



Vaginal Aplasia Creatsas Vaginoplasty

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George Creatsas

Mayer-Rokitansky-Küster-Hauser (MRKH) syndrome is a rare congenital abnormality of the female genital tract presented with aplasia of the uterus and the upper two-thirds of the vagina in an otherwise normal 46XX individual. The incidence is approximately one case in 4000 women. The syndrome is frequently associated with other nongynecological defects, such as urinary tract anomalies, vertebral deformities, and to a lesser extent auditory and cardiac lesions. Furthermore the absence of the vagina and the uterus has a profound psychological impact on the young woman's sense of femininity, so that the demand for a sexual life makes the creation of a neovagina strongly advisable [1].

Diagnosis is based on the history, the clinical and gynecological examination, and the ultrasonography, including the urinary tract examination to exclude relative anomalies, as well as laparoscopy and hysteroscopy to diagnose and classify the relative uterovaginal anomaly.

Several techniques of vaginal reconstruction, surgical or nonsurgical, have been reported as the Creatsas vaginoplasty, the Frank's procedure, the Williams vaginoplasty, the McIndoe operation, the Vecchietti's technique, and others [2–4].

The Creatsas vaginoplasty is a modification of the Williams procedure. It is a simple, safe, and quick operative method resulting in a functioning vagina, similar to normal. We developed our technique in 1981 and until now we have performed 254 cases.

The operation starts with three incisions (using electrocautery), at the third, sixth, and ninth o'clock positions of the hymen. This opening prevents postcoital bleeding during the first sexual intercourse. The vulval tissues are put under tension by four Allis clamps (Fig. 17.1a). A U-shaped incision is followed on the labia (Fig. 17.1b). The upper edge of the incision ends 4 cm laterally to the external

G. Creatsas

Department of Obstetrics and Gynecology, University of Athens, Athens, Greece

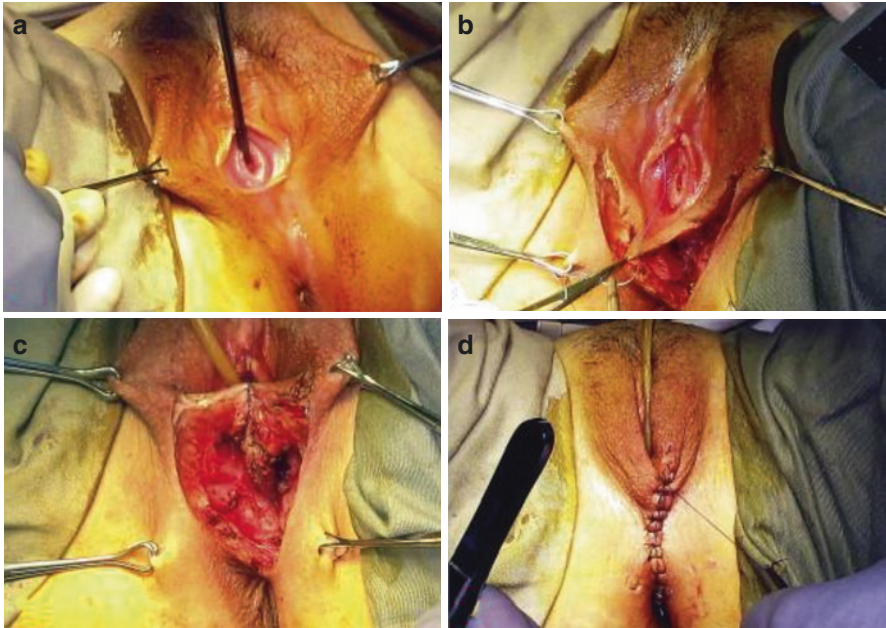


Fig. 17.1 (a) Placement of the Allis clamps and catheterization of the urethral meatus. (b) A U-shaped incision in the vulva, mobilization of the tissues, and placement of the first suture. (c) Completion of the first layer of sutures between the inner skin margins. (d) Closing of the second layer and completion of the operation [4, 5]

urethral meatus. After mobilizing the tissues, a meticulous hemostasis is required to avoid postoperative hematomas and tissue necrosis [4, 6].

