medical indications should be informed of the risk of placenta accreta spectrum and its consequences for subsequent pregnancies. Antenatal diagnosis of placenta accreta spectrum is crucial in planning its management and has been shown to reduce maternal morbidity and mortality. Previous caesarean delivery and the presence of an anterior low-lying placenta or placenta praevia should alert the antenatal care team of the higher risk of placenta accreta spectrum.

Ultrasound imaging is highly accurate when performed by a skilled operator with experience in diagnosing placenta accreta spectrum. Refer women with any ultrasound features suggestive of placenta accreta to a specialist unit with imaging expertise. Women with a history of previous caesarean section seen to have an anterior low-lying placenta or placenta praevia at the routine fetal anomaly scan should be specifically screened for placenta accreta spectrum. Clinicians should be aware that the diagnostic value of MRI and ultrasound imaging in detecting placenta accreta spectrum is similar when performed by experts. MRI may be used to complement ultrasound imaging to assess the depth of invasion and lateral extension of myometrial invasion, especially with posterior placentation and/or in women with ultrasound signs suggesting parametrial invasion. Women diagnosed with placenta accreta spectrum should be cared for by a multidisciplinary team in a specialist centre with expertise in diagnosing and managing invasive placentation.

Delivery for women diagnosed with placenta accreta spectrum should take place in a specialist centre with logistic support for immediate access to blood products, adult intensive care unit and neonatal intensive care unit by a multidisciplinary team with expertise in complex pelvic surgery. In the absence

of risk factors for preterm delivery in women with placenta accreta spectrum, planned delivery at 35+0 to 36+6 weeks of gestation provides the best balance between fetal maturity and the risk of unscheduled delivery. Once the diagnosis of placenta accreta spectrum is made, a contingency plan for emergency delivery should be developed in partnership with the woman, including the use of an institutional protocol for the management of maternal haemorrhage. Any woman giving consent for caesarean section should understand the risks associated with caesarean section in general, and the specific risks of placenta accreta spectrum in terms of massive obstetric haemorrhage, increased risk of lower urinary tract damage, the need for blood transfusion and the risk of hysterectomy. Additional possible interventions in the case of massive haemorrhage should also be discussed, including cell salvage and interventional radiology where available. The elective delivery of women with placenta accreta spectrum should be managed by a multidisciplinary team, which should include senior anaesthetists, obstetricians and gynaecologists with appropriate experience in managing the condition and other surgical specialties if indicated. In an emergency, the most senior clinicians available should be involved. Caesarean section hysterectomy with the placenta left in situ is preferable to attempting to separate it from the uterine wall. When the extent of the placenta accreta is limited in depth and surface area, and the entire placental implantation area is accessible and visualised (i.e. completely anterior, fundal or posterior without deep pelvic invasion), uterus preserving surgery may be appropriate, including partial myometrial resection.

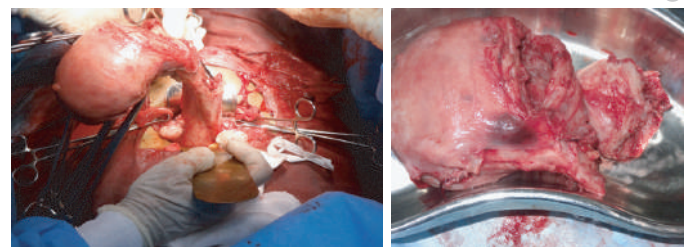
Uterus preserving surgical techniques should only be attempted by surgeons working in teams with appropriate expertise to manage such cases and after appropriate counselling regarding risks and with informed consent.

There are currently insufficient data to recommend the routine use of ureteric stents in placenta accreta spectrum. The use of stents may have a role when the urinary bladder is invaded by placental tissue. There is limited evidence to support uterus preserving surgery in placenta accreta and women should be informed of the high risk of peripartum and secondary complications, including the need for secondary hysterectomy. Elective peripartum hysterectomy may be unacceptable to women desiring uterine preservation or considered inappropriate by the surgical team. In such cases, leaving the placenta in situ should be considered.

When the placenta is left in situ, local arrangements need to be made to ensure regular review, ultrasound examination and access to emergency care should the woman experience complications, such as bleeding or infection.

