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Case report

Management of an isolated complete imperforate transverse vaginal septum: A case report

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ABSTRACT

Introduction and importance: The isolated complete transverse vaginal septum (TVS) is a rare congenital abnormality. Which can completely obstructed the vagina, can cause a hematometrocolpos associated with cyclic severe pelvic pain and primary amenorrhea. Management of this case was discussed.

Case presentation: A 14-year-old adelocant girl with primary amenorrhea and severe persistent pelvic pain presented to the gynecology outpatient clinic in our hospital. On pelvic examination, there did not see cervical external os. Radiologic imaging revealed a markedly both fluid intrauterine cavity and upper vaginal canal. The patient underwent general anesthesia, a partial incision of the septum was performed. At discharged time sponge soaked with estrogen cream and 22 number catheter were placed in her vagina to prevent stenosis.

Clinical discussion: Transverse vaginal septum is no symptoms until the age of menarche, and can cause recurrent pelvic pain and amenorrhea. The patient underwent general anesthesia, underwent the partial incision of the septum. Then with end-to-end suturing of the remained vaginal edges, and put urinary 22 number catheter inside the upper vagina for preventing stenosis of the vagina in an operating room.

Conclusion: The excision of septum have put catheter for 3 months with estradiol cream to prevent stenosis and failure of the operation. The management can be performed in the transverse vaginal septum, without any complications. This report gave an option in a simple and effective method that allows the gynecologist to treat this case to reach a good result and still needed to follow up in the future.

1. Introduction

Transverse vaginal septum (TVS) is a rare congenital abnormality. This is caused by a defect in the fusion and/or recanalization of the urogenital sinus and Mullerian organs. This structural obstruction can completely obstruct the vagina, which can cause a hematometrocolpos associated with cyclic severe pelvic pain and primary amenorrhea after menarche in adolescent girls, which has a significant impact on the patient's healthy [1–3].

The diagnosis of the transverse vaginal septum is based on a careful clinical, gynecological examination and ultrasound scan via the abdominal or transrectal, if there are more complex cases, a magnetic resonance image (MRI) will be performed. If the diagnosis of hematometrocolpos is missed or delayed, which may develop retrograde menstruation which can cause subsequently endometriosis, pelvic adhesions, fallopian tube damage, and infertility [3–5].

The primary treatment is surgical, which must be conducted as early as possible. Surgical technic will depend on the location, thickness of the septum, and skilled operator. A minimally invasive procedure, such as laparoscopic or robotic assistance, has fewer surgical complications and in faster recovery than a laparotomy. Management of TVS requires local excision with end-to-end anastomosis of the vagina, and the use of skin grafts if needed, but this technique has been reported to have common complications to secondary tissue contracture, which often leads to stenosis of the vagina [2,3,6,7]. In this case, we managed TVS with subsequently a local circumferential excision of the septum, end-to-end suturing of the vagina, put 22 number of catheter inside the vagina while applying estradiol cream to avoid postoperative complications such as stenosis of the vagina and failure of the operation.

In this report, we present a case of a young girl with transverse vaginal septal, managed by a simple flap surgery technique with the purpose to avoid postoperative complications. This case report has been reported in line with the SCARE 2020 criteria [8].

