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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:

- **Levonorgestrel releasing intrauterine device vs systemic therapy for obese women with complex atypical hyperplasia..**
- **A case of Horn Pregnancy Diagnosed after Laparotomy.**
- **Delivery by C-section have less chances to conceive subsequent children.**

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. Levonorgestrel releasing intrauterine device vs systemic therapy for obese women with complex atypical hyperplasia.

Hysterectomy remains the standard treatment for complex atypical hyperplasia, but patients who desire fertility or who are poor surgical candidates may be opted for progestin therapy. Aim of the current study is to evaluate response between the Levonorgestrel -IUD and systemic progestin therapy in women with Congenital Adrenal Hyperplasia desiring medical management.

Methods:

A retrospective study involving 250 patients with complex atypical hyperplasia who received progestin therapy was done. Treatment response was assessed by histopathology on subsequent biopsies.

Time-dependent analyses of complete response and progression to cancer were performed comparing the levonorgestrel-releasing intrauterine device and systemic therapy.

A score inverse probability of treatment weighting model was used to create a weighted cohort that differed based on treatment type but was similar with respect to other characteristics.

A term analysis was performed to examine the impact of body habitus on treatment response, and an interrupted time-series analysis was employed to assess if changes in treatment patterns correlated with outcomes over time.

Results:

In women receiving the levonorgestrel-releasing intrauterine device had higher rates of complete response (78.7% vs 46.7%; adjusted hazard ratio, 3.32; 95% confidence interval, 2.39-4.62) and a lower likelihood of progression to cancer (4.5% vs 15.7%; adjusted hazard ratio, 0.28; 95% confidence interval, 0.11-0.73) compared to those who received systemic therapy.

Particularly women with class III obesity derived a higher relative benefit from levonorgestrel-releasing intrauterine device therapy in achieving complete response compared to systemic therapy: class III obesity, adjusted hazard ratio 4.72, 95% confidence interval 2.83-7.89.

Among Class I-II obesity, adjusted hazard ratio 1.83, 95% confidence interval 1.09-3.09; and non obese, adjusted hazard ratio 1.26, 95% confidence interval 0.40-3.95.

In cohort-level analysis, the obesity rate increased during the study period (77.8% to 88.2%, 13.4% relative increase, $P = 0.033$) and levonorgestrel-releasing intrauterine device use significantly increased after 2007 (6.3% to 82.7%, 13.2-fold increase, $P < .001$), both



concomitant with a higher proportion of women achieving complete response (32.9% to 81.4%, 2.5-fold increase, $P = 0.005$).

Discussion:

Endometrial hyperplasia is a spectrum of pathologic diagnoses characterized by excessive proliferation of endometrial glands and can be a precursor lesion to endometrial cancer.

In normal endometrium, progestins antagonize estrogenic stimulation and induce secretory differentiation; however, therapeutic effect in the setting of hyperplasia may also be secondary to apoptosis and shedding of preneoplastic tissue during withdrawal bleeding.

Progestins can be given systemically via oral or intramuscular formulations or can be administered locally via an intrauterine device.

Conclusion:

Levonorgestrel-releasing intrauterine device can be more effective than systemic therapy for women with complex atypical hyperplasia who opt for nonsurgical treatment, particularly in obese women.

Reference:

Mandelbaum RS et al. Progestin therapy for obese women with complex atypical hyperplasia: levonorgestrel-releasing intrauterine device vs systemic therapy. *Am J Obstet Gynecol.* 2020;223(1):103.e1-103.e13.

2. A case of Horn Pregnancy Diagnosed after Laparotomy.

Müllerian abnormalities are seen in 0.17% of fertile women and 3.5% of infertile women, and a unicornuate uterus is observed in 0.4% of women.

The incidence of pregnancy occurring in a rudimentary horn of the unicornuate uterus is very rare ranging from 1 in 75,000 to 150,000 pregnancies.

Current is a case demonstrating a communicating rudimentary horn connected to a unicornuate uterus and the diagnosis was revealed after surgery.

Case presentation:

A 21-year-old Gravida II, abortion I came with a referral letter and sonography showing that she had IUFD.

