SEXUAL MEDICINE

Sexual Life of Women With Mayer-Rokitansky-Küster-Hauser Syndrome After Laparoscopic Vecchietti Vaginoplasty

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ABSTRACT

Introduction: Adequate anatomic and physiologic functions of the genitalia are fundamental prerequisites for sexual well-being and reproduction. Mayer-Rokitansky-Küster-Hauser syndrome (MRKHS) compromises female sexual life and makes reproduction impossible.

Aim: To assess the psychosexual effect of vaginal reconstruction using the laparoscopic Vecchietti technique in patients with MRKHS.

Methods: Forty-two patients with MRKHS who underwent laparoscopic Vecchietti vaginoplasty were included. Their partners also were interviewed. A control group of 45 age-matched, childless, sexually active women were examined during the same period.

Main Outcome Measures: A gynecologic examination was performed to determine the anatomic outcome. Psychosexual function was evaluated with the Female Sexual Distress Scale—Revised (FSDS-R), the Female Sexual Function Index (FSFI), and a semistructured interview. Genital self-image was evaluated using the Female Genital Self-Image Scale (FGSIS).

Results: Average neovagina length (7.0 ± 9.6 cm) in the MRKHS group was significantly shorter than the vaginal length in the control group (9.3 ± 2.5 cm). Women with a neovagina reported satisfactory sexual function (FSFI score = 29 ± 2.7) that was not significantly different from the control group ($P < .05$); however, they also had significantly higher levels of distress (FSDS-R score = 14.5 ± 6.5) and were not satisfied with their genitals (FGSIS score = 22.0 ± 2.4) compared with the control group.

Conclusion: Sexual function in women with MRKHS can be restored successfully by vaginoplasty; however, they have higher rates of distress and are less satisfied with their genitals. **Pastor Z, Froněk J, Nováčková M, Chmel R. Sexual Life of Women With Mayer-Rokitansky-Küster-Hauser Syndrome After Laparoscopic Vecchietti Vaginoplasty. Sex Med 2017;X:XX—XX.**

Key Words: Mayer-Rokitansky-Küster-Hauser Syndrome; Vecchietti Vaginoplasty; Neovagina; Female Sexual Dysfunction

INTRODUCTION

Mayer-Rokitansky-Küster-Hauser syndrome (MRKHS) is characterized by agenesis of the uterus and vagina and can be associated with renal, skeletal, auditory, and cardiac malformations. Its prevalence is estimated at approximately 1 per 4,000 to 5,000 female births.[1] It results from congenital malformations of unknown etiology in the lower structures of the Müllerian ducts during organogenesis. No clear genetic cause of the syndrome has been established.[2] In some cases, familial clustering of MRKHS occurs.[3,4] The syndrome is mostly diagnosed in postpubertal girls with primary amenorrhea.[5] Women have the XX karyotype, female phenotype, normal secondary sexual characteristics, physiologic endocrine function, biphasic ovarian cycle, and female psychosexual identification.[6] MRKHS compromises sexual life and makes natural reproduction impossible. These women can have a child by adoption, assisted reproduction, or gestational surrogacy, and uterine transplantation (UTx) also can provide women with MRKHS the opportunity to have their own biological child.