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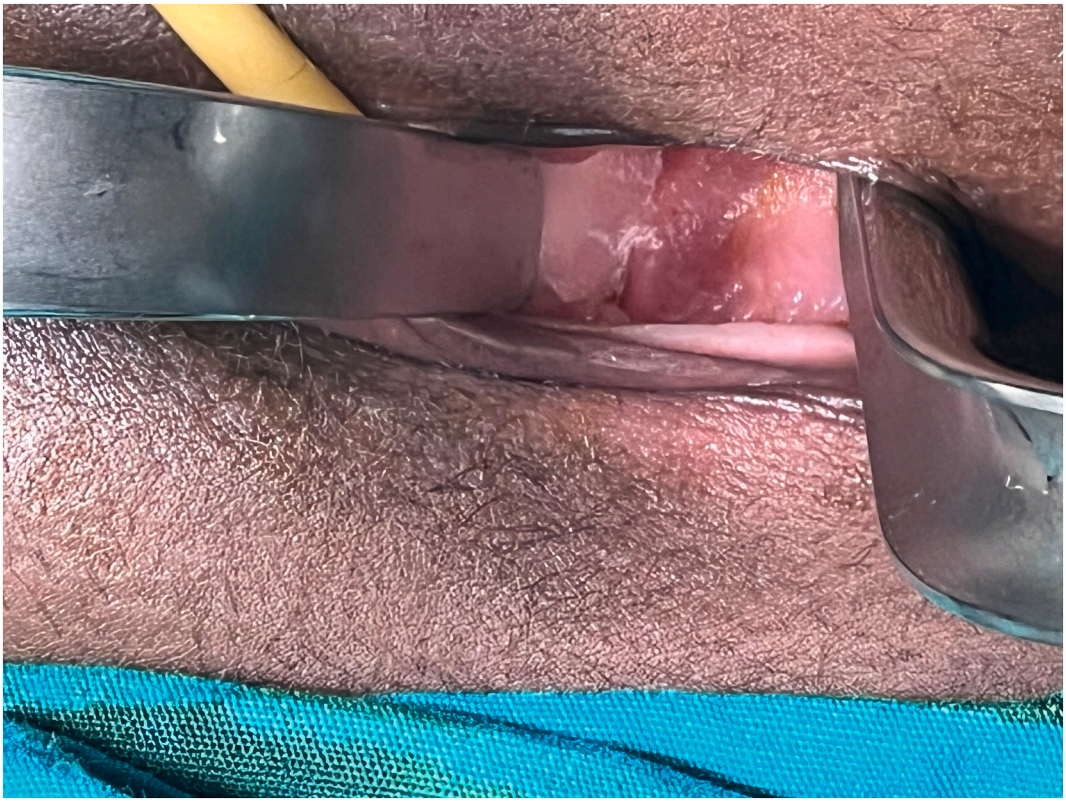

Fig. 1. Speculum examination revealed a blind vaginal canal.

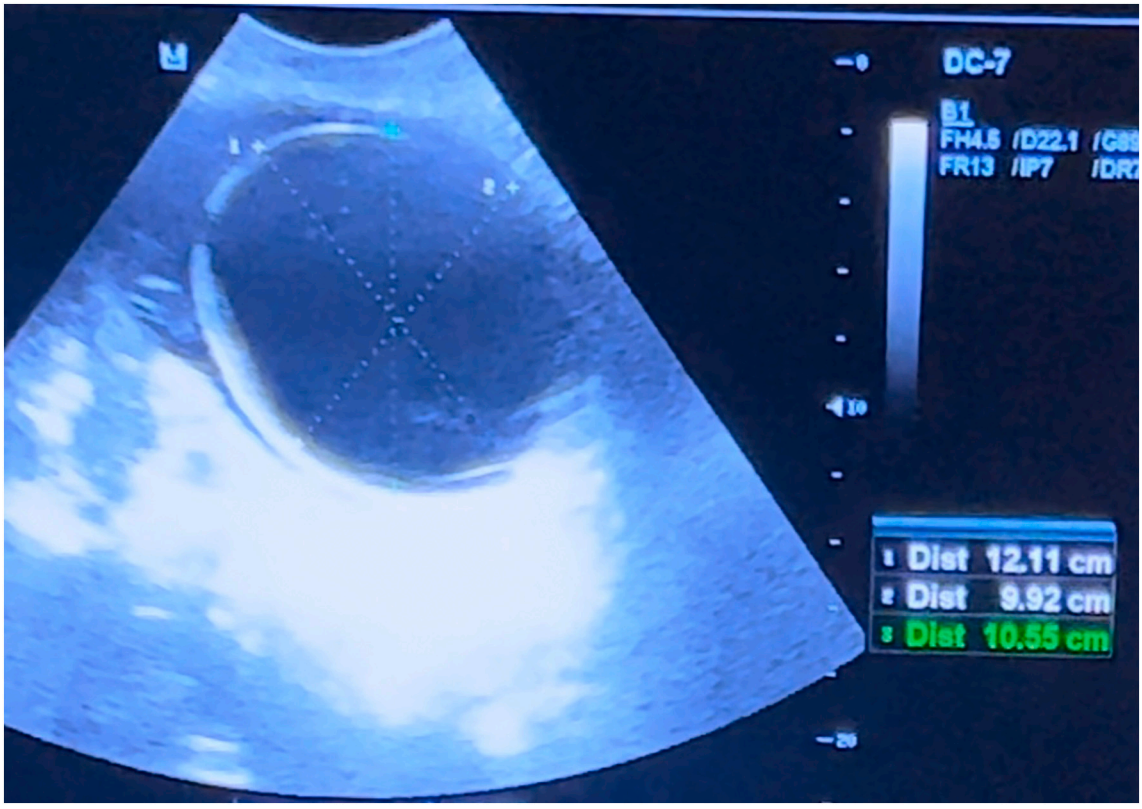

Fig. 2. Ultrasonography showing echogenic fluid in the uterus, cervix, and upper vagina.

