



Obstetric outcomes of singleton live birth after hysteroscopic division of complete uterine septum

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Introduction

- Complete uterine septum (CUS) is a rare Müllerian anomaly with limited data on obstetric outcome after hysteroscopic surgical correction
- Some reports suggested that pregnant patients with CUS may progress successfully without surgical treatment¹
- Other investigators reported poor pregnancy outcome without surgical treatment²
- It has been suggested that dividing the cervical portion of a CUS reaching the external cervical os may be associated with cervical incompetence.³
- The aim of this study was to compare the obstetric outcomes in patients with a singleton live birth after hysteroscopic division of a CUS extending to the external os versus the internal os

Study Design

- A retrospective cohort study of 17 women with a singleton live birth after a CUS, identified on trans-vaginal 3D ultrasound (TV 3D US) with or without saline infusion sonohysterogram (SIH) with hysteroscopic correction from 2006 to 2019 [Figure 1]
- Inclusion criteria:
 - Presence of CUS
 - History of infertility, miscarriage, or recurrent pregnancy loss (RPL)
- Group 1: 5 patients with septum reaching the external cervical os and with a complete vertical vaginal septum
- Group 2: 12 patients with the septum reaching to the internal cervical os [Figure 2]
- Post operative care:⁴
 - Placement of a size 8 French pediatric Foley catheter into the endometrial cavity for 6-7 days without the use of antibiotics
 - Oral estrogen for 42 days
 - Oral progestogen during the last 10 days of estrogen course
 - Evaluation of the endometrial cavity after 8 weeks
- Statistical analysis was performed using Student's *t*-test for continuous variables and Fisher's exact test for categorical variables

Results

- Patients in Group 1 were significantly younger ($p=0.014$), otherwise, there were no significant differences in maternal demographics or past obstetric history [Table 1]
- All residual septi were less than 1 cm
- There was no significant difference in cerclage placement rate (0% vs 9.1%), gestational age at delivery in weeks (39.0 ± 0.7 vs 38.0 ± 1.6), premature birth rate (0% vs 8.3%), other obstetric complications rate (20% vs 27.3%), vaginal delivery rate (60% vs 27.3%), cesarean section (CS) delivery rate (40% vs 72.7%), and newborn birth weight in grams (3477.2 ± 626.0 vs 3117.7 ± 598.5) between Group 1 and Group 2 respectively (Table 2)
- Group 1: One patient (20%) had delayed fetal growth at 30 weeks gestation due to velamentous insertion of the umbilical cord
- Group 2: obstetric complications occurred in three patients (27.3%) in the form of gestational DM, gestational hypertension and cervical shortening at 24 weeks gestation. The latter patient was treated with vaginal progesterone, and carried the pregnancy to 39 weeks gestation. One premature birth in occurred at 34 week gestation because of vasa previa. One patient had a history indicated cerclage placed

	Group 1 (n=5)	Group 2 (n=12)	P value		Group 1 (n=5)	Group 2 (n=12)	P value
Age (years)	25.4±5.0	32.8±4.9	0.014	% prophylactic cervical cerclage	0%	9.1%	0.486
BMI (Kg/m ²)	24.9±2.3	27.7±7.8	0.457	% Obstetric complications	20%	27.3%	0.755
Day 2-3 FSH (miu/ml)	6.0±0.4	7.9±3.6	0.392	% Premature birth	0%	8.3%	0.506
Infertility duration (years)	2.3±1.1	1.9±1.8	0.823	% Vaginal delivery	60%	27.7%	0.210
% Primary infertility	66.7%	33.3%	0.310	% CS delivery	40%	72.7%	0.210
% History of miscarriage	0%	33.3%	0.140	Gestational age at delivery (weeks)	39.0±0.7	38.0±1.6	0.231
% History of RPL	0%	25%	0.218	Newborn birth weight (grams)	3477.2±626.0	3117.7±598.5	0.283
% Past history of obstetric complications	0%	27.3%	0.218				
% Residual septum (<1cm)	100%	81.8%	0.512				

Table 1: Demographic and Background Details

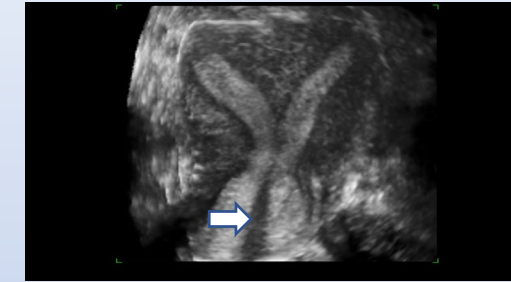


Figure 1: TV 3D US illustrating a complete uterine septum reaching to the external cervical os. A vertical vaginal septum is also seen (arrow).

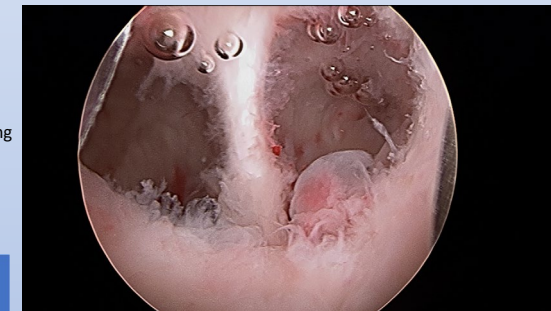


Figure 2: A hysteroscopic image illustrating a complete uterine septum reaching the internal os

Conclusion

- This pilot study suggests that despite the added injury to the cervix during hysteroscopic division of a CUS extending to the external os, there were no significant differences in the obstetric outcome with a successful singleton live birth.
- Despite excellent obstetric outcomes in our study, it is our recommendation that such patients should be cared for by a maternal fetal medicine specialist to monitor cervical lengths during pregnancy in view of the small sample size.

References

- Heinonen PK. Complete septate uterus with longitudinal vaginal septum. Fertil Steril 2006; 85(3):700-705
- Ghil T et al. The pregnancy outcome in women with incidental diagnosis of septate uterus at first trimester scan. Hum Reprod 2012;27(9): 2671-2675
- Patton PE et al. The diagnosis and reproductive outcome after surgical treatment of the complete septate uterus, duplicated cervix and vaginal septum. Am J Obstet Gynecol 2004;190:1669-1678.
- Abuzeid OM et al. Pediatric Foley Catheter after Operative Hysteroscopy Does Not Cause Ascending Infection. JMIG 2018;25(1):133-138.

Table 2: Obstetric outcomes after hysteroscopic correction of complete uterine septum