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Reproductive outcomes after laparoscopic radiofrequency ablation of symptomatic myomas

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INTRODUCTION

More than 2,000 cases of laparoscopic intraabdominal ultrasound-guided radiofrequency ablation (Lap-RFA; Acessa® procedure, Acessa Health, Inc., Austin, TX USA) of symptomatic myomas have been performed in the United States and internationally,¹ and the procedure has been described.² Contraception and childbearing following Lap-RFA are of great interest to patients, obstetrician-gynecologists, and reproductive endocrinologists.

AIM

Our purpose is to analyze the safety and outcomes among reported pregnancies post Lap-RFA.

METHOD

Gynecologic surgeons, who perform Lap-RFA, complete standardized data collection forms that capture specific details describing their consenting patients' preoperative, intraoperative, and postoperative data as well as any pregnancy data.

Reproductive outcomes were prospectively collected through December 2017 and were analyzed using descriptive statistics.

RESULTS

- ✧ Twenty-eight women conceived 30 times after having undergone Lap-RFA
- ✧ Time from treatment to conception ranged from 1 month to 54 months (mean 10.7 ± 9.9 months)
- ✧ Two patients each conceived twice
 - one patient (age 31 years) conceived at 8.5 and 28 months after her procedure
 - the other patient (age 37 years) conceived at 12 and 54 months after her procedure
- ✧ Excluding the second pregnancies, the mean time from procedure to conception was 8.5 ± 4.5 months
- ✧ Of the 30 pregnancies, 26 (86.7%) resulted in full-term deliveries of healthy infants
- ✧ Vaginal births comprised 50% of the live births and Caesarean sections also comprised 50%
- ✧ Reasons for the Caesarean deliveries were:
 - prior C-sections
 - placenta previa marginalis
 - breech presentation
 - history of infertility and recommendation from maternal-fetal medicine specialist
 - Nuchal cord
 - oligohydramnios and fetal intolerance to labor
 - presence of uterine scar from past myomectomy
 - Unknown safety effect of Lap-RFA on vaginal deliveries (pre-market; n = 4)
- ✧ Four pregnancies (13.3%) ended in spontaneous abortions
- ✧ One patient (3.8%), who delivered by C-section, experienced post-partum hemorrhage

Outcome	n (%)	Mean age at baseline, years (min/max)	Mean time from procedure to conception, months (min/max)
Pregnancies	30 (100%)	35.0 ± 3.4 (30–44)	10.7 ± 9.9 (1–54)
Full-term live births	26 (86.7%)	34.7 ± 3.5 (30–44)	9.1 ± 5.9 (1–28)
Vaginal deliveries	13 (50.0%)	34.5 ± 4.0 (30–44)	8.5 ± 6.5 (3–28)
Caesarean sections	13 (50.0%)	34.8 ± 3.0 (30–41.5)	9.2 ± 5.4 (1–23.5)
Spontaneous abortions	4 (13.3%)	37.3 ± 1.0 (36–38)	21.5 ± 21.9 (6.5–54)
1st Trimester	3 (10.0%)	37 ± 1.0 (36–38)	24.5 ± 25.8 (6.5–54)
2nd Trimester	1 (3.3%)	38	12.5

CONCLUSIONS

- ✧ Evidence to date indicates that safe childbearing with full-term gestation can be achieved after Lap-RFA of symptomatic myomas.
- ✧ No preterm deliveries, uterine rupture, placental abruption, placental accreta, or intrauterine growth restriction were reported.
- ✧ Most of the Caesarean sections were performed due to obstetrical history and evidence-based considerations; 4 pre-market C-sections were done due to the unknown safety effect of Lap-RFA on vaginal deliveries.
- ✧ The spontaneous abortion rate of 13.3% is within the reported range of 11–22% in the general obstetric population.³

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