**NEWS LETTER FROM DEPARTMENT OF OBG**

**INTERESTING RARE CASE OF PREGNANCY WITH IMPERFORATE HYMEN AND HIGH TRANSVERSE VAGINAL SEPTUM WITH BICORNUATE UTERUS**

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**Introduction**

Maldevelopment of the mullerian ducts occurs in a variety of forms and each anomaly is distinctive. What appears as an apparently isolated vaginal malformation after preliminary diagnostic evaluation, may be associated with various other uterine and other malformations. Moreover pregnancy with such kind of malformations are complicated and have to managed with utmost caution and obstetric care. Here we present a rare case of term pregnancy diagnosed with imperforate hymen on preliminary evaluation, which later was found to be associated with high transverse vaginal septum and bicornuate uterus with left non-communicating rudimentary horn.

**Case report**

26 years old unbooked, Primigravida with 38 weeks of gestation came for the first visit to our hospital with complaints of low back ache since 4 days, which was dull aching and non-radiating. She had marital life of 6 years and conceived spontaneously without any evaluation for infertility. She had attained menarche at 11 years of age with regular cycles thereafter for 3/30 days with scanty flow, changing one pad per day. On examination, patient had facial asymmetry with severe trismus. Her vitals were normal. Systemic examination of cardiovascular and respiratory system was normal. Obstetric examination revealed uterus was term size, deviated to right side, relaxed. Head was at the lower pole with good fetal heart rate. On examination of external genitalia, there was normal pubic hair distribution with normal urethral orifice. Hymen was imperforate. Retrospectively, patient also had complains of coital difficulty with incomplete penetration. Routine investigations were within normal limits and NST was reactive.
Obstetric USG revealed single live intrauterine pregnancy of 37 weeks in cephalic presentation with adequate liquor. A tubular structure of around 9.1*5.2*3.9 cm was noted adjacent to the left lateral wall of uterus similar to uterine myometrial wall suggestive of duplicated left uterine horn ?didelphys uterus. Patient was prepared for Elective caesarean section in view of imperforate hymen. Intra-operatively uterus was found to be bicornuate with left rudimentary non-communicating horn.

A live female baby of 2.25 kg was extracted. Then with the patient in lithotomy position, cruciate incision was made on the hymen and vaginal canal was explored. A high transverse vaginal septum was noted. With guidance of finger through the uterine cavity, incision was taken on the transverse vaginal septum. After uterine and abdominal closure, patient was again put in lithotomy position and resection of transverse vaginal septum and resection of hymen done. The edges of the septum and hymen were undermined. Post-operative period was uneventful.

**Discussion**-
Hymen is the membranous vestige of the junction between sinovaginal bulb and urogenital sinus. It generally becomes perforate during fetal life to establish connection between the vaginal canal and perineum. Imperforate hymen follows failure of the inferior end of the vaginal plate to canalize. It generally presents with primary amenorrhea with hematocolpos and hematometra. In neonatal period it can manifest with hydrocolpos or mucocolpos. Transverse vaginal septum is due to the failure of fusion of the vaginal plate and caudal end of fused mullerian duct. In neonates it is associated with fluid and mucus collection in the upper vagina. In adolescents it may present with primary amenorrhea. Pregnancy with intact and imperforate hymen is very rare and in literatures very few cases have been reported. Pregnancy with imperforate hymen and high transverse vaginal septum has not been reported till date. Pregnancy with imperforate hymen can be attributed to the following reasons: Micro perforations in the hymen or Spontaneous closure of hymen during pregnancy. Spontaneous closure of hymen during pregnancy has been reported in 2 cases. Pregnancy with imperforate hymen and transverse vaginal septum may be attributed to micro perforations in both the hymen and septum. The pin-hole openings may permit normal passage of menstrual fluid and semen. Consequently spontaneous pregnancy may occur rarely.

**Conclusion**-
Usually patients with imperforate hymen and transverse vaginal septum present at an early age at adolescence. Some may present at later age with primary infertility. But this is one of the rarest case which has presented with term pregnancy without any symptoms. Proper surgical correction is essential for the long-term menstrual and reproductive welfare of the patient. Failure to manage them correctly may impact the patient’s reproductive, sexual and psychological health.

