

# Cryptomenorrhea Due to Acquired Mid-Vaginal Atresia: A Case Report Treated by Vaginoplasty and Serial Vaginal Dilatation

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## Abstract

We report a case of a 19 - year old Para 0+2, single sales girl who presented with 2-year history of amenorrhea and cyclical lower abdominal pain for 1 year following insertion of herbal concoctions in the vaginal aimed at terminating an unwanted pregnancy. There was associated loss of sexual function and dyspareunia. Examination revealed mid-vaginal atresia with vaginal length of about 4 cm. Ultrasound showed hematometria and hematocolpos. She had vaginoplasty with serial vaginal dilatation using soft vaginal mould for 4 weeks. She did well on follow up with finding of normal size empty uterus and well-defined endometrial plate on ultrasound. She menstruated 2 weeks post-operatively and established normal penetrative vaginal intercourse thereafter.

**Keywords:** Cryptomenorrhea; Acquired gynetresia; Vaginoplasty; Vaginal mould

## Introduction

Acquired gynetresia is a common gynecological problem in developing countries where interventions by untrained health workers or quacks result in genital tract injuries. Among women presenting with gynetresia in Lagos, Nigeria, 83.0% of the women had acquired disorders [1] while an incidence of 7/1000 women was reported in Ibadan [2]. Practices that lead to acquired gynetresia include vaginal insertion of herbal pessaries for treatment of infertility, uterine fibroids and uterovaginal prolapse and for procurement of abortion [1,2]. In Arab world, postpartum insertions of rock salts in the vagina to restore the vagina to the nulliparous state as well as female genital mutilation are common causes of acquired gynetresia [1,3,4]. We present a 19 - year old girl with acquired mid-vaginal atresia due to chemical vaginal burns resulting from insertion of herbal pessaries in the vagina aimed at terminating an unwanted pregnancy.

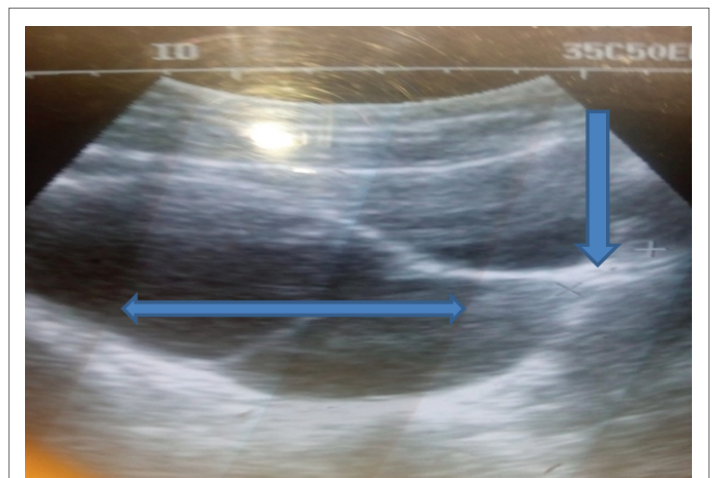
## Case Report

A 19 - year old Para 0+2 single lady presented with amenorrhea for 2 years and cyclical lower abdominal pain for 1 year. She had normal vagina and uterus and had been sexually active from about the age of 16 years. She discovered she was 8 weeks pregnant confirmed with a positive urinary pregnancy test and decided to terminate it using vaginal misoprostol tablets but this failed. She later inserted herbal concoctions in the vagina, given to her by herbalist. She experienced burning pain in the vagina 2 days later and presented at a private clinic where she had vaginal irrigation with normal saline and dilatation

and curettage. About 4 months later, menstruation had not resumed and she discovered that her vagina was blocked on insertion of fingers. She also experienced difficulties in achieving penetrative vaginal intercourse with associated dyspareunia and later resorted to anal sex. One year later, she developed cyclical lower abdominal pain with progressive supra-pubic fullness. She had terminated a pregnancy a year earlier at 8 weeks gestation using vaginal misoprostol and salt solution.

Clinical examination reveals a young anxious lady. Abdominal examination revealed supra-pubic fullness. There was a supra-pubic mass of about 14 weeks' size, cystic, and mildly tender. There was no other palpable mass. The external genitalia were normal but speculum examination revealed a blind ending vagina, about 4 cm in depth. Digital rectal exam revealed a patulous anus with decreased sphincteric tone and a cystic mass adjacent the anterior rectal wall.

