Scholars Journal of Medical Case Reports (SJMCR) **ISSN 2347-6559 (Online)**
Abbreviated Key Title: Sch. J. Med. Case Rep. **ISSN 2347-9507 (Print)**

A United of Scholars Academic and Scientific Society, India

Cervical Atresia with A Functioning Uterus: Successful Surgical Treatment by Foley's Catheter Stent (Uterovaginal Anastomosis): A Case Report

Dr. Mst. Moonmoon Begum[1*], Prof. Ferdousi Sultana[2], Dr. Md. Shahidul Islam Sugom[3], Dr. Hasina Banu, IMO[4]
[1]Resident Surgeon, Department of Obstetrics & Gynecology, Rangpur Medical College & Hospital Rangpur, Bangladesh
[2]Head of the Department of Obstetrics & Gynecology, Rangpur Medical College & Hospital Rangpur, Bangladesh
[3]Associate Prof. of the Department of Urology, Rangpur Medical College & Hospital Rangpur, Bangladesh
[4]Department of Obstetrics & Gynecology, Rangpur Medical College & Hospital Rangpur, Bangladesh

***Corresponding author**
Dr. Mst. Moonmoon Begum

Article History
Received: 23.09.2018
Accepted: 04.10.2018
Published:30.10.2018

DOI:
10.36347/sjmcr.2018.v06i10.004

Abstract: Atresia of cervix is a rare mullerian anomaly. This anomaly frequently occurs in association with absence of a portion or whole of the vagina. A functioning uterus with an absent cervix and vagina is extremely rare with less than 20 cases reported in English literature. The main objectives of treatment of cervical agenesis were symptom relief, achievement of regular menstruation and restoring fertility and management of these cases represent a challenge as in many cases treatment fails and hysterectomy may be needed. In this case a simple method was used and found effective. A 16 size Foley's catheter was used to create a Uterovaginal tract through vaginal approach in a 14 years old patient with diagnosis of the uncommon cervical atresia and hematometra of 16 weeks pregnant uterus size. The Foley's catheter was removed five weeks after operation. The patient was followed up for one year, and menstruation occurred regularly at monthly intervals. The procedure seems to be a simple and reasonably effective method for the creation of a menstrual outflow tract for cases of cervical atresia with functioning uterus.
Keywords: Cervical atresia, Foley's catheter, Functioning uterus.

INTRODUCTION

Mullerian ducts are differentiated, fused and canalized to form fallopian tubes, uterus, cervix and upper vagina. These are fused with the urogenital sinus that forms the lower vagina. These processes start cranially and progress caudally. Arrest at any level leads to "localized gynatresia". Cervical agenesis classified as type 1B Mullerian anomaly, according to the American Fertility Society [1], results from abnormal fusion of the Mullerian ducts with the urogenital sinus, or atrophy of a segment of normally formed Mullerian system[2]. The incidence of cervical atresia is 0.01% in general population. It represents about 3% of all uterine anomalies [3].

Cervical atresia is rarely associated with the presence of vagina and functioning uterus and if associated with functioning uterus, hematometra will occur [4,5]. It is estimated that only 4.8% of women with cervical agenesis have a functioning uterus [6]. These cases present usually presents with primary amenorrhea, cyclical lower abdominal pain, and well developed secondary sex characters [7].

The main objectives of treatment of cervical agenesis were symptom relief, achievement of regular menstruation and restoring fertility. Several techniques of reconstructive surgery have been developed to create Uterovaginal canal [7]. To prevent closure of the surgically formed Uterovaginal canal, it is recommended that uterovaginal catheter stent is left for 3-5 weeks [8-10]. Cyclic estrogen progesterone therapy such as combined OCP given postoperatively for 2-3 months promote epithelialization of the surgically formed uterovaginal canal [8, 9]. However, frequently re-operations due to re-stenosis of the formed canal are necessary and in many cases hysterectomy cannot be avoided [7].