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Fig-1 Imperforate hymen  
Fig-2 High transverse vaginal septum visualized after hymenotomy  
Fig-3 Bicornuate uterus with left non communicating horn
A STUDY OF CORRELATION OF INDIVIDUAL BIOPHYSICAL VARIABLES AND VIBROACOUSTIC STIMULATION WITH PERINATAL OUTCOME

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Introduction: Pregnancy is a normal physiological state and the purpose of antenatal care should be to provide optimal conditions for the mother and growing fetus to achieve the best possible outcome. Vibroacoustic stimulator provokes a physiological sympathetic range response characterized by fetal heart rate acceleration suggesting an intact non-hypoxic CNS. (46) VAST utilizes ultrasound to evaluate the fetal responses to acoustic stimulation. Observation of fetal startle response to VAST was found to be associated with BPP score of 8 and above. VAST has been shown to shorten the testing period and reduce false positive results by awakening fetus. Fetal biophysical profile is a reliable antepartum test for determination of fetal well being. While low scores are associated with very high morbidity and mortality, normal scores virtually assure an uncomplicated intrauterine survival for a period of 3 days to 1 week. The benefits of using fetal vibroacoustic stimulation in conjunction with tests of fetal well being must be weighed with respect to its effect on the predictive reliability of the test and safety of the procedure.

Objectives: - To assess the adjunctive use of vibroacoustic stimulation to alter fetal behavioral states, reduce the false positive non-reactive tests.

Materials and methods: - A prospective study was conducted at Sri Adichunchanagiri Institute of Health and Research Centre. 100 women performing VAST test and control group (n=100) without VAST test. It was done by placing vibroacoustic stimulator, with 75DB sound intensity at one meter, frequency of 75Hz on abdominal wall over fetal head for 3 seconds. Fetal startle response was observed along with fetal heart rate acceleration. If the test comes non-reactive, it is considered as positive test and if the test comes reactive it is considered as negative.

Summary and Results: - With VAST, startle response was observed in 85% of patients in study group, 42 (89.4%) had normal perinatal outcome and 43(81.1%) had abnormal perinatal outcome. Association between BPP scoring before and after VAST was statistically significant (p<0.001). 85% of patients had reactive NST. 51(77.3%) had normal perinatal outcome and 34 (100%) had abnormal perinatal outcome. Association between them was found to be statistically significant.

Conclusion: - It is simple, rapid and non-invasive tool for detection of fetal well being. Vibroacoustic stimulation testing can significantly reduce the number of falsely non reactive non stress test and thus reduce the number of patients who would otherwise undergo more prolonged or invasive forms of monitoring or unnecessary operative interventions.

CHRONIC NON Puerperal UTERINE INVERSION SECONDARY TO UTERINE LEIOMYOMA MISDIAGNOSED AS ADVANCED CERVICAL CANCER: A RARE CASE REPORT

Dr. Lokesh Chandra H.C, Dr. Surakshith L Gowda

Introduction

Uterine inversion is a rare clinical condition with only a few cases of chronic non puerperal inversion of the uterus. Uterine inversion is described as part of the uterus indenting towards and eventually prolapsed through the dilated cervix resulting in uterus being turned inside out. It is categorized as puerperal/obstetric and nonpuerperal/gynaecological complication. Non puerperal uterine inversion can be classified into acute, sub-acute and chronic based on the timing of the event. Acute inversion occurs within 24 hours of birth; sub-acute uterine inversion occurs after 24 hours and within 4 weeks, whereas chronic is rare and occurs after 4 weeks. Chronic non puerperal uterine inversion is often associated with uterine pathology. Prolapsed fibroids tend to be the most common inciting factor with occasional reports of inversion associated with uterine neoplasm and endometrial polyps. The rectoabdominal method is often the most diagnostic clinical method, as the vagina is occupied by the inverted uterus and on bimanual examination there is dimpling of the uterine fundus. Treatment depends on the stage of the inversion and correction is usually by surgical methods. Vaginal hysterectomy for chronic non puerperal inversion poses unique challenges to the surgeon.
Case report:
A 45 year old perimenopausal tubectomised lady with four term vaginal deliveries in the past was referred from primary health centre for menorrhagia and dysmenorrhoea since three months without any complaints inter menstrual spotting, white discharge per vagina or post coital bleeding. Patient was a known case of diabetes mellitus since seven years on regular treatment. She came with pelvic ultrasonography report done two months back which revealed endometrial hypertrophy with normal uterine size and contour to the department of Obstetrics and Gynaecology. General examination patient was anaemic without any abnormality in the systemic examination. Pelvic examination revealed a 7x6 cm fragile mass occupying whole of vagina, cervix could not be seen or felt separately. Uterine size could not be made out. Parametrium was free on per rectal examination. The initial evaluation suggested severe anaemia secondary to advanced cervical carcinoma. Examination under anaesthesia and staging was attempted but this was however inconclusive due to profuse haemorrhage. As the mass was friable and bleeding on touch biopsy of the mass was taken. Histopathological report of the mass showed pleomorphic cells with autolytic changes. After few days patient complained of excessive bleeding per vagina and noticed a mass protruding out of the introitus while straining at stools. On Gynaecological examination there was irreducible well circumscribed mass of 10x7cm with sloughing surface protruding through introitus. The uppermost part of the protruding mass was beefy red in appearance, with no active bleeding, the lower part of the mass was necrotic with a demarcation between the two (Figure 1). Cervix was not felt separately. On sound test (passing uterine sound through the cervix) no uterine cavity was demonstrable. Patient did not tolerate examination well. We could not identify the Ostia of the fallopian tubes. Pelvic ultrasonography could not identify the uterus in the pelvis. Ultrasound probe on the mass revealed central stripe of echogenic tissue suggestive of endometrium. Diagnosis of chronic uterine inversion was made with associated pathology of submucosal fundal fibroid polyp. Correction of anaemia was done with three pints of packed red cell transfusion and the infected mass was treated with glycerine magnesium sulphate dressing and parenteral antibiotics. Patient was posted for vaginal hysterectomy as she was parous and had completed her family. Cervical ring was identified (Figure 2) and was cut posteriorly and access gained to the funnel of inversion. Under the guidance of fingers incision was extended upwards and uterus was bisected after doing polypectomy. Inversion could not be completely reverted back because of the marked hypertrophy and edema of the tissues. Uterovesical fold of peritoneum was opened and bladder was pushed upwards. Ligaments were identified clamped, cut and ligated from inside. Bisected uterus with cervix was removed. Vault was closed by haeney’s stitch. Per operative blood loss was approximately 500ml. Post-operative period was uneventful. Patient was discharged on the 10th postoperative day. Histopathological report of the specimen showed red degeneration of fibroid with no evidence of malignancy.

