Conservative surgical repair in cervical atresia associated with partial or complete absence of the vagina

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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.
Setting: Tertiary referral center.
Patient(s): The surgical video presents surgical correction in 3 different patients with cervical agenesis. The first patient, aged 14 years, had a normoconformed uterus and total absence of the vagina. The second patient, aged 12 years, demonstrated a left unicornuate uterus and partial absence of the vagina. The third patient, aged 13 years, displayed a right unicornuate uterus and total absence of the vagina.
Intervention(s): Laparoscopic time and perineal time. During laparoscopy, the entire abdominopelvic cavity was assessed to evaluate the uterine morphology and size to exclude anomalies such as hematometra. The adnexa and adhesions were evaluated and any endometrial flare-ups were treated appropriately. A laparoscopic ultrasound probe was used to evaluate the size and location of the endometrial cavity. In cases with total absence of vaginas, an H-shaped incision in the hymenal dimple allowed a larger area of available tissue for the anastomosis. A tunnel was then created by blunt finger dissection between the bladder and rectum. Simultaneously, the uterus was pushed caudally by an assistant while the operator grasped it from below using an internal probe. A circular myometrial incision at the uterine caudal body allowed to reach the endometrial cavity and open it. The edges of the uterine cavity were then anastomized with the edges of the hymenal incision. In cases with partial absence of vaginas, the creation of the tunnel between the vagina and rectum was not necessary and the open uterus was 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) on the day before surgery and on the day of surgery.
Main Outcome Measure(s): Intraoperative anatomic and ultrasound data, neovaginal length, and recovery of menstrual function 180 days after surgery.
Result(s): The surgical procedure 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 after surgery because of the upward traction action exerted by the uterus through its natural ligament apparatus (cardinal ligaments and ovarian vessels). This fact eliminated the requirement for the use of a mold after surgery. At the 15-week follow-up, vaginoscopy was performed, with mucus observed at the site of uterovaginal anastomosis in all cases. None of the patients developed infection after surgery because of the avoidance of molds or pessaries and the natural mucus production. Six months after surgery, the length of the neovagina was >4 cm in all 3 cases.

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Conclusion(s): Laparoscopic-assisted uterovaginal/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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El resumen está disponible en Español al final del artículo.

Key words: Cervicovaginal atresia, müllerian anomalies, unicornuate uterus, uterovestibular anastomosis

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Reparación quirúrgica conservadora de atresia cervical asociada a ausencia completa o parcial de vagina.

Objetivo: Describir la técnica quirúrgica de anastomosis uterovaginal/vestibular asistida por laparoscopia en pacientes con atresia cervical asociada a ausencia parcial o completa de vagina.

Diseño: Artículo video de cirugía. Se obtuvo aprobación del comité local institucional y consentimientos escritos de los pacientes.

Lugar: Centro de referencia de tercer nivel.

Paciente(s): El video de cirugía presenta la corrección quirúrgica en 3 pacientes distintas con agenesia cervical. La primera paciente, de 14 años, tenía el útero de aspecto normal y ausencia total de vagina. La segunda paciente, de 12 años, con útero izquierdo unicorne y ausencia parcial de vagina. La tercera paciente, de 13 años, presentó un útero derecho unicorne y ausencia total de vagina.

Intervención(es): Tiempo quirúrgico laparoscópico y tiempo perineal. Durante la laparoscopia, la cavidad abdominopélvica completa se abordó para evaluar la morfología y tamaño uterino y excluir anormalidades como hematómetra. Se evaluaron anexos y adherencias y los brotes de endometriosis fueron tratados apropiadamente. Una sonda ecográfica laparoscópica se utilizó para evaluar el tamaño y la localización de la cavidad endometrial. En casos de ausencia total de vagina, una incisión en forma de H en el himen permitió una mayor área de tejido disponible para anastomosis. Posteriormente se creó un túnel con disección roma digital entre la vejiga y el recto. Simultáneamente, el útero fue empujado caudalmente por un asistente mientras el cirujano lo sujetaba internamente desde abajo utilizando una sonda interna. Una incisión miometrial circular en el cuerpo uterino permitió llegar a la cavidad endometrial y abrirla. Los bordes de la cavidad uterina fueron posteriormente anastomosados con los bordes de la incisión del himen. En casos de ausencia parcial de vagina, la creación del túnel entre la vaginal y el recto no fue necesaria y el útero abierto fue anastomosado con los márgenes de la cúpula vaginal en relieve sobre la guía de un dilatador de metal. Todos los pacientes recibieron antibióticos de amplio espectro (i.e., cefalosporinas de la última generación disponible) el día previo y el día de la cirugía.

Medida(s) de resultado principal: Datos anatómicos intraoperatorios y ecográficos, longitud de la neovagina, recuperación de la función menstrual 180 días después de la cirugía.

Resultado(s): El procedimiento quirúrgico fue exitoso en todos los casos. No se registraron complicaciones mayores, y en particular, no ocurrieron lesiones vesicales o rectales. No se registró estenosis del neocérvix. El tiempo de estadía media en el hospital fue de 3.5 ± 1.5 días. En cada caso, la neovagina se desarrolló gradualmente a través del tiempo después de la cirugía debido a la tracción hacia arriba ejercida por el útero a través del aparato natural de ligamentos (ligamentos cardinales y vasos ováricos). Este hecho eliminó la necesidad del uso de un molde después de la cirugía. En la semana 15 de seguimiento, se realizó una vaginoscopia, observándose moco en el sitio de la anastomosis uterovaginal en todos los casos. Ninguna de las pacientes desarrolló infección después de la cirugía debido a que se evitaron los moldes o pesarios y a la producción de moco natural. Seis meses después de la cirugía, la longitud de la neovagina fue mayor de 4 cm en los tres casos.

Conclusión(es): Anastomosis uterovaginal/vestibular asistida por laparoscopia puede ser considerada el tratamiento de elección para pacientes con atresia cervical asociada a ausencia parcial o completa de vagina.