

# LAPAROSCOPIC MANAGEMENT OF A CASE OF HEMATOMA AT THE BASE OF THE BLADDER

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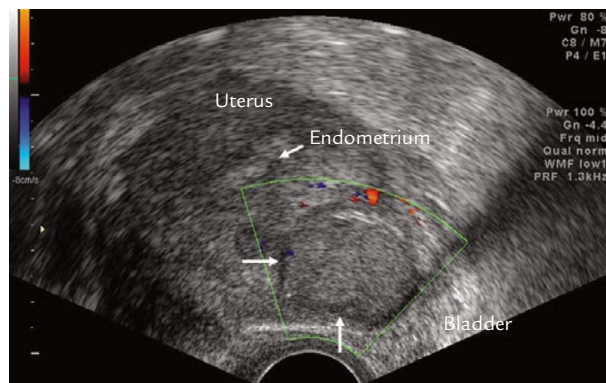
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Hematomas at the base of the bladder have often been reported soon after pelvic surgery or pelvic trauma [1]. They may also be found many years after artificial abortion, but urinary frequency is rarely reported [2]. There have been some reports in the literature discussing the options for treatment, including laparotomy and transvaginal aspiration of the hematomas [3,4]. To the authors' knowledge, this is the first case report using laparoscopy for management of a hematoma at the base of the bladder.

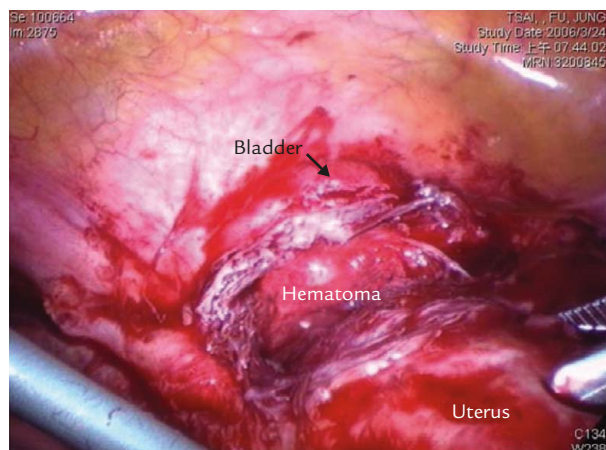
A 42-year-old female, gravida 5, para 4, who had one elective abortion, was in good health prior to admission. She came to our clinic because of persistent dull lower abdominal pain (occurring for years) that became progressively worse in the 2 months prior to admission. Her menstruation cycles were regular without menorrhagia, hypomenorrhea or dysmenorrhea. There were no associated symptoms and signs such as nausea, vomiting, diarrhea or constipation. In addition, she disclosed her urinary frequency during the daytime, with sensations of urgency and nocturia.

Transvaginal sonography (Figure 1) showed a 3 × 4 cm homogenous cystic mass of medium echogenicity with thick well-defined walls. Duplex scanning showed no neovascularization around the mass. The mass was located at the anterior lower corpus of the uterus and dorsal to the urinary bladder. Bilateral ovaries appeared grossly normal. The CA 125 was 16.07 U/mL. She received laparoscopic surgery to excise the mass. During the operation, we found that the omentum was adhered to the anterior uterine wall, and a 3 × 4 cm mass was noted at the base of the bladder. We excised the thick granulated cystic wall, and the chocolate-colored content was drained out (Figure 2). A hematoma at the base of the bladder base was diagnosed. We removed

the chronic organized hematoma and re-established the anatomic relationship between the uterus and the bladder. The posterior cul-de-sac was free and the bilateral adnexa were normal. The surgery was successful. The symptoms of high urinary frequency and dull pelvic pain resolved after the operation. The pathology of the excised cystic wall revealed chronic inflammation and fibrosis.



**Figure 1.** The 3 × 4 cm mass (arrows) was located between the anterior lower corpus and the urinary bladder. The homogenous mass had well-defined borders, no calcification, no protruding vegetation, and no encompassing vessels.



**Figure 2.** The hematoma was located between the uterus and the bladder. We excised the granulated wall, and the chocolate-colored content was drained out.



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There are a few causes of urinary frequency such as polyuria, bladder outflow obstruction, detrusor instability, neurogenic bladder, spinal cord injury, and urinary tract infection. Most pelvic masses leading to bladder outflow obstruction were myomas. Our case demonstrated a hematoma at the base of the bladder that compressed the bladder and resulted in outflow obstruction and urinary frequency.

There have been some case reports and research articles in the literature that discuss pelvic hematomas and consequent complications. The causes of pelvic hematomas include pelvic trauma with or without pelvic ring fracture, postoperative intervention of tension-free vaginal taping, cesarean section, angiographic catheterization, abdominal surgery with anticoagulant therapy, ovarian corpus hemorrhagicum, hysterectomy, elective abortion, vaginal delivery, and even spontaneous abortion [1–9]. The occurrence of trauma to the pelvic organs may lead to blood accumulation and formation of a hematoma. Lane et al [4] reported a 71-year-old woman who had an ulcerated perforation of the bladder caused by a large pelvic hematoma without any direct injury to the bladder. She developed the hematoma after emergency percutaneous angioplasty which was complicated by retroperitoneal bleeding from an injured femoral artery. Eddy [10] reported a 60-year-old woman who had a pelvic mass following cardiac catheterization. The elevated CA 125 (53 U/mL) also suggested the possibility of a gynecologic malignancy. During exploratory laparotomy, a large organized hematoma in the left paravesical space was noted. Obstructive uropathy is a possible example of a complication secondary to an extensive pelvic hematoma [3,5,6]. Freeman et al [5] reported two cases of obstructive uropathy caused by a massive pelvic hematoma following a major pelvic trauma. Abdulwahab et al [3] found that the use of anticoagulants may carry a high risk of hematoma formation following surgery. The case we present here was complicated with urinary frequency and abdominal discomfort caused by hematoma at the base of the bladder. She did not have any risks for coagulopathy and had only received an elective abortion several years previously. The symptoms and signs developed after the elective abortion. We hypothesize that the hematoma at the base of her bladder developed as a result of complications during the operation.

Sonography allows rapid detection of pelvic hematomas in patients. Because the hematoma is usually large and uninoculated with well-defined borders and homogeneous cysts, its relationship to the pelvic organs is clearly shown [2,9,11,12]. We diagnosed the hematoma accurately before the operation using sonography.

Laparoscopic surgery is advantageous because of the shorter operative time, smaller scars, faster recovery, and decreased adhesion formation [13]. The patient in this report underwent successful laparoscopic surgery and recovered well without complications. Some authors have suggested that percutaneous or transvaginal aspiration of a pelvic hematoma would be an option [10]. However, the method is conservative and is unable to reform the pelvic anatomy that may be the cause of lower abdominal discomfort. In conclusion, our case showed a successful experience in laparoscopic management of a hematoma at the base of the bladder.

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