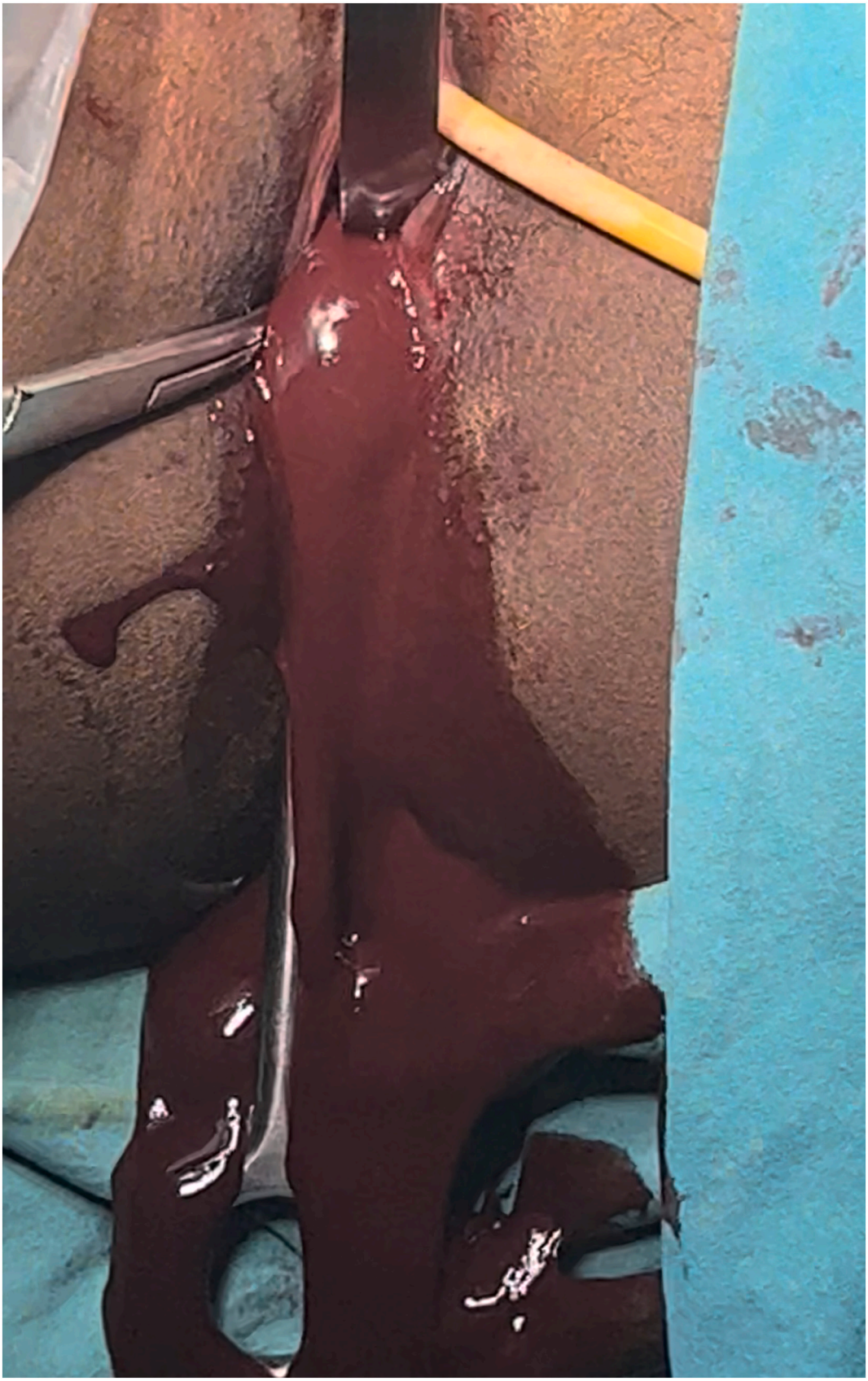

Fig. 3. After excision of the transverse vaginal septum, draining of dark Brown fluid from the vaginal canal to the outside. (For interpretation of the references to colour in this figure legend, the reader is referred to the web version of this article.)

