



A CASE REPORT ON ISTHMOCELE – cause of secondary infertility.

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ABSTRACT

Uterine niche, also known as uterine isthmocele, caesarean scar defect and diverticulum, is an iatrogenic defect in the myometrium at the site of previous caesarean scar due to defective tissue healing ⁽¹⁾. The incidence of uterine niche is on the rise due to the rising caesarean rates. Clinically it may either be asymptomatic or present as abnormal uterine bleeding, post-menstrual spotting or infertility. A 32 years old patient with previous caesarean section who was diagnosed as a case of secondary infertility due to uterine niche after ruling out other causes. The defect was repaired laparoscopically under general anesthesia. Patient conceived after 5 months of the procedure with ovulation induction and she is currently 5 weeks of period of gestation under follow-up. Post-caesarean uterine niche is a relatively newer clinical entity, and its diagnosis requires high index of suspicion.

KEYWORDS- case report, isthmocele, uterine niche, laparoscopy

INTRODUCTION

It has been described as indentations at least 2 mm deep in the myometrium ⁽¹⁾. The niche is defined radiologically as a triangular, hypoechoic or anechoic area at scar site. Uterine niche occurs in up to 70% women

with previous caesarean of whom 30% are symptomatic ^(2,3) . based



Figure 1: 2D Ultrasonography depicting uterine niche.

On ultrasound isthmocoele can be graded into (base X height/2)

Grade 1: $\leq 15 \text{ mm}^2$, grade 2 : $16-25 \text{ mm}^2$, grade 3: $> 25 \text{ mm}^2$.⁽⁴⁾ Infertility due to isthmocoele is caused by a decrease in follicular-phase mucus quality, which hinders sperm storage and capacitation, and transfer, or even affects embryo implantation due to the stagnation of menstrual blood in the cervix.⁵

²CASE REPORT

32 years old P₁L₁A₁ with previous caesarean section (6 years back) with cycles of failed ovulation induction was unable to conceive for 2 years. Patient also had complain of intermittent pelvic pain associated with exertion and prolonged spotting per vaginum from 4th day of menses lasting up to 9th day of the cycle and. Past menstrual cycles were regular once per 30 days with bleeding for 3-4 days with moderate flow not associated with dysmenorrhea..

Male factor of infertility was ruled out with appropriate test. HSG showed no abnormality. AMH was 2 ng/ μl and other hormone profile was with in normal range .Her usg showed the following



Figure 2: TVS of our patient showing the dimensions (0.82cm*1.30cm) on the left, and pouch like defect in the anterior uterine wall extending from the endometrium towards the serosa.

Patient was planned for laparoscopic niche repair under general anesthesia. Uterovesical fold was dissected and bladder was separated. Repair was done in 2 layers with barb suture. Hemostasis was achieved with cautery. Ultrasound done 3 months after surgery revealed disappeared niche with no fluid in the cavity.

The patient conceived after 5 months of the procedure with 2nd cycle of ovulation induction with letrozole 5mg given from day 2 to day 6 for a period 5 days. She is currently 5 weeks period of gestation under regular ANC follow-up.

DISCUSSION

There are many risk factors for the formation of niche may be surgical or patient related.

Cervical dilatation of >5 cm, >5 h duration of labour and advanced fetal station predispose to large niche due to thinner or lesser vascularized myometrium resulting in inadequate healing⁽¹⁾.

Lower uterine incision towards the cervix and improper suturing techniques. Adhesions, retroflexed uterus, genetic predisposition of the patient and comorbidities like diabetes mellitus leading to infection and improper wound healing are the other risk factors. The symptoms include pain, post menstrual spotting, intermittent spotting, secondary infertility, problems with IVF and caesarean scar ectopic.

CONCLUSION

Primary prevention is by minimizing caesarean rate and secondary by proper surgical technique.

Hence, double-layer uterine closure using non-locking sutures is the optimal closure technique that results in thicker residual myometrium and hence potentially lower risk of niches. Careful selection of the patient for niche repair is essential after ruling out other possible causes of the presenting symptoms.

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