Methotrexate adjuvant therapy should not be used for expectant management as it is of unproven benefit and has significant adverse effects. Larger studies are necessary to determine the safety and efficacy of interventional radiology before this technique can be advised in the routine management of placenta accreta spectrum.

Women diagnosed with placenta accreta spectrum who decline donor blood transfusion should be cared for in a unit with an interventional radiology service. If at the time of an elective repeat caesarean section, where both mother and baby are stable, it is immediately apparent that placenta accreta is present on opening the abdomen, the caesarean section should be delayed until the appropriate staff and resources have been assembled and adequate blood products are available. This may involve closure of the maternal abdomen and urgent transfer to a specialist unit for delivery. In case of unsuspected placenta accreta spectrum diagnosed after the birth of the baby, the placenta should be left in situ and an emergency hysterectomy performed. Take home message: Antecipat homemessage: Antecipate placenta accreta in all cases of previous cesarean with anterior placenta previa unless definitely proved otherwise.



A CASE OF OVARIAN DERMOID CYST- LAPAROSCOPY AND ITS BENEFITS

Dr Aparna BL



A 21 year old unmarried female presented with symptoms of vague abdominal discomfort and abdominal distention since 2 months. There was no history of bowel or bladder disturbances, loss of weight or appetite, no relevant medical or surgical history. On examination General condition fair, per abdomen- firm, non tender cystic mass corresponding to 26 weeks gestation was observed. USG showed a large abdominopelvic cystic mass arising from right adnexa- 16.2 x 14.7x 8.4cm with mixed echogenecity extending from pelvis superiorly into abdominal cavity. MRI confirmed ultrasound findings in favour of Mature cystic teratoma, left ovary polycystic, uterus normal size, no free fluid seen. Tumour markers (CA 125-5.12 IU/ml, LDH 152, CEA - 1.7ng/ml CA19.9 < 0.6U/ml, Alpha Fetoprotein- 0.01 ng/ml) done were within normal limits (RMI= 0, no feature in ultrasound). Patient was counseled for laparoscopic ovarian cystectomy and possible oophorectomy and laparotomy if needed. Intra operative findings confirmed a right ovarian cyst of 15x15 cm. Dermoid cyst with ovary was introduced into endobag, drained of its content, 1.5L of sebum and mucous material drained, cystectomy done, cyst wall enucleated from its bed, specimen retrieved through 10mm lateral port and sent for histopathology. Post operative period was uneventful and discharged on day 3. Histopathology of cyst revealed Benign Cystic Teratoma of ovary.

DISCUSSION

Benign cystic teratomas, or Dermoid cysts, are germ cell tumors of the ovary that account for 20-25% of all ovarian tumors and are bilateral in 10-15% of cases. They have a low incidence of malignancy, reported as 1-3%. Majority of cases are asymptomatic, but complications such as torsion, spontaneous rupture, risk of chemical peritonitis, and malignancy usually makes surgical treatment necessary upon diagnosis.

It is very important to do a complete preoperative diagnosis and then decide which operative method is to be used- laparoscopy or laparotomy. With careful preoperative screening the rate of laparoscopies for treatment of benign ovarian cysts can be increased. However, careful approach is required due to the possibility of unexpected, very rarely, malignancy in ovarian dermoid cysts.

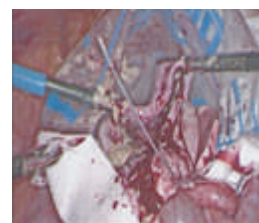
Surgical management of dermoid cysts remains controversial, and some surgeons prefer to approach these cysts via laparotomy due to the high risk of intraperitoneal cyst rupture in laparoscopic surgery and the related risks of chemical peritonitis. Laparoscopy is the standard treatment of ovarian dermoid cysts and provides many advantages over laparotomy. The benefits of performing laparoscopy are numerous and include lower risk of wound complications, less postoperative pain and ileus, shorter hospital stays, reduced adhesion formation, and a faster return to normal activities. Laparoscopic approach may result in chemical peritonitis caused by the spilled contents of a ruptured dermoid cyst. In addition to chemical peritonitis, the procedure can be complicated by intraperitoneal dissemination of tumor if the dermoid cyst underwent malignant transformation. Intra-peritoneal spillage of contents from an ovarian dermoid cyst may occur after spontaneous rupture of the cyst; therefore it is very important to act promptly.