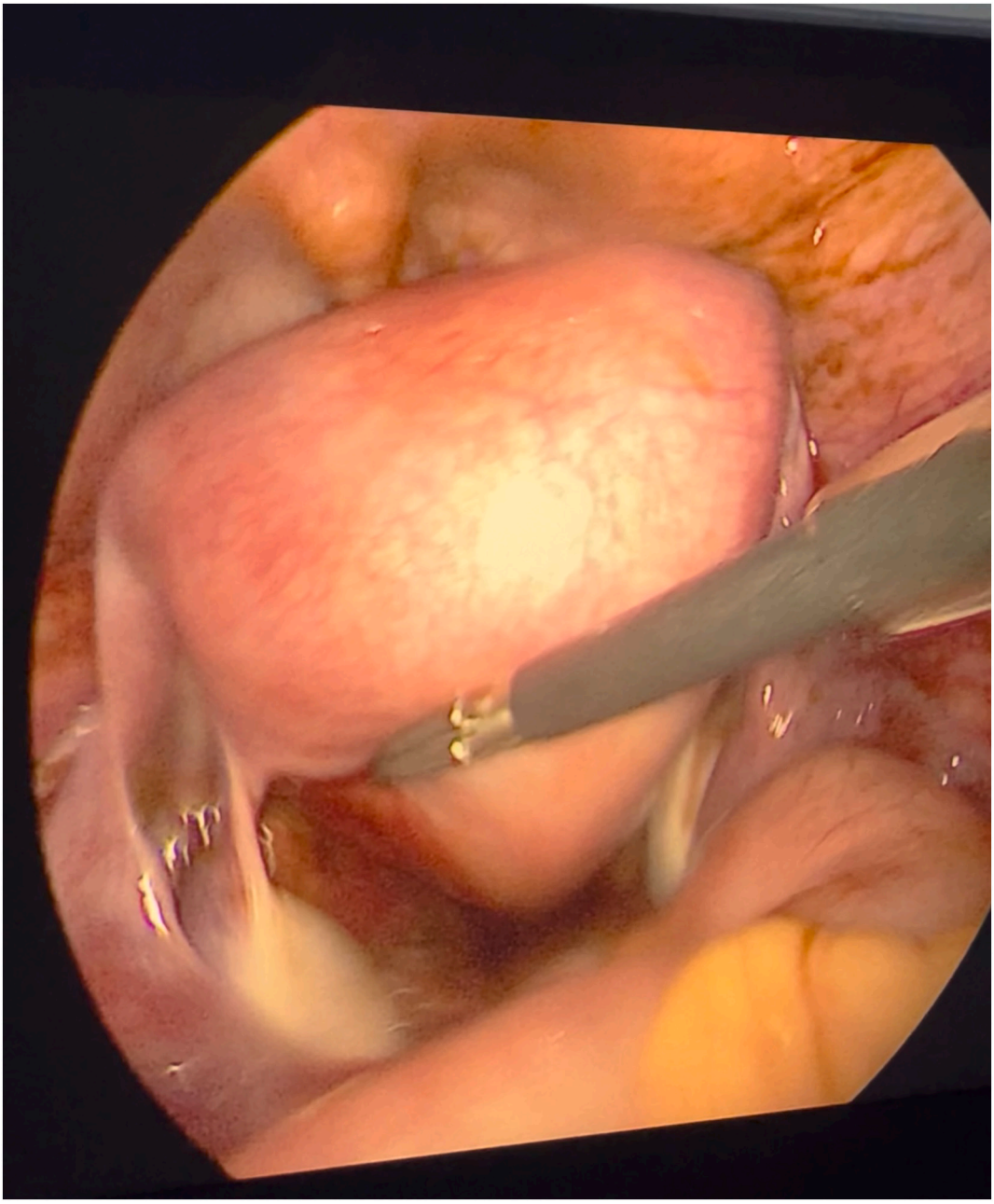

Fig. 4. Laparoscopic view showing gross uterine with normal ovaries.