Close of the inner skin margins is followed. The knots are placed inside the created neovagina, to avoid early decomposition, which could lead to wound opening.

A layer of sutures is followed to approximate the subcutaneous tissue and the perineal muscles. Finally, the external skin is closed (Fig. 17.1d). For the closing of both the skin layers (Fig. 17.1b, c) interrupted absorbable 2-0 sutures are used, starting posteriorly and proceeding anteriorly.

The criterion for the success of the operation is the creation of a neovagina up to 10–12 cm in depth and 4–5 cm in width. The functional dimensions of the neovagina are measured using sonovaginography [7]. A clinical reexamination at 4 weeks and 6 months after the operation and then on a yearly basis is recommended. Following our procedure, no significant postoperative complications were reported, and all patients have a satisfactory sexual intercourse. A mean hospital stay up to 6 days is required to prevent postoperative complications such as dehiscence during bathing at home and to maximize patient compliance.

There is no need for postoperative vaginal dilatations, which impairs the psychological impact of the patient [1, 5, 8, 9].



The McIndoe's vaginoplasty was a commonly used vaginoplasty among other available operative techniques. However several complications were reported, such as the injuries of the neighboring organs. Also graft shrinkage, due to the development of granulomatous tissue, caused neovaginal stenosis. The aesthetic outcome should be taken into consideration.

The Vecchiotti's operation and its laparoscopic version are frequently performed in several European centers over the last years, with a low perioperative morbidity and a short recovery period. Potential important complications may occur, as passing the cutting needle from the abdominal wall to the retrohymenal fossa. Frequent follow-up evaluations to adjust the device's tension and the use of dilators after the removal of the apparatus are also required [10].

The sigmoidal colpoplasty is an intraperitoneal operation that carries intraoperative risks and complications. Satisfactory anatomical and functional results have been reported by the use of pelvic peritoneum from the pouch of Douglas [2].

The Frank's technique requires daily use of manually operated vaginal dilators for a long period of time. Despite the good results of the method and the absence of surgical and anesthetic risks, young patients often cannot maintain the required compliance.

In contrast to other methods, Creatsas vaginoplasty provides elasticity of the tissues, formatting the lower part and the introitus. The neovagina permits pleasant and uncomplicated sexual intercourse (Tables 17.1 and 17.2). The latter may be attempted shortly after the operation to alleviate the patient's stress. Almost all of our patients described their sexual life as satisfactory or adequate, which shows that sexual satisfaction is usually achieved.

In conclusion, the aim of all methods is the creation of a vaginal channel of adequate functional depth and width, with axial deviation similar to normal. Our experience shows that the Creatsas vaginoplasty is a simple, quick, and effective vulvo-perineoplasty that satisfies all the requirements.

Table 17.1 Creatsas vaginoplasty

<i>Total MRKH cases</i>	200
Mean age at operation	17.2 (r:13–26)
Depth of vaginal dimple	
3–20 mm	157 (78.5%)
20–30 mm	43 (21.5%)
Remnants of uterine horns	167 (83.5%)
Accessory ovary	1
<i>Urinary tract anomalies</i>	89 (44.5%)
Unilateral kidney	62
Solitary pelvic kidney	10
Horseshoe kidney	9
Double renal pelvis/ureter	8
Skeletal malformations	18 (9%)
Scoliosis	11
Humpback	4
Klippel-Feil syndrome	3
Hearing loss	9 (4.5%)

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Operations until the year 2010

Table 17.2 Postoperative results of Creatsas vaginoplasty

Creatsas vaginoplasty—results	
Attempted sexual activity	49 (74.5%)
>4 sexual partners	77 (38.5%)
Genital wart infections	46 (23%)
Mean surgical time (min)	28 (r: 23–43)
Neovagina	
10–12 cm depth/5 cm width	191 (95.5%)
7–9 cm depth/2–3 cm width	9 (4.5%)
Postoperative complications	
Wound opening	8 (4%)
Coital bleeding	0
Mean hospital stay (days)	6 (r: 3–11)
Quality of sexual life	
Satisfactory	189 (94.5%)
Adequate	10 (5%)
Unsatisfactory	1 (0.5%)
Dyspareunia	0
Pregnancies	2

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