

▶ VIDEO ARTICLE

Combined Vaginal and Laparoscopic Approach for the Creation of Neovagina in a Patient Affected by Mayer-Rokitansky-Küster-Hauser Syndrome: An Innovative Surgical Treatment

Pierluigi Giampaolino, PhD, Michela Dell'Aquila, MD, Giuseppe Bifulco, PhD, and Fabrizio Schonauer, PhD

From the Department of Public Health, University of Naples Federico II, Naples, Italy (all authors)

Study Objective: To describe the step-by-step simultaneous vaginal and laparoscopic approach for the creation and reconstruction of a neovagina using a skin graft in a woman affected by Mayer-Rokitansky-Küster-Hauser syndrome [1]. To date, no data are available in the literature comparing our technique with other validated approaches such as McIndoe and Davydov, as our process is a newly developed one.

Setting: Tertiary-referral center.

Participant: An eighteen-year-old woman affected by type 1 Mayer-Rokitansky-Küster-Hauser syndrome previously treated with vaginal dilators without success attracted our attention because of her desire to treat her vaginal agenesis. The patient report primary amenorrhea and appeared with normal secondary sexual characteristics. Blind vaginal pouch was confirmed via imaging [2].

After having an accurate counseling with the patient, using drawings on the thigh, informing her about the postoperative course, and showing aesthetic outcomes, an innovative surgery, resulting from a combination of vaginal and laparoscopic approaches, was proposed.

Intervention: The surgical procedure consisted of 2 phases. The vaginal step involved the creation of the lower part of the neovagina using the Fortunoff technique, whereas the laparoscopic step enabled the creation of the upper part under direct visual control. The neovagina was reconstructed using a skin graft harvested from the patient's thigh. The combination of techniques enabled the development of a functional vaginal canal with excellent anatomical and clinical outcomes. At three-month follow-up, the neovagina appeared fully epithelialized, with a total length of 8 cm and satisfactory anatomical and functional results [3–5].

Conclusions: In conclusion, this is the first reported case of a technique combining a vaginal approach for creating the lower canal of the neovagina with a laparoscopic approach for the upper part. We are committed to increasing our case series so that our surgical approach may be considered a viable option to offer surgeons in the future. Journal of Minimally Invasive Gynecology (2025) 00, 1–1. © 2025 The Author(s). This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>)

Keywords: Combined strategy; Laparoscopy; Vaginal aplasia; Vaginal reconstruction

References

1. Sultan C, Biason-Lauber A, Philibert P. Mayer-rokitansky-küster-Hauser syndrome: recent clinical and genetic findings. *Gynecol Endocrinol*. 2009;25:8–11.
2. Committee on Adolescent Health Care. ACOG Committee Opinion no. 728: Mullerian agenesis: diagnosis, management, and treatment. *Obstet Gynecol*. 2018;131:e35–e42.
3. Meutia AP, Harzif AK, Priyatini T, Moegni F, Hakim S, Djusad S. Introducing modified technique of combined vaginal and laparoscopic approach for creation of neovagina. *Int J Surg Case Rep*. 2023;106:108164.
4. Fedele L, Frontino G, Restelli E, Ciappina N, Motta F, Bianchi S. Creation of a neovagina by Davydov's laparoscopic modified technique in patients with Rokitansky syndrome. *Am J Obstet Gynecol*. 2010;202:33.e1–33.e6.
5. Motta GL, Tavares PM, Burtet LM, Berger M, Silva Neto B, Rosito TE. Vaginoplasty with full-thickness mesh skin graft for vaginal agenesis. *Urology*. 2016;98:200–203.

The authors declare that they have no conflict of interest.

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

The Local Department has reviewed and deemed this video article exempt from IRB review and approval.

Corresponding author: Michela Dell'Aquila, MD, Department of Public Health, University of Naples Federico II, Naples; Via Pansini, 5 Naples, Italy. E-mail: michela.dellaquila94@gmail.com

Submitted April 22, 2025, Revised June 22, 2025, Accepted for publication July 14, 2025.

Available at www.sciencedirect.com and www.jmig.org