

## GYNECOLOGY

# Sexual response in women with Mayer-Rokitansky-Küster-Hauser syndrome with a nonsurgical neovagina



Stephanie Both, PhD; Kirsten Kluijvers, MD, PhD; Marianne ten Kate-Booij, MD, PhD; Philomeen Weijnen, MD, PhD

**BACKGROUND:** Sexual dysfunction is prevalent in women with Mayer-Rokitansky-Küster-Hauser syndrome after the creation of a neovagina. Insight into the physiologic response of the neovagina during sexual arousal is lacking, although this would help in the understanding of sexual function of these patients. The physiologic sexual response of the vagina can be measured objectively by vaginal photoplethysmography to assess vaginal blood flow.

**OBJECTIVE:** Testing whether the physiologic and subjective sexual response in women with Mayer-Rokitansky-Küster-Hauser syndrome with a neovagina differs from the response in women with a natal vagina.

**STUDY DESIGN:** Vaginal blood flow (vaginal pulse amplitude) and subjective sexual responses during neutral and erotic film viewing were assessed in premenopausal women with Mayer-Rokitansky-Küster-Hauser syndrome with a nonsurgically created neovagina (n=15) and were compared with responses of an age-matched control group (n=21).

**RESULTS:** All women with Mayer-Rokitansky-Küster-Hauser syndrome had created their neovagina themselves by dilation. Women with Mayer-Rokitansky-Küster-Hauser syndrome showed a significantly smaller vaginal pulse amplitude compared with control subjects during neutral film

viewing ( $P=.002$ ). In both groups, vaginal pulse amplitude increased significantly during erotic film viewing, but this increase was significantly smaller in the Mayer-Rokitansky-Küster-Hauser syndrome group ( $P<.005$ ). Levels of subjective sexual arousal did not significantly differ between the 2 groups ( $P>.2$ ).

**CONCLUSION:** Women with Mayer-Rokitansky-Küster-Hauser syndrome with a nonsurgically created neovagina showed a weaker vaginal blood flow response during visual sexual stimulation and poorer basal blood flow compared with control subjects. The differences in vaginal blood flow may be related to less vascularization and innervation of the neovagina compared with the natal vagina. The weaker vaginal sexual response can play a role in sexual dysfunction; however, despite the weaker vaginal response, women with Mayer-Rokitansky-Küster-Hauser syndrome did not differ in their level of subjective sexual arousal. Future studies may compare vaginal blood flow and subjective sexual response of women with Mayer-Rokitansky-Küster-Hauser syndrome with nonsurgically and surgically created vaginas.

**Keywords:** Mayer-Rokitansky-Küster-Hauser syndrome, sexual dysfunction, sexual response, vaginal blood flow, vaginal pulse amplitude

Mayer-Rokitansky-Küster-Hauser (MRKH) syndrome, also known as Müllerian Agenesis syndrome, is an uncommon congenital condition (incidence of 1 per 4500–5000 women), characterized by an agenesis or hypoplasia of vagina and uterus.<sup>1</sup> The cause is not fully understood, but a failure in the canalization of the Müllerian ducts in the embryologic phase of the development of the female fetus is thought to be the main mechanism.<sup>2</sup> Usually, patients with the syndrome are identified when they are evaluated for primary amenorrhea with otherwise typical growth and pubertal development. Most women with MRKH syndrome decide to create or

have created a vagina to allow penile-vaginal intercourse. According to the American College of Obstetricians and Gynecologists, nonsurgical vaginal elongation by dilation, as described by Frank,<sup>3</sup> is the first-line approach to create a vagina, with success rates of 90–96%.<sup>4</sup> If dilation therapy is unsuccessful, surgical procedures can be used such as the Vechietti's procedure that involves a traction device attached to the abdomen, sutures placed subperitoneally via laparoscopy, and a plastic "olive" placed on the vaginal dimple.<sup>5</sup> Other surgical techniques involve the creation of a canal that is covered not only by skin grafts,<sup>6</sup> peritoneum,<sup>7</sup> or amnion<sup>8</sup> but also by segments of ileum, caecum or sigmoid colon.<sup>9,10</sup>

Many publications on vaginal agenesis have documented medical treatment procedures and their anatomic and functional results. Published outcomes usually comprised the vaginal length measured at follow-up evaluation and the report of "being able to have

intercourse satisfactorily." In the last decade, however, validated questionnaires have been used to assess sexual functioning in women with MRKH syndrome after treatment. Studies that have used sexual function questionnaires show a higher prevalence of sexual dysfunction (such as low sexual desire, arousal lubrication, problems reaching orgasm, and problems of pain during sexual intercourse) in women with MRKH syndrome after both vaginal dilation and surgical construction compared with healthy control subjects.<sup>11</sup> More specifically, insufficient vasocongestion and lubrication of the created vagina may play a role. This raised the question of whether the neovaginas of women with MRKH syndrome show similar sexual function as natal vaginas. There are indications of vaginal lubrication during sexual activity in women with MRKH syndrome;<sup>12,13</sup> however, this is based on patient self-report in questionnaires. In addition, Masters and Johnson<sup>14</sup> reported normal

**Cite this article as:** Both S, Kluijvers K, ten Kate-Booij M, et al. Sexual response in women with Mayer-Rokitansky-Küster-Hauser syndrome with a nonsurgical neovagina. *Am J Obstet Gynecol* 2018;219:283.e1-8.