Patient had a spontaneous abortion for which dilation and curettage (D&C) was performed at the primary hospital 16 months back. She had no remarkable medical and surgical histories. Had regular antenatal care follow-up at the primary hospital and had 8 months of amenorrhea.

Upon admission, the patient was clinically asymptomatic and stable, showing no uterine contractions and no cervical dilatation.

On examination, the uterus was enlarged equivalent in size to 30 weeks of pregnancy, her BP was 120/75 mm of Hg, pulse 85/minute, temperature 36.5° C, and respiratory rate 22/minute.

FHS was absent. Obstetric ultrasonography revealed a singleton, intrauterine fetal demise with a gestational age of 32 weeks, estimated fetal weight of 1.3 kg, and negative fetal heartbeat.

The placenta was fundal and anteriorly. The cervix was closed, uneffaced, and posterior. All laboratory investigations were normal.

Patient was administered 50 mcg of vaginal misoprostol at 6-hour intervals, without response after the 6th dose. Then, she was given an infusion of normal saline 0.9% with 5 IU of oxytocin, followed by increasing concentrations of the same infusion. There was no cervical dilation, despite the onset of contractions. Cervical effacement with no dilatation was seen. Finally, a Foley catheter was used.



All attempts were unsuccessful. The patient was counselled and underwent a cesarean section horizontally under spinal anaesthesia. The intraoperative finding was intact rudimentary horn pregnancy. Clamps were applied over the fibrous band on the medial side and the fallopian tube and ovarian and round ligaments on the lateral side; the accessory horn was excised with the dead fetus; and right salpingo-oophorectomy was performed.

On the release of forceps applied to the fibrous band and probing, a canal was detected between the rudimentary horn and the uterine cavity at the level of the isthmus. The round ligament, ovarian ligament, and tube were connected to the right cornua of the uterus.

Patient was advised to follow up. The patient had uneventful postoperative recovery and was discharged after 3 postoperative days.

Discussion:

Unicornuate uterus associated with a rudimentary horn is a congenital uterine anomaly which results from the developmental arrest of the two Müllerian ducts with the simultaneous incomplete fusion of the opposite side.

Unicornuate uterus with rudimentary horn may have a cavity that is either in communication with (type A1a) or sealed off from (type A1b) the primary uterine cavity, or it may have failed to canalize entirely and is without a cavity (type A2).

Diagnosis is challenging due to a limited field of sonographic view compared to other diagnostic imaging modalities and lateral deviation of the rudimentary horn, USG sensitivity is only 26%.

Conclusion:

Early awareness of Unicornuate uterus with rudimentary horn is crucial if there is no response to repeated failed attempts at the induction of labor.

Reference:

Mengistu K et al. Rudimentary Horn Pregnancy Diagnosed after Laparotomy. Case Reports in Obstetrics and Gynecology Volume 2020, Article ID 5816487, 3 pages.



IN FOCUS

3. Delivery by C-section have less chances to conceive subsequent children

More than 20% of births occur by cesarean section delivery. A study was done to investigate the association between mode of first delivery and subsequent conceptions and live births.

A multicenter prospective cohort study involving 2400 women aged 18 to 35 years with singleton pregnancies, enrolled and interviewed before first childbirth with first delivery (cesarean or vaginal).

Subsequent rates of conceptions and live births were used to compare the rate of subsequent conception (vaginal vs cesarean) among those who completed the 36-month survey, accounting for reported months of unprotected intercourse during the follow-up period.

Also the age-adjusted rate of subsequent live birth (vaginal vs cesarean) among those who completed the 36-month survey was also calculated.

Results showed that Cesarean delivery was associated with lower rates of conception after unprotected intercourse during the follow-up period (413 of 599 [68.9%]) compared with vaginal delivery (1090 of 1422 [76.7%]).

Cesarean delivery was also associated with reduced likelihood of a subsequent live birth compared with vaginal delivery.

Women who delivered their first child by cesarean had lower rates of conception after unprotected intercourse, and fewer of these women had a second child than those who delivered vaginally.

Reference:

Kjerluff KH et al. Association Between Mode of First Delivery and Subsequent Fecundity and Fertility. JAMA Netw Open. 2020 Apr; 3(4): e203076.



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