In order to reduce intraoperative spillage of cyst we did aspiration of cyst to reduce the size as it was huge and performed removal of the specimen through an endoscopic retrieval bag through lateral port. Removing cysts in an endobag significantly reduce both operating time and spillage. Controlled intraperitoneal spillage of contents does not increase postoperative morbidity as long as the peritoneal cavity is thoroughly washed. The risk of granulomatous peritonitis can be minimized by undertaking laparoscopic removal of dermoid cysts with the routine intraoperative use of an endoscopic retrieval bag to prevent intraperitoneal spillage of cysts contents. It is possible to aspirate the cyst after placing it intact inside a laparoscopic bag. Increased use of this technique has significantly reduced the potential for spillage.

Chemical peritonitis may develop even after removal of the ovarian dermoid cyst due to scattering of its content despite the use of endobag and in such cases thorough irrigation with physiologic fluids is advised. Because most cases with benign cystic teratoma are of reproductive age and wish to preserve fertility, a conservative approach is ideal to minimize post operative adhesions and thus decrease chances to compromise fertility.



Transabdominal scan showing huge dermoid cyst



Cyst introduced into an endobag without spillage

CONCLUSION

Laparoscopy should be considered as a method of choice for the removal of ovarian dermoid cysts. Experienced laparoscopic surgeons should consider laparoscopy as an alternative to laparotomy in management of ovarian dermoid cysts in selected cases. The risk of chemical peritonitis can be minimized when undertaking laparoscopic removal of ovarian dermoid cysts if the peritoneal cavity is washed out thoroughly from spillage of cyst contents. Laparoscopic conservative excision of dermoid cysts placing the ovary in an endobag at the beginning of surgery and removing the cyst by the same bag is a safe and effective approach to reduce intraperitoneal spillage and operative time.

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Bladder injury in Gynaecological Surgery: Anticipate and Act promptly!

Dr Nairuti Sompura



51-year-old female presented with recurring severe abdominal pain. She also complained of fever, burning micturition and increased frequency of urination. Patient was non-diabetic non-hypertensive with past history of thyroidectomy on tablet thyronorm. Her surgical history included two caesarean sections. Physical examination revealed a vague palpable mass of 6-8 weeks size associated with Diffuse tenderness more on the right side. Right forniceal fullness and tenderness was also elicited per vaginally.

Transvaginal scan was performed which revealed a posterior wall Subserosal fibroid of 2.3 cm and right adnexal multiloculated cyst of 6x5 cm with echogenic area of 2.4 cm. MRI pelvis showed a Right complex multiloculated Space Occupying lesion of 6.4x7x8 cm with bowel and uterine adhesions. Right ovary could not be seen separately. Given the radiologic findings, there was a high suspicion for tubo-ovarian mass. The patient was scheduled for Total abdominal hysterectomy with Bilateral salpingo-oophorectomy. Intraoperatively pelvic abscess was seen just behind the bladder, densely adherent to bladder and bowel with right TO mass. Retrograde hysterectomy was done. During procedure, Defect was noticed at the base of bladder plastered to the vault. Bladder wall was thickened and inflamed on the right. Intraoperatively urologist was called. Ureteric orifice identified bilaterally with normal reflux. DJ stent kept on left while right orifice was calibrated with 6 Fr feeding tube and bladder was separated from vault with sharp and blunt dissection. Vault was closed separately. Bladder mucosa was sutured with 3-0 vicryl in the lower part and towards the dome by 2-0 vicryl and SPC kept extraperitoneally for 8 days and patient discharged with SPC in situ which was removed after 67 days.

INTRODUCTION

The close embryologic development and anatomic proximity of the urinary and genital organs, predisposes the urinary tract to injury during surgical procedures in the female pelvis. Injuries to urinary bladder and ureter are not uncommon complication after obstetric or gynaecological surgeries.

RELEVANT ANATOMY

In adults, the bladder is located in the anterior pelvis and is enveloped by extraperitoneal fat and connective tissue. It is separated from the pubic symphysis by an anterior prevesical space known as the space of Retzius. The dome of the bladder is covered by peritoneum and the bladder neck is fixed to neighboring structures by reflections of the pelvic fascia as well as by true ligaments of the pelvis.