Assessment of cryptomenorrhea due to acquired vaginal atresia resulting from chemical vaginitis was made. Pelvic ultrasound revealed bulky distended uterus and upper vagina, both harbouring hypoechoic contents (Figure 1). Her hematocrit was 35%, urinalysis was normal and HIV



**Figure 1:** Ultrasound picture Shows site of atresia (single arrow) and dilated upper vagina and uterine cavity with menstrual blood (double arrow)

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screening was non-reactive. Diagnosis and treatment were discussed with her and was planned for vaginoplasty and serial vaginal dilatation with vaginal mould.

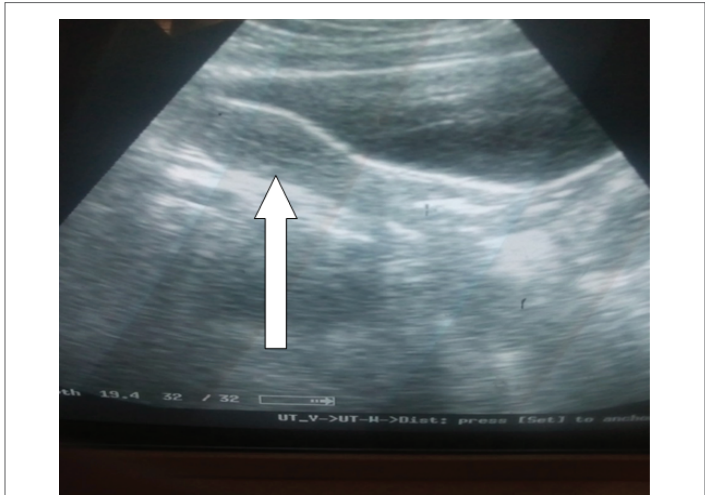
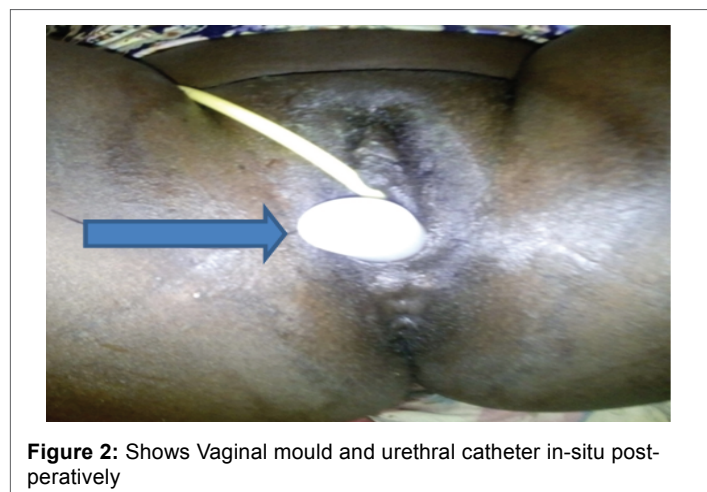
### Operative Procedure

The patient was placed in lithotomy position after spinal anesthesia and was cleaned and draped. Anterior and posterior walls of the blind ended vagina were retracted with Sims' speculum. Transverse incision was made at the middle of the blind end of the vagina to separate the urinary bladder above and the rectum below. A combination of blunt and sharp dissection was done for about 4-6 cm in depth to reach the upper end of the atresia. An incision was made on the tissue separating the hematocolpos and the dissected upper end of the vagina resulting in drainage of accumulated menstrual blood. Edges of the dilated cervix were grasped with sponge holding forceps and about 400 ml of menstrual blood was freely drained. A vaginal mould wrapped with Vaseline gauze was inserted in the vagina (Figure 2).

She was placed on prophylactic intravenous Ampicillin/Cloxacillin 1g 6 hourly and Metronidazole 500 mg 8 hourly for 48 hours, intramuscular Pentazocine 60 mg 6 hourly for 36 hours and normal saline alternated with 5% dextrose 1 litre 8 hourly for 24 hours. Vaginal mould was changed daily under analgesia and light sedation with diazepam. The patient did well and was discharged on oral Piroxicam and vitamin C fifth day post-operatively. She was followed-up weekly and used the vaginal mould twice daily for 4 weeks, leaving it in-situ for about 10 – 20 minutes during each session. She later resumed normal menstruation 2 weeks postoperatively which lasted for 4 days. She admitted in one of the visit to have had penetrative vaginal intercourse with minimal discomfort. At each visit, speculum examination (Cusco) was done and the cervix had returned to normal shape by the third visit. Repeat pelvic ultrasound showed normal size empty uterus with intact endometrial plate (Figure 3). She was counseled on safe sex if she cannot abstain and was discharged from the clinic.

