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GYNAE SPECTRUM

Dear Doctor,

Greetings from Micro Labs. We are happy to bring you "**Gynae Spectrum**", which contains latest and interesting news in the field of Obstetrics and Gynaecology.

This issue contains:

- Is there any association between low Body mass index with ectopic pregnancy following assisted reproductive techniques.
- Laparoscopic Hysterectomy performed on a 32-Year-Old Female with Adhesive Disease with Single 11 mm Port : A case report.
- A novel Intelligent Surgical Unit

Should you require any article or, medical information, please feel free to contact us
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Looking forward to your valuable feedback.

Best Regards,

Medical Team, Micro Labs Limited



1. A Randomized Controlled Trial of Physical Exam Indicated Cerclage in Twin pregnancy.

Twins are at increased risk for low birth-weight (LBW), have five times higher risk of early neonatal and infant death and complications related to prematurity and LBW.

Twin pregnancies presenting with dilated cervix in the second trimester are at increased risk of pregnancy loss and early preterm birth.

At present there is no proven therapy to prevent preterm birth in this group.

Objective of the study is to determine if physical exam indicated cerclage reduces the incidence of preterm birth in asymptomatic women with twin gestations and cervical dilation diagnosed before 24 weeks of pregnancy.

Methods:

An intention to treat analysis of Multicenter, open-label, randomized controlled trial of women with diamniotic twin gestation with asymptomatic cervical dilation from 1 to 5 cm and/or visible membranes by pelvic exam or speculum and asymptomatic cervical dilation from 1-5 cm between 16 0/7 to 23 6/7 weeks were enrolled.

Eligible participants were women between 18 - 50 years of age

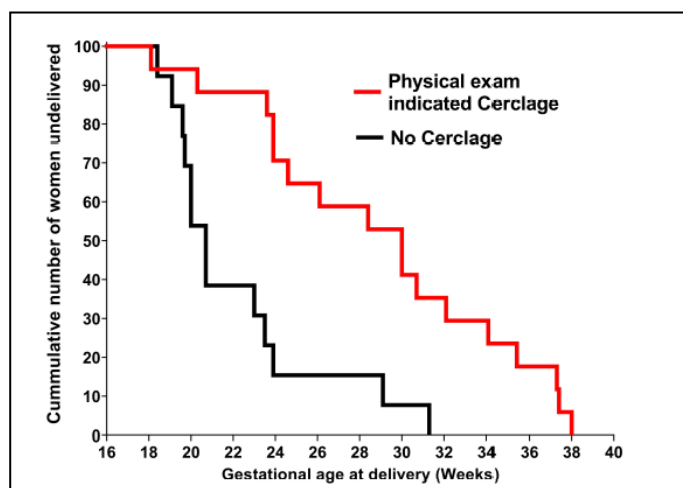
Eligible women were randomized in a 1:1 ratio to either cerclage or no cerclage. 40 women were included in the study. 20 women were randomized to physical exam indicated cerclage and 20 women to no cerclage. Four women randomized to cerclage did not receive the surgical procedure, while no women in the no cerclage group received cerclage.

Patients with monochorionic- monoamniotic pregnancy, selective fetal growth restriction, twin-twin transfusion syndrome, major fetal malformation, known genetic anomaly, placenta previa, signs of labor, or clinical chorioamnionitis were excluded from study.

Primary outcome was incidence of preterm birth <34 weeks. Secondary outcomes were preterm birth <32, <28 and <24 weeks, interval from diagnosis to delivery, and perinatal mortality.

Results:

Maternal demographics were comparable. Women in the cerclage group all of them also received indomethacin and antibiotics. As compared to cerclage vs no cerclage group, the incidence of preterm birth <34 weeks was significantly decreased: 70% vs 100% (RR: 0.71 95% CI 0.52-0.96), as well as preterm birth <32 weeks 64.7% vs 100% (RR: 0.65 95% CI 0.46-0.92), preterm birth <28 weeks 41% vs 84% (RR: 0.49 95% CI 0.26-0.89) and preterm birth <24 weeks 30% vs 84% (RR: 0.35 95% CI 0.16-0.75). mean gestational age at delivery was later:





29.05±1.7 vs. 22.5±3.9 weeks ($p<0.01$); the mean interval from diagnosis of cervical dilation to delivery was longer: 8.3±5.8 vs. 2.9±3.0 weeks ($p=0.02$).

Perinatal mortality was also significantly reduced in the cerclage group 17.6% vs 77% , (RR: 0.22 95% CI 0.1-0.5).

Discussion:

Cervical cerclage in women with twin pregnancy is not routinely indicated but is beneficial in subjects with a history of preterm birth or very short cervix or dilated cervix.

Few studies have shown the benefit of cerclage in twin pregnancy.

Studies have shown that A greater proportion of pregnancies were prolonged by at least 28 days among women who received indomethacin and perioperative antibiotics (24 [92.3%] vs 15 [62.5%], $p=0.01$).

Conclusion:

Cerclage , indomethacin, and antibiotics in asymptomatic twin pregnancies before 24 weeks significantly decreases preterm birth at all evaluated gestational ages.