2. Case presentation

A 14-year-old adelocant girl with primary amenorrhea and severe persistent pelvic pain presented to the gynecology outpatient clinic in our hospital, On physical examination, her height was 160 cm, breast development was normal for her age, and other secondary sexual characteristics was seen normal for her age, she had lower abdominal distension, which felt like a firm mass extending up to the suprapubic and into the pelvic cavity. On pelvic examination, external genitalia was seen as normal, a speculum examination revealed a blind-ending vagina 2 cm from the introitus and there did not see cervical external os (Fig. 1). She had no known medications history of allergies, adverse reactions, diseases, and her family disease. She had failed septum excision due to TVS earlier 2 months another hospital.

Transabdominal ultrasonography revealed a markedly both fluid intrauterine cavity and upper vaginal canal. These findings were consistent with hematometrocolpos (Fig. 2). Because of all findings of examination and images were diagnosed to transverse vaginal septum.

The patient's family were reported that she underwent vaginal incision with a drained of blood without septum excision 2 months earlier but unluckily, two weeks later faced the same symptoms that's why came to us.

The patient was admitted to the gynecology and obstetrics clinic for a planned septum excision. The patient underwent general anesthesia, we performed diagnostic laparoscopy to check her internal reproductive organs (Fig. 4) and then a partial incision of the septum was done, and then draining 300 mL of dark Brown fluid from the vaginal canal to the outside and local circumferential excision of the septum (which is about 5 mm thin diameter fibrous tissue) after those were seen the cervix (Fig. 3). Then with end-to-end suturing of the remained vaginal edges by Vicryl 2.0 and put urinary 22 number catheter inside the upper vagina for preventing stenosis of the vagina in the operating room. Then,