Discussion: Non puerperal uterine inversion is usually precipitated by tumors sited at the fundus of the uterus which exerts traction force to cause the inversion. The major factors that contribute to its occurrence are: tumor attachment site, thickness of the tumor pedicle, tumor size, thin uterine wall and dilatation of cervix. Different studies have reported different causative factors of uterine inversion. Chronic uterine inversion is such a rare clinical condition and over a period of 10years in this institute only 3 cases have been recorded and all those cases were due to uterine fibroid. The patient we managed had tumor associated chronic inversion in which the implicated tumor was a fundally sited sessile fibroid. Due to insidious onset and rare occurrence, the clinical diagnosis of chronic uterine inversion is difficult, especially if inversion is incomplete as seen initially in our case. The diagnosis is based on high index of suspicion. The clinical features may include: lower abdominal tenderness, vaginal bleeding, urinary frequency, dysuria and urgency. Finding a mass coming through the cervix without definite margins of a cervix, absence of the uterine fundus or fundal dimpling during bimanual or rectal examination are strongly suggestive of the diagnosis. The openings of the fallopian tubes may be identifiable if it had been dragged through the endometrial surface. The diagnosis is easier with complete inversion when a bluish red mass is identified from the vulva with a constricting ring of the cervix superiorly. In other cases, the diagnosis can be difficult. Imaging procedures such as ultrasound and magnetic resonance imaging will assist the diagnosis. Unfortunately, because of the rare nature of the disorder, uterine inversion frequently goes undetected until surgery unless a high index of suspicion is maintained. Ultrasound examination is the first line imaging investigation. The suggestive features in that include: indentation of the fundal area and depressed longitudinal groove extending from the uterus to centre of inverted uterus. When available magnetic resonance imaging can be useful, the features will include; “U-shaped uterine cavity, thickened and inverted uterine fundus on sagittal section and “bull’s eye” configuration on an axial image. Some authors have recommended the use of T2-weighted MRI. Frozen section of the vaginal mass has been used by some authors for the diagnosis.
Demonstration of the endometrium on the surface of the mass will confirm the diagnosis. Biopsy of the mass has definite place if an associated malignancy is suspected as in our case. Treatment is guided by whether condition is acute or chronic, reproductive wish of patient and cause of the inversion (benign or malignant).
Surgery is imperative in chronic inversion unlike in acute inversion where manual repositioning is possible. Many surgical methods (vaginal and/or abdominal) have been described to treat non puerperal uterine inversion. The efficacy of the nonsurgical methods is not clear. Most of the surgical methods described involve reinverting the uterus before proceeding to hysterectomy. Vaginal hysterectomy without reinverting the uterus has been reported. Depending on the clients reproductive desire and associated conditions, surgical reposition or hysterectomy could be done through either abdominal or vaginal conditions. Huntington abdominal approach involves grasping the round ligaments and the uterus below the area of inversion and slowly pulling up repeatedly until the uterus is re-inverted. The Haultain procedure is where vagino-cervical ring is incised posteriorly and carried up the posterior wall of the uterus until it can be reinverted to its normal anatomy. Kustner and Spinelli procedures are the commonly used vaginal approaches. Kustner procedure is entering the pouch of douglas vaginally and splitting the posterior aspect of the uterus and the cervix, and reinverting the uterus. In Spinelli operation incision is made on the anterior aspect of the cervix and the uterus is reinverted. After both the procedures the uterine incision needs to be repaired after repositioning, if the fertility is wished or otherwise can be proceeded for routine vaginal hysterectomy. However in our case reposition of the uterus could not be done completely because of the hypertrophied and edematous tissue and hysterectomy was performed by bisecting the uterus, ligating the ligaments from inside out. Nevertheless, in places where the facility and expertise exist the repair could be done laparoscopically.