Reference:

Roman A et al. Physical Exam Indicated Cerclage in Twin pregnancy: a Randomized Controlled Trial. Am J Obs Gynecol; 2020: 1-33.

2. Laparoscopic Hysterectomy performed on a 32-Year-Old Female with Adhesive Disease with Single 11 mm Port : A case report.

Minimally invasive single-port hysterectomy is beneficial for patients in terms of outcome. However it is challenging with adhesions, mobilization of the bladder flap, or performing a bilateral salpingo-oophorectomy without significant vaginal assistance.

Most of the laparoscopic surgeries require incisions greater than 15mm in the umbilicus. Current is a case of laparoscopic single site hysterectomy using only an 11mm umbilical incision that is created with a blunt laparoscopic trochar.

Case presentation:

A 30-year-old woman with endometriosis, adenomyosis, and chronic pelvic pain with recurrent ovarian cysts presented for laparoscopic hysterectomy with bilateral salpingo-oophorectomy.

Many conservative surgeries had been previously tried, medical treatments including a 6-month course of leuprolide acetate and multiple surgeries for fulguration of endometriosis.

Patient completed desired childbearing and requested definite treatment. The patient had a history of prior bilateral salpingectomy and one prior cesarean section.

Patient had confirmed endometriosis at previous laparoscopic exploration and was suspected to suffer from adenomyosis based on cyclic pain and pain that seemed to originate from the uterus with gentle palpation with the vaginal ultrasound probe.

She was counseled to the risks of bilateral salpingo-oophorectomy and offered more conservative surgical options including hysterectomy without bilateral salpingo-oophorectomy. The patient

refused more conservative treatments, citing her fear of the necessity of future surgeries for endometriosis or ovarian cysts, as well her fear of ovarian cancer in the future despite no family history.

The total operative time was 38 minutes, and the estimated blood loss was 100 cc. The patient was discharged 18 hours after surgery, and the recovery was uneventful. The final pathology report showed endometriosis and adenomyosis.

Procedure:

Laparoscopic single-port hysterectomy was done based on the concept that a bluntly created incision would be less likely to herniate than a sharply created incision.

after creating the initial skin incision with an 11-blade scalpel, a 11mm blunt laparoscopic trochar was placed into the incision after insufflating with a veress needle as shown in figure. The multiport device is then loaded into its introducer and is inserted into the abdominal cavity after removing the 11mm port from the umbilical incision.



The multiport device was then installed and actively utilized to perform the hysterectomy through only an 11mm incision as show in figure. This include inserting one or two five-millimeter-diameter instruments, as well as a five-millimeter laparoscope, to complete the hysterectomy through any method the surgeon is comfortable.



After this, the uterine pedicles were divided with a bipolar power coagulation and division device, and the circumferential colpotomy was made with a monopolar cautery set to 30 watts of coagulating current with a laparoscopic hook extender.

The vaginal cuff was sewn from the vaginal approach and the ovaries and tubes are removed after removal of the uterus. The patient returned 4 weeks postoperatively and no scars were visible . This technique was significantly different from any previously described techniques because of the usage of an 11mm blunt trochar to create the umbilical incision. This creates a reproducible footprint in the fascia that should be identical and reproducible regardless of circumstances. By keeping the incision bluntly created and small, the risk of postoperative herniation can be minimised.

Discussion:

In this case technique was designed to facilitate the hysterectomy through the smallest incision possible, as well as to perform the technique through a bluntly created incision to further minimize the chance of postoperative herniation.

Although this technique is considered by the authors to be inferior to a purely vaginal approach, patient with no known pathology that would necessitate abdominal surgery, a vaginal technique would be preferable, especially if the ovaries and fallopian tubes were to be retained at time of surgery.

In a patient with scar tissue from prior surgery and the expectation of adhesive disease from endometriosis, current technique may be an excellent minimally invasive alternative.

Conclusion:

A successful laparoscopic hysterectomy was done with 11 mm port in patients with adhesions.

Reference:

Marchand GJ et al. Single Port 11mm Laparoscopic Hysterectomy Performed on a 32-Year-Old Female with Adhesive Disease. Case Reports in Obstetrics and Gynecology. 2020; 3757391: 1- 4 pages

IN FOCUS

A novel Intelligent Surgical Unit

A company received FDA clearance for its Intelligent Surgical Unit (ISU).



The ISU allows surgeons to better control the laparoscopic camera by responding to commands and recognizing certain objects and locations in the surgical field. It is also compatible with planned scene cognition and surgical image analytics features.

The ISU is used with a Surgical System, which is currently indicated for use in laparoscopic gynecological surgery, colorectal surgery, cholecystectomy, and inguinal hernia repair.

The platform features haptic feedback, minimal docking time, and surgeon controlled camera movements.

ISU has several key advantages, such as head- and eye-tracking technology that allows the surgeon to move the laparoscopic camera with minimal workflow interruption, and reusable instruments that significantly decrease cost.

The capabilities now will be focused on optimizing visualization and camera control in ways never before offered in robotic or digital surgery.

Reference:

Available at : <https://www.medgadget.com/2020/03/transenterix-receives-fda-clearance-for-intelligent-surgical-unit.html>. Accessed on 05-07-2020.