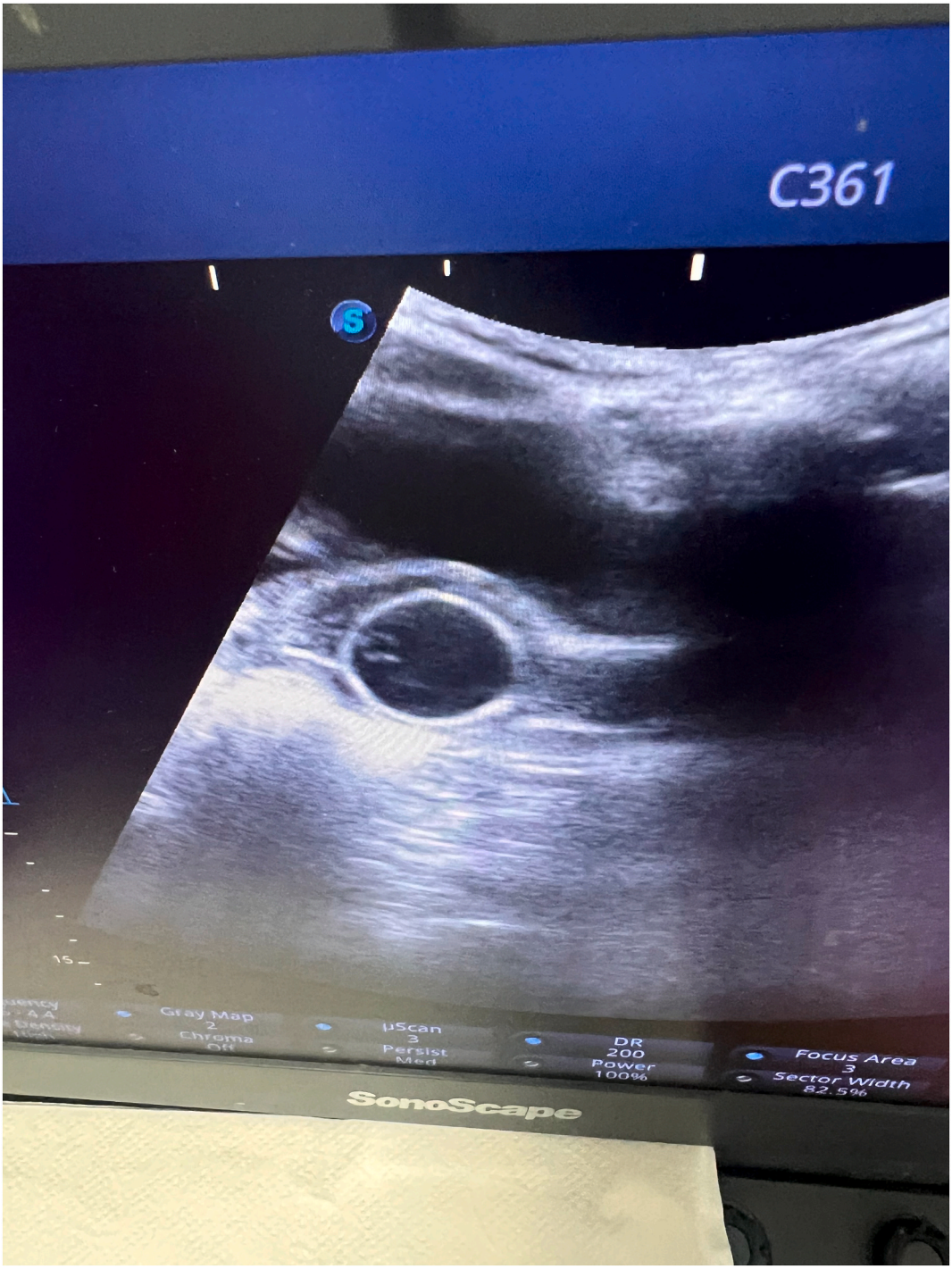

Fig. 5. Ultrasonography showing Foley catheter in the uterus 3 months after surgery.

Transabdominal ultrasonography was noted a few fluid remained in the uterin cavity. The patient had an uneventful postoperatively. She had no pain or discomfort. She was discharged home on a postoperative day 1 in very well condition. At discharge time sponge soaked with estrogen cream and 22 number of catheter were placed in her vagina to prevent stenosis. We were discharged with estrogen cream and the catheter. We followed up every two weeks for five months following surgery. Both the catheter and receiving estrogen cream were 3 months (Fig. 5), after which removed catheter and stoped estrogen cream for 2 months (Fig. 6). During this time, vaginal mucosa healed with smooth and no vaginal stenosis, and the patient had a normal menstrual cycle.

3. Discussion

Transverse vaginal septum is an uncommon congenital illness, which is caused by an absence of canalization or fusion of the müllerian ducts and the urogenital sinus, the detection of which is not until the age of menarche when the period hasn't yet started [9]. Our patient never had menstrual bleeding.

Anatomically, the majority of patient's location of the septum is in the upper two-thirds of the vagina [9]. In our case, the septum was located in the upper two-thirds of the vagina, 2 cm away from the introitus.