NEED FOR CAUTION

Risk factors for bladder injury include previous operations, radiation, malignant infiltration, chronic infection, and inflammation. The surgeon obviously must be highly aware of the urinary tract and gynaecologic organs relationship, especially during the operation. The surgeon must be alert during the history taking and physical examination, especially if there is a history of caesarean delivery or abdominal surgery/laparotomy, adhesions, and gynaecology diseases of endometriosis or broad ligament fibrosis are high risk situations.

WHEN DOES IT OCCUR AND HOW TO DIAGNOSE?

In gynaecologic surgery, bladder injury most commonly occurs during abdominal hysterectomy. During the operation, the diagnosis of bladder injury is suggested by the presence of gas filling up the Foley bag or visibly bloody urine in the Foley bag. Other signs of injury are urinary/fluid drainage from a secondary trocar site incision, or fluid pooling in the abdomen/pelvis. If a bladder injury is suspected, the bladder should be filled with methylene blue-coloured saline. The forcing out of fluid/dye indicates a bladder injury inside the abdominal membrane. If there is no fluid forced out and a bladder injury outside the abdominal membrane is suspected, a cystogram (X-ray of the bladder after injection of contrast medium) should be performed. Bladder injury if noted at this time, usually can be easily managed by a two- or three-layer closure with absorbable suture and Foley catheter bladder drainage. Retrograde bladder filling with blue-coloured saline again makes bladder injury diagnosis easier. Injuries outside the abdominal membrane are managed conservatively through prolonged Foley drainage. Delayed diagnosis of bladder injury also is done by cystography. Irritation of the abdominal membrane that persists more 12 hours after laparoscopy also should raise suspicion of an undiagnosed bladder injury. An unrecognized bladder injury will usually present clinically in the early postoperative period. Signs and symptoms can include drainage from a surgical incision, increased output from surgical drains, vaginal leakage, ileus, apparent oliguria, and urinary ascites with elevated BUN and serum creatinine due to

reabsorption. If uroperitoneum develops, it will present diffuse abdominal pain, distension, and ileus

Routine cystoscopy has become a trend in post-gynaecological surgery management because previous studies demonstrated < 25 % of bladder injuries and < 50 % of ureteral injuries are disclosed without the use of cystoscopy, but there is up to a 100% detection rate of ureteral injuries and 80% detection rate of urinary bladder injuries following performance of an intraoperative cystoscopy.

Early recognition of complications during or immediately after hysterectomy will improve the outcome and reduce morbidity after such complications of gynecologic surgery, and perhaps it will decrease the lag time of the final operation for gynecologic complication and also reduce the possibility of eventual loss of kidney or legal problems. Most previous studies suggest almost all bladder injuries are detected and about 80%-90% of ureteral injuries are detected by intraoperative cystoscopy.

The type of extravasation (intraperitoneal or extraperitoneal) from a bladder injury depends upon the location of the laceration and its relationship with the peritoneal reflection, as follows:

- If the perforation is above the peritoneal reflection, on the dome of the bladder, the extravasation is intraperitoneal
- If the injury is below the peritoneal reflection, and not on the dome of the bladder, the extravasation is extraperitoneal

Grade*	Injury type	Description of injury
I	Haematoma	Contusion, intramural haematoma
II	Laceration	Partial thickness
	Laceration	Extraperitoneal bladder wall laceration <2 cm
III	Laceration	Extraperitoneal (≥ 2 cm) or intraperitoneal (<2 cm) bladder wall laceration
IV	Laceration	Intraperitoneal bladder wall laceration ≥ 2 cm
V	Laceration	Intraperitoneal or extraperitoneal bladder wall laceration extending into the bladder neck or ureteral orifice (trigone)

Advance one grade for multiple lesions up to Grade III.

MANAGEMENT

Management varies from conservative approaches that center on maximizing bladder drainage to major surgical procedures aimed at directly repairing the injury.