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Vaginal agenesis can be treated by non-surgical dilatation methods or surgically.[7] Surgical approaches to vaginal agenesis fall into three categories[8]: Williams vulvovaginoplasty with suturing of the labia majora into a perineal pouch[9]; Vecchietti vaginoplasty, in which the vagina increases in size by gradually applying traction to the vaginal vault[10,11]; and methods involving the creation of a neovagina within the rectovesical space lined with various types of tissue, such as skin (McIndoe technique), peritoneum (Davydov procedure), intestine, or—perhaps in the future—tissue engineering of the vaginal mucosa.[8,12,13] Dilatation methods have fewer complications, but patients' long-term cooperation is required. Some methods have definite advantages over others: the ideal neovagina maintains its original anatomic placement and is covered with original mucosa. The Vecchietti neovagina, which is covered by non-keratinized squamous epithelium, is the only option that meets the two criteria.[14–16] Laparoscopic Vecchietti vaginoplasty is used at our gynecologic department. The technique, which enables the creation of a neovagina with good anatomic and functional results, is a simple and effective procedure. The principle of the Vecchietti technique is to create a neovagina by gradual stretching of the patient's own vaginal skin. An olive-shaped device is placed on the vaginal dimple and drawn up gradually by threads that run through the olive from the perineum into the pelvis and out through the abdomen, where they are attached to a traction device. To create a neovagina, the tension is increased on the traction device to pull the thread and stretch the vagina by approximately 1 to 1.5 cm/d until the vagina reaches approximately 7 to 8 cm in depth.[10] Previous studies have mainly evaluated the subjective feelings of respondents using standardized questionnaires or assessed the psychosocial impact of creating a neovagina.[17–22] Several studies have assessed the influence of lifelong infertility and physical integrity.[23–25] Female sexuality is not determined just by the possibility of copulation. It is formed by emotional, relationship, and other social aspects. Furthermore, satisfaction with one's own body and perception can have substantial significance to female sexuality. The purpose of this study was to investigate the sexual well-being, satisfaction with genitals, and level of distress in women who have an anatomically functional neovagina but no possibility for natural motherhood. We wanted to determine whether these characteristics would be different from those of the general population and the views of sexual partners of women with a neovagina.

METHODS

Selection of Patients After Laparoscopic Vecchietti Vaginoplasty

From 2004 through 2013, 95 women with MRKHS underwent surgery at our gynecologic department using laparoscopic Vecchietti vaginoplasty. Of 95 letters sent out inviting them for a check-up, 9 were returned because of a change of address. Fifty-five women 17 to 38 years old responded to our invitation, and 42 arrived for examination.

All women had a heterosexual orientation and were not taking any long-term medication. Each woman was instructed about the essential regular use of a dilatator, application of a lubricant, and appropriate sexual positions before and after the operation. The patients were informed about their reproductive options (adoption, surrogate motherhood, and UTx with subsequent in vitro fertilization) and asked whether they were interested in any of these methods. The investigation was performed during 2015. It was approved by the ethical committee, and all patients provided written informed consent. All interviews and investigations were performed by one gynecologist with a background in sexology and psychology. Semistructured interviews were conducted with all participants to identify anamnestic information and assess sexual partnerships. In addition, a structured interview with the patient's current partner was included in the research. He was asked whether he was aware that his partner had undergone the neovagina surgery, how satisfied he had been with his sexual life, and whether infertility might be a reason to leave the relationship.

Selection of Control Group and Exclusion Criteria

The control group consisted of 45 age-matched (18–38 years old), sexually active, childless patients who received our contraceptive advisory services. These women used the intrauterine delivery system containing levonorgestrel 13.5 mg (Jaydess; Bayer PLC, Newbury, United Kingdom) and had a sexual partner. All had a heterosexual orientation and did not take any long-term medication. Exclusion criteria were age younger than 18 or older than 40 years, current or previous pregnancy, no sexual partner, history of gynecologic operations, or current severe gynecologic illness. Control subjects underwent the same tests and completed the same questionnaires. They signed the informed consent, and their examination was performed during the same period and by the same expert as women with a neovagina.

Sexual Partners of Women With a Neovagina

When evaluating the sexual life of women with a neovagina, only the partners from a current relationship lasting longer than 1 year were included. Information about their age, total number of sexual relationships, severe illness history, and sexual problems was collected. They were asked when they had found out about the partner's neovagina and whether they would leave the relationship based on infertility.

Gynecologic Examination and Anatomic Outcome of Vaginal Reconstruction

The gynecologic examination consisted of assessing basic somatic characteristics (body mass index, hair, and breasts) with primary focus on the genitals; assessment of external genitalia (labia majora and minora, clitoris, vaginal introitus, urinary meatus, and perineum length); and speculum examination (vagina length and spaciousness, tissue estrogenization, vaginal discharge,