CONCLUSION: Chronic non puerperal uterine inversion is a rare condition that is difficult to manage even for the experienced gynaecologist. Clinical diagnosis is often difficult and can be misdiagnosed as carcinoma cervix. A high index of suspicion is required for the diagnosis of chronic uterine inversion. It can be described as a “gynaecological near miss”. Treatment is surgical that includes both abdominal and vaginal approaches. An attempt at vaginal restoration and removal has been reported but is difficult. Uterine inversion has a good outcome if diagnosed and managed timely.

Figure 1: Preoperative (sloughing on the inverted mass). Figure 2: Posterior view showing cervical ring

CALENDER OF EVENTS:

- Doctors day celebration on July 1st 2016.

- Breast feeding week was celebrated from 1st August to 7th August 2016 in the department. All the seven days there was active participation by staff, PG and UG students. Several events were organized as a part of it like, display of banner and charts, panel discussion on breast feeding by postgraduates, talk in BEd college, Bindiganavele CHC visit, quiz for undergraduates on breastfeeding.

- Nutrition week “Poshaka Aahara Deshadha Aadhara”, was celebrated from 1st of September to 7th of September in the department
CONFERENCES AND CME:

1. Workshop **Endovision** in association with BSOG on 16th and 17th July at St Jhons medical college Bangalore was attended by Dr N. Gopal, Dr Surakshith L Gowda.

2. **Focus -2016**, All India PG training programme was held at Jubilee mission medical college, Thrissur from 22nd-26th August 2016 attended by postgraduates Dr.Divya K, Dr. Shashikala Narasappa Pujar, Dr Shika Agarwal, Dr Divya Alamelu N, Dr Joe Kaushik.

3. **OBGYAN 2016** - PG training programme was held at Kuppam from 5th to 8th October 2016, attended by Postgraduates Dr.Tara, Dr. Shravani, Dr. Soumya T, Dr Devi P.

4. **Fetal Medicine** guest lecture was held at mamathieya madilu hospital at CR Patna on November 6th 2016, attended by Dr.Subbappa, Dr. Surakshith L Gowda and postgraduates Dr.Vindhayashree, Dr. Shrunga RP, Dr. Rashmi, Dr. Bhrahthi.

5. **KSOGA 2016** was held at BLDE university, Vijayapura from 25th-27th November 2016 attended by Dr.Mahendra G, Dr. Bharathi K.R., Dr. Subbappa, K, and postgraduates Dr.Vindhayashree, Dr.Devi Krishna, Dr. Ratnadeep Goswami, Dr. Shilpashree M.K, Dr. Tara R, Dr. Sowmya T.

**Paper Presentations by Postgraduates**
- “Rare case report on huge hydronephrosis in pregnancy” by Dr. Sowmya T at KSOGA 2016.
- “Study of primary caesarean section in multiparous women” by Dr. Tara R at KSOGA 2016.

**Poster presentations by Postgraduates**
- “Massive ascites complicating severe pre-eclampsia: A case report” by Dr. Vindhayashree S at KSOGA 2016.
- “Cystic Hygroma: A case series” by Dr. Ratnadeep Goswami at KSOGA 2016.
- “Too many loops may be too tight” by Dr. Shilpashree M.K. at KSOGA 2016.

- Dr Vijayalakshmi S, Prof & HOD, was honored as “Uttama Mahila Vaidhya Seva Puraskara” by Negilayogi Samaja Seva trust, at Mysore by on 30th July 2016.
- Dr Vijayalakshmi S, Prof & HOD chaired the session of fetal growth restriction on 2nd of December 2016 at international conference on fetal care – Bridging the gap- “A Fetomaternal Connect”, conducted at people tree hospital, Bangalore.

**DEPARTMENT OF OBG, AIMS, BG NAGARA**