

A rare case: Vesicouterine fistula

Nadir bir vaka: Vezikouterin fistül

Selahattin Çalışkan, Hüseyin Kanberoğlu, Mehmet Akyüz, Mustafa Güneş

İstanbul Haydarpaşa Numune Eğitim ve Araştırma Hastanesi 2.Üroloji Kliniği, İstanbul, Türkiye

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ABSTRACT

Vesicouterine fistula is a communication between the bladder and the uterus. %1-4 of all urogenital fistulas are vesicouterine fistulas. The prevalence increase all over the world because of the more frequent use of cesarean section. Cystoscopy, cystography, hysterosalpingography, computed tomography (CT) and magnetic resonance imaging (MRI) are used in diagnosis of vesicouterine fistula. Treatment options of vesicouterine fistulas are various. These are conservative, medical or surgical treatments. Surgery is the mainstay and definitive treatment of vesicouterine fistulas. We presented a vesicouterine fistula case who was treated with open transvesical-transperitoneal technique.

Key words: Cesarean, fistula, uterus

ÖZET

Vesikouterin fistül mesane ile uterus arasındaki bir oluşumdur. Tüm ürogenital fistüllerin %1-4' ünü oluşturur. Son yıllarda sezaryen ameliyatının sık yapılmasından dolayı prevalansı artmaktadır. Sistoskopi, sistografi, histerosalpingografi, bilgisayarlı tomografi ve manyetik rezonans görüntüleme tanıda kullanılır. Tedavi seçenekleri çeşitli olup; konservatif, medikal ve cerrahi tedavilerdir. Cerrahi temel ve kesin tedavidir. Bu vakada açık transvesikal-transperitoneal teknikle tedavi ettiğimiz vaka sunuldu.

Anahtar kelimeler: Sezaryen, fistül, uterus

INDRODUCTION

Vesicouterine fistula is a communication between the posterior wall of the bladder and the anterior wall of the uterus.¹ Vesicouterine fistulas represent %1-4 of all urogenital fistulas, but the prevalence increase all over the world because of the more frequent use of cesarean section. Cause of the vesicouterine fistula is obstetric procedures, especially cesarean section in most cases.² Long labor, forceps delivery, vaginal birth after cesarean section, abdominal pregnancy for perforation of the anterior wall of the uterus, gynecological injuries, tuberculosis of the genital tract and contraceptive devices are other causes of vesicouterine fistulas.¹ We presented a vesicouterine fistula case that treated with open transvesical-transperitoneal technique.

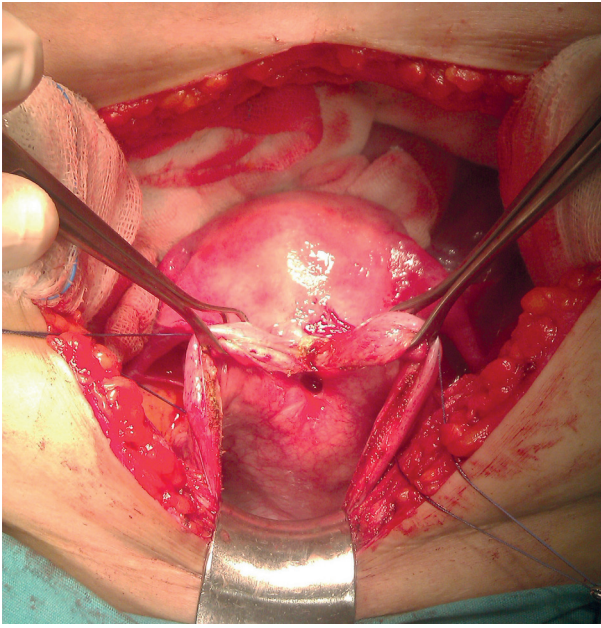
CASE REPORT

A 37 year old woman (gravida 3, para 3) who was applied with menouria after cesarian section. She had undergone cesarian section before 5 months. The other cesarian sections were before 9 and 2 years. Hematuria and urinary incontinence were appeared after cesarian section postoperatively. She had been treated with fulguration of the fistulous tract before 4 months. Her complaints did not disappear after this operation. Cystoscopy showed a hole fistula at superior of the trigone. Methylene blue instilled into the bladder wall but the passing to the uterine cavity was not seen. Vaginal examination was performed and no pathology was detected. We planned open surgery technique (transvesical-transperitoneal). At laparotomy, we saw the fistulous tract and opened

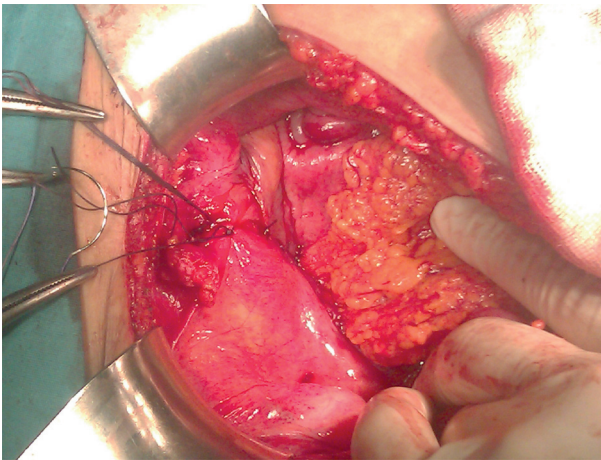
Yazışma Adresi /Correspondence: Dr. Selahattin Çalışkan

Haydarpaşa Numune Eğitim ve Araştırma Hastanesi 2.Üroloji Kliniği, İstanbul, Türkiye Email: dr.selahattin@gmail.com
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the bladder (Picture 1). The track was excised and bladder and uterus were closed with two layers. The omental flap interposition was used (Picture 2). Peroperative and postoperative complications were not seen. The patient has no problem who is in third months follow up.



