

Table S1 Detailed information of the nine patients with congenital cervical and complete vaginal atresia

Case	Age (years)	Clinical symptom	Uterus size (cm ³) [†]	Endometrium (mm)	Surgical type	Surgical duration (min)	Bleeding volume (mL)	Menstruation, sex life, and pregnancy
1	17	Seasonal abdominal pain for 2 years; amenorrhea	108.5	Absent	Received laparoscopic vaginoplasty with peritoneal flaps + cervicoplasty + bladder injury repair + electrocautery for endometriosis	250	50	Normal menstrual cycle, reported satisfaction with sex life, multiple miscarriages
2	15	Seasonal abdominal pain for 5 months; amenorrhea	90.3	Absent	Transvaginal amniotic vaginoplasty, with the vaginal mold removed 1 year after. Experienced amenorrhea with lower abdominal discomfort 6 months after. After 2 years, received laparoscopic vaginoplasty with peritoneal flaps + cervicoplasty + rectal injury neoplasty	257	200	Normal menstrual cycle, reported satisfaction with sex life, not yet pregnant
3	18	Abdominal pain for 3 days; pelvic mass	60.5	Absent	Received laparoscopic vaginoplasty with peritoneal flaps + cervicoplasty + right hydrosalpinx excision + right ovarian sac excision + greater omentum adhesion separation	230	110	Normal menstrual cycle, reported satisfaction with sex life, not yet pregnant
4	14	Intermittent abdominal pain for 1 year; amenorrhea	79.1	Absent	Received transvaginal amniotic vaginoplasty. Presented with amenorrhea with lower abdominal discomfort 1 year after. After 1 year, received laparoscopic vaginoplasty with peritoneal flaps + cervicoplasty	250	230	Normal menstrual cycle, not yet pregnant
5	28	Intermittent abdominal pain for 8 years; amenorrhea	51.9	Absent	Received laparoscopic vaginoplasty with peritoneal flaps + cervicoplasty + right tubal forming + pelvic adhesion separation	270	300	Normal menstrual cycle, reported satisfaction with sex life, not yet pregnant
6	14	Intermittent abdominal pain for 1 year; amenorrhea	17.9	4	Received laparoscopic vaginoplasty with peritoneal flaps + cervicoplasty + electrocautery for endometriosis	182	80	Abnormal menstrual cycle with continuous menstruation, not yet pregnant
7	11	Seasonal abdominal pain for 3 months; pelvic mass	48.0	5	Received laparoscopic vaginoplasty with peritoneal flaps + cervicoplasty + excision of the left oviduct mesangial cyst + great omentum adhesion separation	161	100	Normal menstrual cycle, not yet pregnant
8	12	Intermittent abdominal pain concurrent with dysuria for 3 days	17.9	3	Received laparoscopic vaginoplasty with peritoneal flaps + cervicoplasty	105	100	Normal menstrual cycle, not yet pregnant
9	21	Seasonal abdominal pain for 5 years; amenorrhea	54.0	6	Received laparoscopic vaginoplasty with peritoneal flaps + cervicoplasty + removal of right ovarian endometriosis cyst + electrocautery for endometriosis	205	50	Normal menstrual cycle, reported satisfaction with sex life, not yet pregnant

[†], uterus size was calculated using the formula: uterus size = length × width × height × π/6.