0002-9378/\$36.00

© 2018 Elsevier Inc. All rights reserved.

<https://doi.org/10.1016/j.ajog.2018.07.012>

## AJOG at a Glance

**Why was this study conducted?**

Sexual dysfunction is prevalent in women with Mayer-Rokitansky-Küster-Hauser syndrome after creation of a neovagina. However, insight in the physiologic response of the neovagina during sexual arousal is lacking. Therefore, vaginal blood flow was measured during visual erotic stimulation with the use of vaginal photoplethysmography that assesses vaginal pulse amplitude.

**Key Findings**

Women with Mayer-Rokitansky-Küster-Hauser syndrome, all of whom had a nonsurgically created neovagina, showed a significantly lower basal blood flow and a smaller increase in vaginal pulse amplitude compared with control subjects.

**What does this add to what is known?**

The data provide the first evidence of physiologic sexual responsiveness of the nonsurgically created neovagina and indicate that physiologic response is weaker than in the natal vagina.

vaginal changes (such as lengthening, widening, and vasocongestion) in response to sexual stimulation in 2 women with MRKH syndrome after a McIndoe vaginoplasty, but they did not describe how exactly these vaginal changes were assessed and compared with a control group.

Today, vaginal photoplethysmography, which assesses vaginal pulse amplitude (VPA), offers a validated measure to assess sexual stimulation—induced vaginal vasocongestion.<sup>15</sup> Vaginal photoplethysmography has been used to study vaginal response in male-to-female transsexuals after penile inversion vaginoplasty and has shown lower basal vaginal blood flow and smaller increases in vaginal blood flow during erotic stimulation in the transsexual participants, compared with natal female participants.<sup>16</sup> So far, assessment of sexual response with the use of vaginal photoplethysmography has not been performed in women with MRKH syndrome with a neovagina. Because sexual dysfunction is prevalent in women with MRKH syndrome after creation of a neovagina, insight into the physiologic response of the neovagina and the association with the subjective experience of sexual arousal is important. The primary aim of the present study was to assess VPA and subjective sexual arousal in response to erotic video stimulation in women with MRKH syndrome with a

neovagina and to compare them with the responses of healthy control subjects. Our hypothesis was that women in the MRKH group would have lower basal VPA, smaller increases in VPA, and weaker subjective sexual arousal measures in response to erotic stimulation compared with healthy control subjects.

**Methods**

Women with MRKH syndrome for this prospective cohort study were recruited by sending an information letter to all current or former patients who had been diagnosed with MRKH syndrome of the Departments of Gynecology of 3 university medical centers in The Netherlands (n=350) and to members of the Dutch MRKH support group (n=338). The control group was recruited through advertisements. The following inclusion criteria were used for both groups: a heterosexual orientation, age 18–45 years, and being in a stable relationship. Women with MRKH syndrome had to have a surgically or nonsurgically obtained vagina with a sufficient length to allow insertion of the photoplethysmograph (ie, approximately 5 cm). The following exclusion criteria were used: a disease or medical history known to affect genital response (such as diabetes mellitus, multiple sclerosis, hysterectomy for control subjects),<sup>17</sup> current or recent use of medication known to affect sexual responding

(such as selective serotonin reuptake inhibitors, antipsychotics),<sup>18</sup> and current pregnancy or lactation (for control subjects). Participants received financial compensation of 60 Euro (approximately \$70). The Human Subjects Ethical Review Boards of the 3 hospitals approved the study; oral and written informed consents were obtained from each woman. Recruitment and data collection took place from November 2015 to May 2017.

Following the same procedure as in previous sexual response studies in our laboratory,<sup>19–21</sup> women were exposed to 2 5-minute erotic film clips, each showing heterosexual scenes including sexual intercourse. The film clips are known to elicit comparable levels of sexual arousal.<sup>19–21</sup> Each erotic film was preceded by a 5-minute neutral nature film. Vaginal blood flow during the first neutral film clip was used to test differences in basal blood flow between groups.

Vaginal blood flow was measured continuously as VPA that was assessed by photoplethysmography. VPA reflects the phasic changes in vaginal engorgement that accompany each heartbeat, with larger amplitudes reflecting higher levels of vaginal vasocongestion. VPA is a sensitive, specific, and reliable measure of increases in vaginal vasocongestion in response to sexual stimulation.<sup>15</sup> After the first neutral film and after each erotic film, subjective sexual responses were assessed with a questionnaire commonly used in sexual response studies that consisted of a sexual arousal, genital sensations, positive affect, and negative affect scale.<sup>22</sup> Each item was preceded by the sentence: “During the film, I felt...” after which a sexual or emotional experience was described (for instance “sexually aroused,” “genital pulsing or throbbing,” “joy,” or “anger”). The items were measured on a Likert scale that ranged from 1 (not at all) to 7 (very intensely).

All women completed questionnaires on demographic characteristics and sexual function. Sexual functioning was assessed by the Female Sexual Function Index (FSFI), a 19-item self-report instrument that consists of 6 subscales: desire, arousal, lubrication, orgasm,

Download English Version:

<https://daneshyari.com/en/article/8958042>

Download Persian Version:

<https://daneshyari.com/article/8958042>

[Daneshyari.com](https://daneshyari.com)