

Three-dimensional Laparoscopic Hemihysterectomy in a Case of Herlyn–Werner–Wunderlich Syndrome

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OBJECTIVE

To demonstrate a rare case of Herlyn–Werner–Wunderlich syndrome (HWWS) with severe pelvic adhesions managed by three-dimensional (3D) laparoscopic ipsilateral hemihysterectomy with right salpingectomy.

DESIGN

Stepwise demonstration of surgical technique.

SETTING

A 16-year-old female with obstructed hemivagina with ipsilateral renal agenesis (OHVIRA syndrome) underwent 3D laparoscopic management for her condition.

PATIENT

The patient was a 16-year-old female without prior intercourse. She suffered from severe right lower abdominal pain, accompanied by yellowish-greenish vaginal discharge lasting for the past 2 months. Ultrasonography showed a confluent cystic lesion measuring 7.5 cm × 6.0 cm in size, double uterus and cervix with right hematometra, and an absent right kidney. Computerized tomography scan revealed a double uterus with a right hemivaginal cystic lesion and obstruction of the right hemivagina. She was diagnosed as a case of HWWS.

INTERVENTIONS

On 3D laparoscopic abdominal exploration on this patient, there were two uterine corpuses, tubo-ovarian complex on

the right adnexa and normal left adnexal structures. Pelvic adhesions were denser on the right, with complete obliteration of the ipsilateral *cul-de-sac* as seen in Figure 1. Adhesiolysis was performed followed by the removal of the entire right hemiuterus, right salpingectomy, and right ovarian biopsy. Chromotubation revealed a patent left tube. The histopathology of the excised tissues showed the following: (1) proliferative phase endometrium, unremarkable myometrium; (2) acute and chronic inflammation on the right ovary; and (3) acute and chronic inflammation with abscess formation on the right fallopian tube.

There were no noted postsurgery complications in this patient.

DISCUSSION

Mullerian developmental anomalies arise from dysregulation or interruption in the processes of differentiation, migration, fusion, or canalization of Mullerian ducts and urogenital sinus.^[1] With the improvement in minimally invasive surgery, laparoscopy and hysterectomy have replaced the conventional surgical method.^[2-6]

HWWS is a rare congenital anomaly characterized by the presence of uterine didelphys, unilateral obstructed hemivagina, and ipsilateral renal agenesis.^[7] It is also known as OHVIRA syndrome with estimated occurrence of 0.1%–3.8%.^[8] HWWS is one kind of Mullerian anomalies. Early intervention is needed to relieve pain and reduce risk of endometriosis, pelvic inflammation, and infertility.

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Article History:

Submitted: 17-Mar-2023

Revised: 20-Mar-2023

Accepted: 27-Mar-2023

Published: 18-May-2023

Access this article online

Quick Response Code:



Website:
www.e-gmit.com

DOI:
10.4103/gmit.gmit_40_23

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How to cite this article: Lay ZM, Gonzalez GP, Paredes JS, Huang KG, Lee CL. Three-dimensional laparoscopic hemihysterectomy in a case of Herlyn–Werner–Wunderlich syndrome. *Gynecol Minim Invasive Ther* 2023;12:99-100.

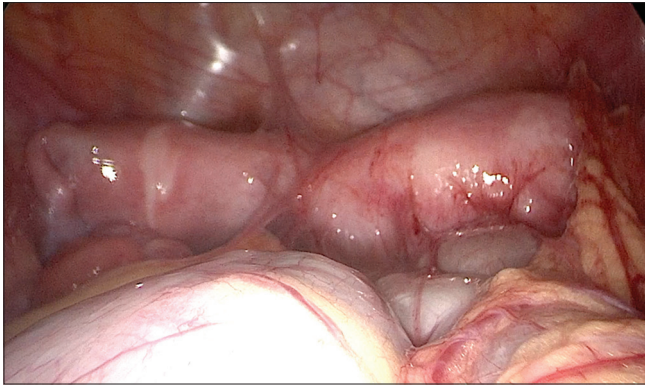


Figure 1: 3D Laparoscopy revealed uterine didelphys with severe pelvic adhesions. 3D: Three-dimensional. <http://www.apagemit.com/page/video/show.aspx?num=305&kind=2&page=1>

The use of laparoscopy in treating Mullerian anomalies is already becoming mainstream. Recent advances in 3D laparoscopic technology have been proven to be advantageous over conventional laparoscopy, i.e., depth perception is possible, leading to better identification of pelvic structures.

CONCLUSION

HWW syndrome has a variable onset of presentation and may have different clinical manifestations, depending on the type and degree of obstruction. Diagnostic modalities such as ultrasonography and computerized tomography/magnetic resonance imaging are important in establishing the diagnosis. Early diagnosis and treatment would often result in good prognosis and prevent further complications such as pelvic infections, secondary endometriosis, adhesion formation, and infertility.^[9,10]

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient's guardian has given her consent for her images and other clinical information to be reported in the journal. The patient/guardian understand that her name and initial will not be published and due efforts

will be made to conceal identity, but anonymity cannot be guaranteed.

Financial support and sponsorship

Nil.

Conflicts of interest

Prof. Kuan-Gen Huang and Prof. Chyi-Long Lee, the editorial board members at *Gynecology and Minimally Invasive Therapy*, had no roles in the peer review process of or decision to publish this article. The other authors declared no conflicts of interest in writing this paper.

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