Sudden Decline in Semen Volume Due To Seminal Vesicle Fistula in a Patient with Crohn's Disease: A Case Report

Yasushi Yumura,[1,2] Kazumi Noguchi,[1] Masatoshi Moriyama,[2] Akira Iwasaki[3]

[1] Department of Urology, Yokohama City University, Medical Center, Yokohama, Japan.
[2] Department of Urology, Yokohama Municipal Citizen's Hospital, Yokohama, Japan.
[3] Department of Urology, Yokohama Minato Red Cross Hospital, Yokohama, Japan.

Corresponding Author:

Yasushi Yumura, MD
Department of Urology, Yokohama City University, Medical Center, Yokohama, Japan.

Tel: +81 45 261 5656
Fax: +81 45 253 1962
E-mail: yumura@yokohama-cu.ac.jp

Received August 2012
Accepted March 2013

Keywords: seminal vesicles; fistula; etiology; Crohn's disease; complications.

INTRODUCTION

Seminal vesicle fistula (SVF) is an uncommon condition. Many cases of seminal vesicle fistula are related to bowel lesions. We report a very rare case of SVF associated with a perianal abscess that developed in a Crohn's disease patient complaining of decline in semen volume.

CASE REPORT

A 34-year-old man with a history of Crohn's disease was referred to our department in July 2007 complaining of a decrease in ejaculated semen volume and pneumaturia for the past 2 months. He had previously undergone two perineal abscess drainage procedures (Seton's method) in 2000 and 2007 due to perianal and ischiorectal abscesses arising from Crohn's disease. His erectile function was normal. Physical examination revealed induration of the tail of the left epididymis. He was afebrile. Testicular size, measured with an orchidometer, was normal bilaterally (14 mL). The prostate could not be examined because of anal stricture and a Penrose drain that was indwelling from the perineum to a perianal abscess. On ejaculation, watery fluid was discharged from the perineal drain. We did not examine whether spermatozoa existed in the fluid discharged from the perineal drain. Semen analysis revealed very low semen volume (0.3 mL and 0.7 mL) and azoospermia. Serum sex hormones levels including follicle-stimulating hormone, luteinizing hormone and testosterone were within normal limits.

Cystogram and cystoscopy revealed no abnormalities. Magnetic resonance imaging (MRI) before the second perineal drainage showed bilateral contracted seminal vesicles and a high-in-

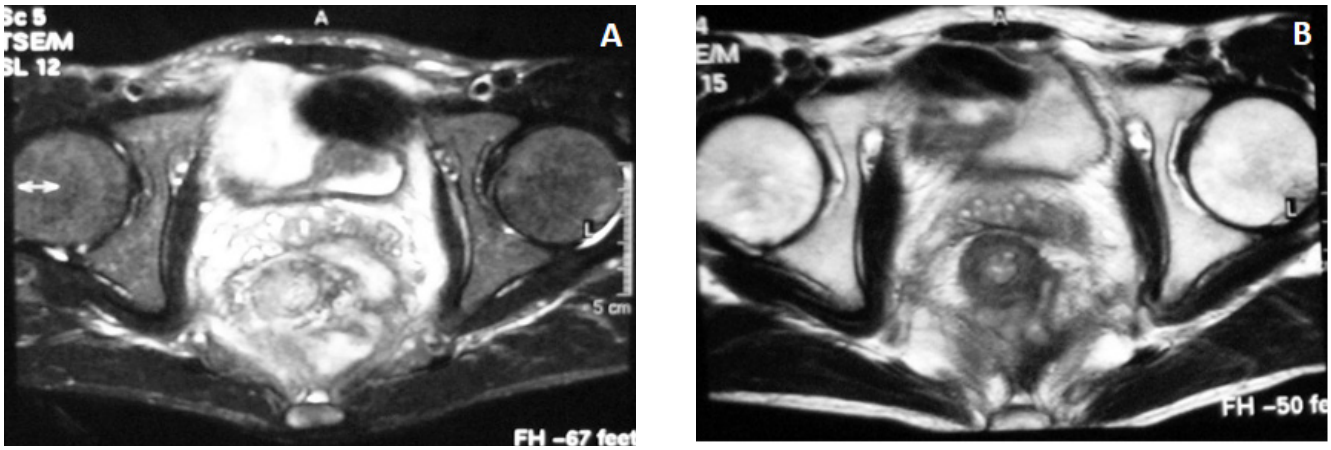

Figure 1. A) Magnetic resonance imaging (MRI) before perineal drainage showed bilateral contracted seminal vesicles and a high-intensity cystic lesion that was located posterior to the seminal vesicle, and we suspected this was an abscess (white arrow). B) MRI after drainage did not show seminal vesicle.

tensity cystic lesion that was located posterior to the seminal vesicle, and we suspected this was an abscess (Figure 1A). MRI after the second drainage failed to show seminal vesicle (Figure 1B).

Vasography showed bilateral obstruction at the level of the ejaculatory duct. Left seminal vesicle was not visualized. Leakage of contrast from the right seminal vesicle to the perineal drain via the posterior lesion of the urinary bladder was demonstrated (Figure 2). Subsequently, he underwent colostomy because the perianal and ischiorectal abscess had not improved. Seminal tract reconstruction was not performed because of the operation difficulties expected with severe perivesical adhesion. After the surgery, the abscess gradually healed and semen volume increased to 1.0 mL. We found sperm (64.0×10^6/mL) in his ejaculate 16 months after the operation.