Picture 1. The fistulous track



Picture 2. Omental interposition

DISCUSSION

Vesicouterine fistula is a rare condition in urology practice. Most cases of vesicouterine fistulas occur after low cesarean delivery.³ The bladder may be damaged by direct injury, inadequate down-

ward mobilization or aberrant sutures in cesarean section.¹ Iatrogenic injury during cesarean section which is %83-88 of cases is the main cause of vesicouterine fistulas.⁴ The risk increases 2 times more when repeated cesarean sections. Delayed vesicouterine fistula may result for infection, devascularization, clamping or hematoma of the bladder. Youssef described the clinical syndrome of vesicouterine fistulas following cesarean section. The syndrome (Youssef) includes menouria, amenorrhea and absence of vaginal urinary leakage.⁵ The main symptom is urinary incontinence in the early postoperative period but the patients may present with amenorrhea, vaginal leakage of urine, urinary tract infection, cyclic hematuria and secondary infertility after several months or years later.⁶ Symptoms are changeable on the level of the fistula and can be explained by the sphincter mechanism of the uterine isthmus and different pressure gradients.³ When the fistula is above the isthmus the menstrual blood passes into the bladder. The menstrual blood passes into the vagina when the fistula is below the isthmus. Urine leaks through the fistula from the bladder into the uterine cervix and the vagina when there is high pressure in bladder. There is three types of vesicouterine fistulas according to the menstrual flow. Type I present with menouria, type II with dual flow both the bladder and the vagina, type III with normal vaginal menses.⁷ In differential diagnosis; endometriosis, vesicovaginal and ureterovaginal fistulas must be excluded.¹

Cystoscopy, cystography, hysterosalpingography, computed tomography (CT) and magnetic resonance imaging (MRI) are used in diagnosis of vesicouterine fistula.² Excretory urography is important for ureteral pathology.⁶ CT appears as a valuable tool in depicting a fistula. When a low vesicouterine fistula is present, CT after intravenous contrast injection is a good method, but a high vesicouterine fistula is present, hysterothyrography shows the best.³ MRI and sonography (gray-scale and doppler) can show abnormalities, but the results are not conclusive. Methylene blue instilled into the uterine cavity or through the urethra or through catheterization of a visible lesion in the bladder wall can confirm the fistula but do not show the track. The test can be negative, when there is a long and tortuous tract.³ In our patient this test was negative. In differential diagnosis; endometriosis, vesicovaginal and ureterovaginal fistulas must be excluded.¹

Treatment options of vesicouterine fistulas are various. These are conservative, medical or surgical treatments.^{4,8} Conservative treatment is bladder catheterization for three weeks which is adequate for early diagnosed small fistulas. Medical treatment is hormonal amenorrhea by oral contraceptive pills or luteinizing hormone-releasing hormone analog. This management is less successful with a mature tract (6 weeks or longer). Fulguration of the lining of the fistulous tract is another conservative therapy.⁶ Spontaneous closing of the fistula is only %5 of patients.

Surgery is the mainstay and definitive treatment of vesicouterine fistulas.¹ Vaginal, transvesical, transperitoneal, laparoscopic and robotic procedures are different approaches for surgery.⁴ Timing of surgery is important. Surgical repair should be planned for at least 2-3 months after caesarean section for complete uterine involution and resolution of inflammation.⁹ Hysterectomy is not necessary for treatment of vesicouterine fistula.⁴ Disappearance of vaginal leakage and/or menouria with the recovery of normal menses are the signs of effective and successful treatment.⁹

Consequently vesicouterine fistula is a very rare condition. The prevalence of vesicouterine fistula increases because of the more frequent use of caesarean section. Vesicouterine fistula affects qual-

ity of life negatively. Surgery is the main treatment with high success and efficacy rates. The other treatment options are adequate for selected patients.

REFERENCES

1. Porcaro AB, Zicari M, Antonioli SZ, et al. Vesicouterine Fistulas Following Cesarean Section. *Int Urol Nephrol* 2002; 34(3):335-44.
2. Yokoyama M, Arisawa C, Ando M. Successful Management of Vesicouterine Fistula by Luteinizing hormone-releasing hormone analog. *Int J Urol* 2006; 13(4):457-9.
3. Smayra T, Ghossain MA, Buy JN, Moukarzel M, Jacob D, Truc JB. Vesicouterine Fistulas: Imaging findings in three cases. *AJR* 2005; 184(1):139-42.
4. Bettez M, Breault G, Carr L, Tu LM. Early Versus delayed of Vesicouterine Fistula. *J Can Urol Assoc* 2011; 5(4):52-5.
5. Youssed A.F. Menouria following lower segment Cesarean section. A Syndrome. *Am J Obstet Gynecol* 1957; 73(4):759-67.
6. Tarhan F, Erbay E, Penbegül N, Kuyumcuoğlu U. Minimal invasive treatment of vesicouterine fistula: a case report. *Int Urol Nephrol* 2007; 39(3):791-3.
7. Jozwik M. Clinical classification of vesicouterine fistula. *Int J Gynaecol Obstet* 2000; 70(3):353-7.
8. Chang-Jackson SC, Acholonu UC Jr, Nezhat FR. Robotic-assisted laparoscopic repair of a vesicouterine fistula. *J Soc Laparoendoscopic Surg* 2011; 15(3):339-42.
9. Ekinci M, Hoşcan M.B, Tunçkiran A. Pregnancy following spontaneous closure of a vesicouterine fistula. *Türk Üroloji Dergisi* 2008; 34(3):379-81.