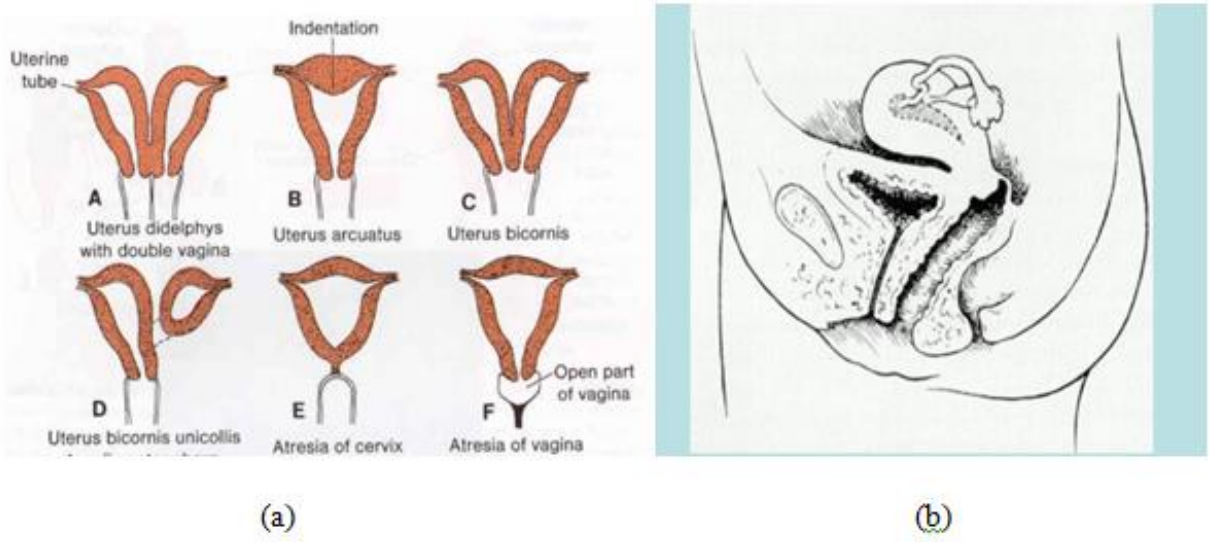

Fig-(a): Developmental anomalies of uterus, (b) Isolated cervical atresia with normal vaginal canal

CASE REPORT

A 14-year-old girl attended the out-patient department of Obstetrics & Gynecology in Rangpur medical college hospital, presenting with primary amenorrhea and cyclical severe lower abdominal pain for more than 5 months. Examination revealed normal secondary sexual characters, midline mass in the lower abdomen about 16 week pregnant uterus size. Vaginal examination showed a blind vagina of 5 cm length with absent cervix.

Pelvic ultrasound showed enlarged uterus filled with fluid content, suggestive of hematometra. Both adnexae were normal.

After counseling and informed written consent, examination under anesthesia revealed a blind vagina of 5 cm length. Urinary bladder drainage was done by inserting a Foley's catheter with all aseptic precaution. Vaginal exploration was done and a transverse incision given in the vaginal dome followed by deep dissection in the fibrous tissue and ultimately uterus was opened with passage of black tarry colored fluid of hematometra. Anterior and posterior wall of uterus was hold with tissue forceps and a 16 size Foley's catheter was placed in the uterus and inflation of the balloon with 10 cc distilled water was done followed by fixation of anterior and posterior lips of uterus with anterior and posterior wall of vagina respectively.

Her postoperative period was uneventful and she was discharged on 5th postoperative day. On discharge, three cycles of combined estrogen and progesterone therapy was given. The patient menstruates one month following operation. The uterine Foley's catheter was removed 5 weeks postoperatively. The patient was followed up for a year after operation. Menstruation occurred at regular monthly intervals.

DISCUSSION

We reported the case of a cervical atresia with hematometra which was successfully treated. Total hysterectomy was previously recommended treatment for cases of vaginal atresia with a functional uterus [4, 11]. Now-a-days, there is a tendency to preserve the uterus. Fedele *et al*. [12] reported a laparoscopic technique in 2008. Yasser *et al*.[13] reported an abdominal-vaginal approach where vaginal exploration was done by giving a transverse incision in the vaginal dome followed by deep dissection the fibrous tissue. Simultaneously a transverse suprapubic incision for abdominal approach was done for identification of the pelvic organs. The uterovesical fold of peritoneum was dissected carefully downward to free the anterior wall of the uterus from the bladder. A transverse incision (2 cm) was done to the uterus and after evacuation of hematometra by suction, a long artery forceps was put inside the uterus at the virtual level of internal os. The artery forceps was pushed gently downward till its tip appeared through the vaginal incision where a Foley's catheter size 16 was placed in its tip and put it inside the uterine cavity and inflation of its balloon by 5 cc saline followed by closure of the uterine incision.