DISCUSSION

In this case, the causes of azoospermia and sudden decline in semen volume were obstruction of the ejaculatory duct and leakage of seminal vesicle fluid to an abscess. We speculated that the abscess that had been drained unsuccessfully extended to the peri- and rear- prostatic and vesical lesions and led to seminal vesicle destruction and seminal tract obstruction. Because of seminal vesicle destruction, we speculated that the right seminal vesicle was connected to the abscess and seminal vesicle fluid was discharged through the Seton drain. We considered that the colostomy led to reduction of the abscess and repair of the seminal tract.

SVF is a very rare disease. To our knowledge, approximately 20 cases have been reported to date. The most common causes of fistulae are diverticulitis,[1] colorectal cancer [2-4] and Crohn's disease.[2,5] Other causes include trauma,[6] radiotherapy, infectious cyst [7] and unknown causes.[8]

Almost all reported cases had fistula that connected the seminal vesicle with the colon or rectum.[1,3-8] To our knowledge, cases of a fistula connected to a perianal abscess are very uncommon. Many seminal vesicle fistulas present with symptoms relating to febrile genitourinary tract infection or lower urinary tract symptom, such as pollakiuria or dysuria.

This SVF patient had a unique clinical course. There has been no report concerning SVF with a chief complaint of sudden decline in semen volume and obstruction of the ejaculatory duct, as in our patient. Crohn's disease may cause fistula in the extra-intestinal tract, including refractory perianal abscesses. Carlin and colleagues also reported a case of SVF related Crohn's disease.[2] In their case, seminal vesicle communicated with perineum area and the patient had recurrent white discharge from the perineal fistula. It was not reported that the patient had a complaint of decline in semen volume.

Computed tomography is usually used for the diagnosis of SVF. Vesiculography,[5, 8] contrast enema [1,2,4] and fistulog-

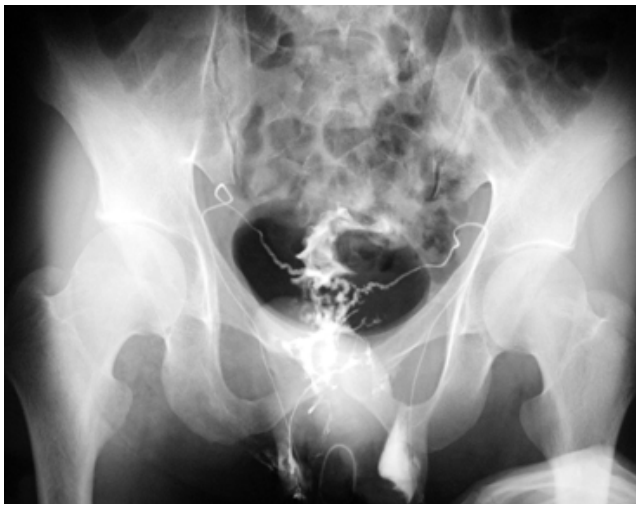

Figure 2. Vesiculography showed bilateral obstruction at the level of the ejaculatory duct. Left seminal vesicle was not shown and leakage of contrast from the right seminal vesicle to the perineal drain via the posterior lesion of the urinary bladder was demonstrated.

raphy have also been used. In general, vesiculography MRI of the seminal vesicle are alternative diagnostic tests for low ejaculate volume. In our case, these examinations were useful for diagnosis of SVF and scrutiny around the seminal vesicle. The reported treatment modalities for SVF are conservative treatment,[2,5,8] surgical drainage (transurethral unroofing,[9] transperinael approach,[7] percutaneous approach [4,6] and laparotomy and excision of the culprit lesion. [1] When excision of the culprit lesion is difficult, colostomy is a valuable tool for treatment. In our patient, the abscess gradually healed, the semen volume increased and spermatozoa appeared in ejaculate after the surgery.

CONFLICT OF INTEREST

None declared.

REFERENCES

1. LaSpina M, Facklis K, Posalski I, Fleshner P. Coloseminal Vesicle Fistula: Report of a Case and Review Of the Literature. Dis Colon Rectum. 2006;49:1791-3.
2. Carlin J, Nicholson DA, Scott NA. Two Cases of Seminal Vesicle Fistula. Clin Radiol. 1999;54:309-11.
3. Goldman SM, Fishman EK, Gatewood OM, Jones B, Siegelman SS. CT in the diagnosis of enterovesical fistulae. AJR Am J Roentgenol. 1985;144:1229-33.
4. Kollmorgen TA, Kollmorgen CF, Lieber MM, Wolff BG. Seminal vesicle fistula following abdominoperineal resection for recurrent adenocarcinoma of the rectum. A case report. Dis Colon Rectum. 1994;37:1325-7.
5. Hamidinia A. Recto-ejaculatory duct fistula: an unusual complication of Crohn's disease. J Urol. 1984;131:123-4.
6. Maeda H, Arai Y, Aoki Y, Okubo K, Okada T. Successful treatment of a persistent cutaneous fistula to the seminal tract: imaging with three-dimensional computed tomography. Br J Urol. 1998;82:595-6.
7. Hammad FT. Seminal vesicle cyst. Scand J Urol Nephrol. 2006;40:426-8.
8. Izumi K, Takase Y, Kobayashi T, Tokunaga S, Namiki M. Seminal Vesicle-Rectal Fistula with Preceding Right Acute Epididymitis. Urol Int. 2007;78:367-9.
9. Frye K, Loughlin K. Successful transurethral drainage of bilateral seminal vesicle abscesses. J Urol. 1988;139:1323-4.