

## CONSERVATIVE SURGICAL REPAIR IN CERVICAL ATRESIA ASSOCIATED WITH PARTIAL OR COMPLETE ABSENCE OF THE VAGINA

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**Running Title** : Treatment of cervico-vaginal atresia

**Capsule**: Laparoscopic utero-vaginal/vestibular anastomosis proves to be an effective and safe conservative treatment of cervical atresia associated with partial or total vaginal agenesis

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**Keywords**: Cervico-vaginal atresia, Utero-vestibular anastomosis, Mullerian anomalies, Unicornuate uterus

### ABSTRACT

**Objective**: to describe the surgical technique of laparoscopically assisted uterovaginal/vestibular anastomosis in patients with cervical atresia associated with partial or complete absence of the vagina.

**Design**: Surgical video article. Local institutional Review Board approval and written permission from the patients were obtained. There were no conflicts of interest

Setting: Tertiary referral center

**Patients**: The surgical video presents surgical correction in three different patients with cervical agenesis. The first one (14 year old) has a normoconformed uterine body and total absence of the vagina. The second one (12 year old) instead with left unicornuate uterine body and partial absence of the vagina, the third (13 year old) with right unicornuate uterus and total absence of the vagina

#### **Interventions:**

Laparoscopic time. An accurate survey of the entire abdominopelvic cavity and of uterine body is carried out to evaluate its morphology and size (presence of hematometra). The adnexa are evaluated and adhesions and any out breaks of endometriosis are treated appropriately. A laparoscopic ultrasound probe is used to evaluate the size and location of endometrial cavity.

Perineal time: In total absence of the vagina an H-shaped incision of the hymenal dimple, allows a larger area of available tissue for the anastomosis. A tunnel was then created between the bladder and the rectum, by blunt and sharp dissection. At the same time, by means of an internal probe, from above the uterine body was pushed by an assistant caudally while the operator grasped it from below. A circular myometrial incision at uterine caudal body allows to reach the endometrial cavity and open it. The edges of uterine cavity were then anastomized with the edges of the hymenal incision. In cases of partial absence of the vagina, the creation of the tunnel between the vagina and the rectum is not necessary and the open uterine body is anastomosed with the margins of the vaginal dome, engraved on the guide of a metal dilator. All patients received broad-spectrum antibiotics (i.e. cephalosporins of the last available generation) the day before and the day of surgery

**Main Outcome Measure(s):** Intraoperative anatomic and ultrasound data, neovaginal length and recovery of menstrual function 180 days after surgery.

**Results:** The surgical procedures was successful in all cases. No major complications were recorded and in particular no bladder or rectal injuries occurred. No stenosis of the neocervix was recorded. The main hospital stay of the patients was 3.5 + 1,5 days. In each case, the neovagina developed gradually over time post-operatively owing to the upward traction action exerted by the uterine body through its natural ligament apparatus (cardinal ligaments and ovarian vessels). This fact eliminated the requirement for the use of a mold after surgery. At 15 weeks follow-up, vaginoscopy was performed with mucus observed at the site of utero-vaginal anastomosis in all cases. None of the patients developed infection post-operatively which we attribute to the avoidance of molds or pessaries and the natural mucus production. Six months postoperatively, the length of the neovagina was > 4 cm in all three cases.

**Conclusions:** laparoscopic assisted utero-vaginal/ vestibular anastomosis may be considered the treatment of choice for patients with cervical atresia associated with partial or complete absence of the vagina.

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