There are three purposes of such operative procedure: to immediately relieve dysmenorrheal, to allow for sexual intercourse, and to allow for pregnancy and childbirth in the future. According to different reports, menstruation occurred regularly in most cases that underwent cervical canalization; however, in some cases reoperation may need because of secondary cervical atresia. In our case, the patient felt relieved to have menstruation. There are several reports of patient who achieved natural pregnancy after operation. Deffarges *et al*. [14] reported that 10 out of 18 patients who underwent surgery to treat cervical atresia with functioning uterus desired pregnancy; of this 4 had a pregnancy. All cases were caesarean section between

36-38 weeks of pregnancy and there was a need for cervical cerclage in one case3. Chakravarty *et al*. [15] reported that 2 out of 18 achieved pregnancy and gave birth. Jasonni *et al*. [16] reported that 1 out of 3 patients achieved pregnancy. The accumulation of cases is still necessary to evaluate the prognosis of pregnancy and delivery of the postoperative uterine cervical atresia.

CONCLUSION

Early diagnosis and treatment is necessary in case of cervical agenesis with functioning uterus because if treatment is delayed, patients may suffer from pelvic endometriosis, hematosalpinx, and infertility. Therefore, timing of surgery is very important. When a young woman present with primary amenorrhea and cyclical lower abdominal pain, clinician should consider Mullerian duct abnormality as a possibility. In this case the patient is free of cervical stenosis, dysmenorrhea, and regularly menstruating. Long term follow up is necessary in order to know the ability of sexual intercourse and to ensure a future pregnancy and childbirth.

REFERENCES

1. American Fertility Society classification of adnexal adhesion, distal tubal occlusion secondary to tubal ligation, tubal pregnancies, Mullerian anomalies and intrauterine adhesions. Fertil Steril. Vol.49, 1988. P. 944-55.
2. Anttila L, Penttila TA, Suikkari AM. Successful pregnancy after in vitro fertilization and transmyometrial embryo transfer in a patient with congenital atresia of cervix. Hum Reprod. 1999; 14:1647-9.
3. Grimbizis GF, Camus M, Tarlatzis BC, Bontis JN, Devroey P. Clinical implications of uterine malformation and hysteroscopic treatment results. Hum Reprod Update. 2001; 7: 161-74.
4. Fujimoto VY, Miller JH, Klein NA, Soules MR. Congenital cervical atresia: report of seven cases and review of literature. Am J Obstet Gynecol. 1997; 177:1419-25.
5. Hovsepian DM, Auyeung A, Ratts VS. A combind surgical and radiologic technique for creating a functional neo-endocervical canal in a case of partial congenital cervical atresia. Fertil Steril. 1998; 71: 158-62.
6. Olpin JD, Heribrun M. Imaging of Mullerian duct anomalies. Clin Obstet Gynecol. 2009; 52: 40-56.
7. Achour R, Basly M, Ben-Aissa I, Ferjaoui A, Neji K. Successful pregnancy by IVF in a patient with congenital cervical atresia. Asian Pacific J Reprod. 2015; 4(3): 249-50.
8. Shah TN, Venkatesh S, Saxena RK, Pawar S. Uterovaginal Anastomosis for complete cervical agenesis and partial vaginal agenesis. A case report. Eur J Obstet Gynecol Reprod Biol. 2014; 174: 154-5.
9. Sultana R, Haque N, Begum F. Effective uterovaginal anastomosis done in cervical agenesis with menouria. Bang Med J Khulna. 2013; 46: 28-30.
10. Tani Yasmin. Urinary catheter stent placement for treatment of cervical stenosis. Aust NZ J Obstet Gynecol. 2007; 47: 406-9.
11. Rock JA, Schlaff WD, Zacur HA, Jones Jr HW. The clinical management of congenital absence of uterine cervix. Int J Obstet Gynecol. 1984; 22: 231-235.
12. Fedele L, Bianchi S, Berfanda N, Montefusco S, Borruto F. Laparoscopically assisted uterovestibular Anastomosis in patients with uterine cervix atresia and vaginal aplasia. Fertil Steril. 2008; 89: 212-216.
13. Yasser AH. Cervical agenesis with a functioning uterus: Successful surgical treatment by Foley's catheter stent: A case report. Middle East Fertil Society. J 2017; 22: 67-69.
14. Deffarges JV, Haddad B, Musset R, Paniel B. Utero-vaginal anastomosis in women with uterine cervix atresia: long term follow up and reproductive performance. A study of 18 cases. HUM Reprod. 2001; 16: 1722-1725.
15. Chakravarty B, Konar H, Chowdhury NN. Pregnancies after reconstrucyive surgery for congenital cervicovaginal atresia. Am J Obstet Gynecol. 2000; 183: 421-423.