### Discussion

Vaginal atresia is either congenital or acquired and may be partial or complete. Congenital vaginal atresia usually occurs as part of Mayer-Rokitansky-Kustner-Hauser (MRKH) syndrome, a condition seen in about 1 in 4000-5000 female live births [5]. MRKH-syndrome involves congenital aplasia of the uterus and vagina with primary amenorrhea. Hence patients with MRKH-syndrome have neither hematocolpos nor hematometra. Acquired vaginal stenosis or atresia is relatively common in developing countries as result of harmful traditional practices or mismanagement of some medical conditions leading to vaginal injuries [1-4]. These practices include female genital mutilation, use of rock salts for vaginal tightening, insertion of herbal pessaries for treatment



**Figure 3:** Shows post-operative ultrasound picture of normal size empty uterus with intact endometrial plate at third week visit

of uterine fibroids, infertility, uterovaginal prolapse and termination of unwanted pregnancies [1-3]. Acquired vaginal atresia has also been reported from obstetric injuries, complication of genital fistula repair and neglected foreign bodies in the vagina [6-8]. Our patient developed midvaginal atresia as a result of insertion of herbal pessaries in the vagina to terminate a pregnancy. This and insertion of other corrosive substances usually cause chemical vaginitis [9]. Irritation causes damage to the vaginal epithelium due to chemical burns and subsequent healing with apposition of the vaginal wall surfaces leads to occlusion of the vagina which may be complete or partial as noted in this patient. The present case with acquired middle vaginal atresia resembles that of a patient with transverse vaginal septum [10]. This obstructive vaginal malformation precludes the outflow of menstruation and causes hematocolpos and often hematometra. Surgical treatment of this congenital malformation is similar to the case reported [11,12]. Vaginal atresia or stenosis may have profound psychological effects and loss of sexual function. Vaginal atresia presents as dysmenorrhea, amenorrhea, coital difficulty (apareunia) and dyspareunia, cryptomenorrhea, hematocolpos and hematometria [13,14] as seen in the typical presentation of our patient. Treatment of vaginal atresia is either conservative or surgical aim at reconstructing a functional vaginal canal. Conservative method is applicable mainly in cases of congenital atresia and involves serial dilatation with graduated vaginal dilators leading to progressive invagination of the vagina to create an adequate vaginal length for coital purposes. Serial dilatation is successful in creating functional vagina in 90% of cases, especially in primary gynetresia [15]. Repeated coitus has also been shown to create vaginal canal [15] but this was not recommended in this patient as she was single. Acquired gynetresia is mainly treated by surgical intervention. Several procedures have been successfully used for the creation of neovagina and treatment of secondary vaginal atresia including McIndoe vaginoplasty and Fenton's operation [14,15]. These procedures may involve the application of grafts on the raw vaginal surfaces. Application of a pudendal thigh flap has been described in the creation of neovagina in women with acquired gynetresia resulting from caustic vaginal burns but it has the disadvantages of hair growth and numbness in the vagina [16] Use of amniotic membrane as a graft and vaginal mould has been successfully used in the treatment of secondary vaginal atresia with good outcome [17]. In this patient, vaginoplasty was carried out by division of vaginal adhesions with successful drainage of accumulated menstrual blood and subsequent serial dilatation using vaginal mould to prevent restenosis or atresia. Dilatation is said to cause stretching of the mucosa, induce mitosis and growth of new epithelium and this procedure has also been used successfully elsewhere [13].

Serial dilatation requires patient co-operation as noted in this patient. She did well on follow up and menstruated 2 weeks postoperatively and established normal penetrative vaginal intercourse thereafter.

## Conclusion

Acquired vaginal atresia should be considered in young women presenting with secondary amenorrhea especially in the tropics where insertion of herbal pessaries in the vagina is used for treatment of some conditions in women. Partial vaginal atresia can be treated with simple vaginoplasty in combination with serial vaginal dilatation using a mould with good results.

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