This anatomical barrier may restrict vaginal outflow and manifest as

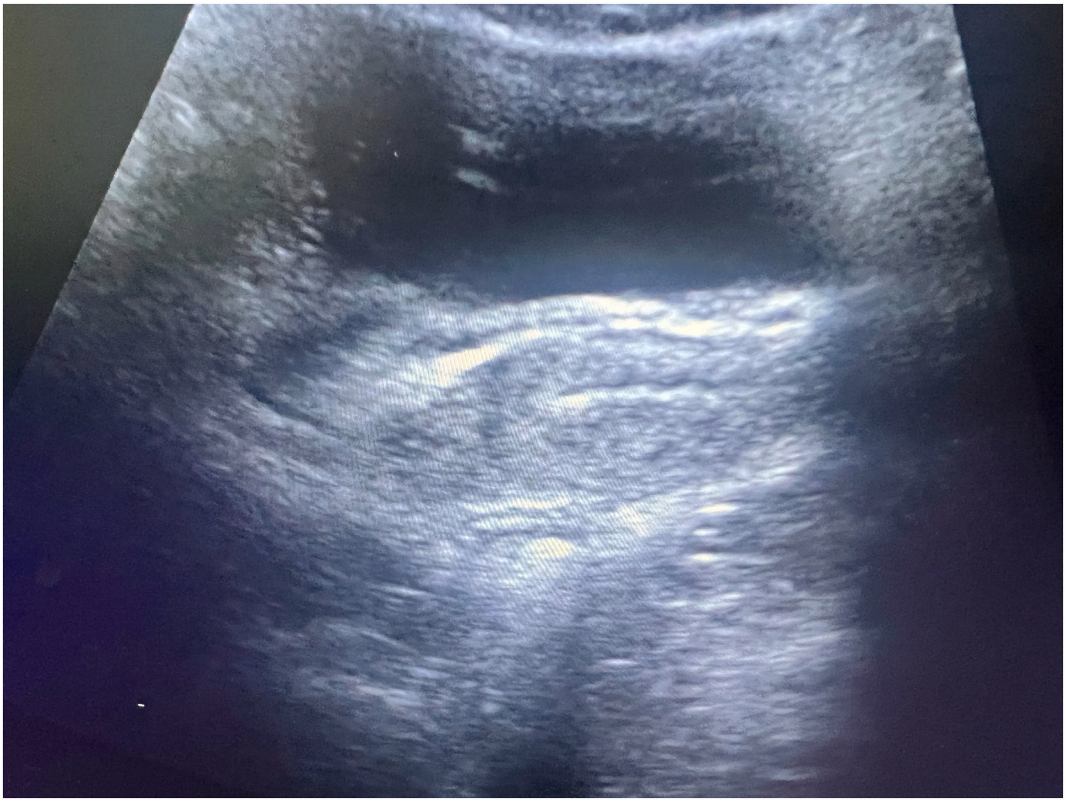

Fig. 6. Ultrasonography showing the uterus, cervix, and vagina without echogenic fluid 5 months after surgery.

mucocolpos in prepubertal children or as haematocolpos accompanied with cyclic abdominal pain and distension and late menarche in improferated type, perforated-type transverse vaginal septa is typically asymptomatic until adolescence or adulthood [10]. In our patient presented with complaints of increased recurrent pelvic pain and amenorrhea.

On the physical examination, the abdomen was swollen and is a cystic mass that can be felt up to the umbilicus. The cystic mass is usually mobile and has a smooth surface [10]. In our case, on physical examination, she had lower abdominal distension, which felt like a firm mass extending up to the suprapubic and into the pelvic cavity. On pelvic examination, external genitalia was seen as normal, a speculum examination revealed blind-ending vagina 2 cm from the introitus and there did not see cervical external os.

On ultrasonography, a hypoechoic crescent-shaped tissue with a swollen uterus full and upper cervix with blood or secretions (hematometrocolpos) may be seen, revealing the diagnosis. However, MRI has been advised for a thorough assessment of an obstructed vagina, as it can aid in the location and measurement of a septum for surgical repair [4,5]. In our case, transabdominal ultrasonography showed a significantly fluid intrauterine cavity and upper vaginal canal. These results were compatible with hematometrocolpos since the septum was determined to be thin and in the upper two-thirds of the vagina.

There are various surgical alternatives, including the vaginal approach, a combined abdominoperineal approach, and laparoscopic resection from the abdominal route. The surgical management guidelines are still up for debate. Surgical technic will depend on the location, thickness of the septum, and skilled operator [2,3,6,7]. Our case had a thin, situated lower the vagina, therefore we did a vaginal approach with circumferential excision, followed by end-to-end suturing of the remaining vaginal margins using Vicryl 2.0, and finally inserted a urinary catheter (number 22) into the vagina to prevent stenosis. She had no complications such as vaginal stenosis or lower abdominal distension, and had a normal menstrual cycle thereafter.

4. Conclusion

The transverse vaginal septum remains a rare anomaly of the female genital tract, the reasons for its discovery are extremely variable according to its shape and location. Hematometrocolpos remains the main consequence of these septums. The management is essentially based on surgery while taking into account the risks of postoperative stenosis and the repercussions on the upper genital tract. The excision of septum have put catheter for 3 months with estradiol cream to prevent stenosis and failure of the operation. The management can be done in transverse vaginal septum, without any complications such as tissue contracture, vaginal stenosis, or scarring. This report gave an option in a simple and effective method that allows the gynecologist to treat this case to reach a good result and still needed to follow up in the future.

Surgery perfomed by Dr. Adil Barut Obstetrics and Gynecology specialist at Somali-Mogadishu Recep Tayyip Erdoğan Research and Training Hospital, Mogadishu, Somalia. Adil Barut is an Obstetrics and Gynecology specialist doctor since 2013.

Author contribution

Surgical and Medical Practices: Adil Barut, M.D.
I am an Obstetrics and Gynecology specialist doctor since 2013.
Concept: Adil Barut, M.D.
Design: Adil Barut, M.D.
Literature Search: Adil Barut, M.D.
Writing: Adil Barut, Zeina Ahmed Hirsi, Khadija Yusuf M.D.
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Surgery performed by Dr. Adil Barut Obstetrics and Gynecology specialist at department of Obstetrics and Gynecology.

Provenance and peer review

No peer review not commissioned.

Source of funding

None.

Ethical approval

Not applicable for case report in our institute.

Consent

Written patient consent was optained from the patient for publication of this case report.

Research registration

No new surgical techniques or new equipments/technology.

Guarantor

Assoc. Prof. Sertac Cimen.

Declaration of competing interest

None.

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