The most recent American Urological Association Guidelines on Urotrauma, published in 2014, state that "surgeons must perform surgical repair of intraperitoneal bladder rupture in the setting of blunt or penetrating external trauma" and that "clinicians should perform catheter drainage as treatment for patients with uncomplicated extraperitoneal bladder injuries."

For injuries to the ventral bladder, dome, or posterior bladder away from the ureteral orifices, the mucosa is closed in a running fashion using 3-0 vicryl followed by a seromuscular running suture of 2-0 vicryl. The bladder can then be irrigated to ensure a watertight closure. A third layer in a Lembert fashion can be used in cases at high risk for fistula formation or when a leak is identified. In the laparoscopic setting, a one-layer closure is performed using 2-0 vicryl to close all layers of the bladder. An additional layer can then be added using a 2- 0 vicryl in a Lembert fashion for more extensive injuries.

CONCLUSION

High incidence of organ injury suggest that one should be very careful while doing any major pelvic surgery and counseling and informed consent are essential. Rate of complication can be reduced by good knowledge of anatomy of Genitourinary Tract, being careful while doing dissection during surgeries and maintenance of asepsis, early detection of complication and better postoperative care. Patients who had undergone previous caesarean sections and other Laparotomies are more vulnerable to iatrogenic injuries. High index of suspicion required in those patients operated previously. If iatrogenic injuries detected intraoperative then it will be managed better in comparison to if detected in late period. Surgery adjacent to or within the urinary bladder and will continue to result in occasional iatrogenic injury. These injuries can be minor with no long-term sequelae, or they can result in significant morbidity and inconvenience to patients. Patients require adequate preoperative counselling about the potential risk of these injuries and its consequences. Due caution must be exercised while doing pelvic anatomy in open or laparoscopic surgery.

REFERENCES :

- Int Surg J. 2017 July
- Hsu CY, Law KS, Tai HP, Chen HL, Tse SS, Huang ZM, et al. Management of urinary tract injuries following total hysterectomy. Urol Sci 2018.
- Urotrauma: AUA Guideline, 2014

STATISTICS

Jan. - April 2021

Total no of cases	285	Detorsion +ovarian cystectomy	2	Marsupialization	1
Total Laparoscopy	89	Open cases		PPS	1
Total Hysteroscopy	66	VH+PFR-1	1	IUI STATISTICS	
Open cases	2	TAH+BSO	1	Total IUI done	386
Minor cases	35	Hysteroscopy		Total conception	44
Male surgery	13	Pre-IVF	53	Conception rate	11.39 %
Obstetrics	80	Operative hysteroscopy		CONCEPTION RATE	
Vaginal deliveries	22	Septum resection	7	Total Conception	146
Total LSCS	58	Polypectomy	45	Spontaneous Conception	57
Elective LSCS	20	Sub mucous fibroid resection	2	COH + Natural	16
Emergency LSCS	38	Endometrial sampling	4	COH + IUI	44
Laparoscopy		Tubal cannulation	7	IVF Conception	27
TLH +/- BSO	13	Hysteroscopic adhesiolysis+PRP instillation	1	IVF STATISTICS	
TLH+Burch colposuspension	1	Hysteroscopic removal of products of conception	1	Total number of cases	88
LAVH+/-BSO+PFR	2	Male surgery		ICSI	45
Myomectomy	16	TESE	3	PICSI	04
Endometriotic cystectomy	7	TESA	5	PESA + ICSI	01
Adenomyomectomy	6	PESA	2	TESA + ICSI	02
Salpingectomy for ectopic	7	NAB	1	TESE + ICSI	03
Salpingostomy for ectopic	2	PESA+TESA	2	FET	29
Dermoid cyst excision	2	Minor cases		ODP	04
Sterilization	1	Excision of umbilical granuloma	1	DET	01
Paratubal cystectomy	1	Suction evacuation	15	Total number of transfers	55
PCO drilling	14	Mirena insertion	2	Freeze all	33
Lap encerclage	1	Cervical cerclage	8	Total Beta HCG Positive cases	27
Fulguration of endometriotic deposits	9	Fractional curettage	4	Percentage	27/55 - 49%
Adnexectomy	5	EUA+Hymenectomy	1	Total FET positive cases	17
Recannalisation	2	Amniocentesis	2	Percentage	17/ 29 - 58.6 %

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