

## CASE REPORT

# A Suburethral Abscess Mimicking An Anterior Vaginal Wall Prolapse: A Case Report

## Ön Vajinal Duvar Prolapsusunu Taklit Eden Subüretral Abse: Olgu Sunumu

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### ABSTRACT

**Introduction:** Anterior vaginal wall prolapse (AVWP), previously known as cystocele, is a herniation of the anterior vaginal wall and the bladder. It is a multifactorial pathology. Patients with AVWP may report a feeling of pelvic pressure and something bulging out of the vagina, urinary incontinence, and dyspareunia which are nonspecific symptoms.

**Case:** A 73-year-old married Turkish G4P4 female who had been menopausal for 20 years presented to the outpatient clinic with dysuria and urinary incontinence lasting for two weeks and a palpable mass located in the genital area for two years. On her vaginal examination, the vagina and cervix appeared normal, and a grade 3 AVWP, along with a semi-mobile mass extending from the distal urethra to the bladder base under the cystocele pouch, was observed. She was diagnosed with a grade 3 AVWP with a plan for the surgical excision. A bilobular cystic mass was observed under the urethra, extending to the bladder wall with a size of 4-5 cm. The macroscopic examination showed a membranous tissue piece of 4.5 x 2.8 x 2 cm, and the microscopic examination revealed a caseified granulomatous inflammation. Upon the suspicion of tuberculosis, we referred her to the infectious diseases (ID) clinic. Her PPD test was 0 mm. She had no complaints of active tuberculosis. She presented to our clinic with urinary incontinence. On her vaginal examination, we observed involuntary urine leakage with bladder stimulation. We planned the implantation of transvaginal tape (TVT).

**Discussion:** We believe this case will help establish an idea about the differential diagnosis of AVWP. The differential diagnosis should include the other possible genitourinary pathologies due to the proximity of the anterior vaginal wall to the bladder and the urethra before ensuring the diagnosis of the AVWP in order not to misdiagnose.

**Keywords:** Suburethral abscess, anterior vaginal wall prolapse, caseified granulomatous inflammation

### ÖZ

**Giris:** Önceden sistosel olarak bilinen ön vajinal duvar prolapsusu (AVWP), ön vajinal duvar ve mesanenin herniasyonudur. Çok faktörlü bir patolojidir. AVWP'li hastalar, spesifik olmayan semptomlar olan pelvik baskı hissi ve vajinadan dışarı taşan bir şey, idrar kaçırma ve dispareni bildirebilir.

**Olgu:** Türk, 73 yaşında, evli, 20 yıldır menopozda olan G4P4 kadın hasta, iki haftadır dizürü ve idrar kaçırma ve 2 yıldır genital bölgede ele gelen kitle şikayeti ile polikliniğimize başvurdu. Vajinal muayenesinde vajen ve serviks normal görünüyordu ve sistosel poşunun altında distal üretradan mesane tabanına uzanan semimobil kitle ile birlikte grade 3 AVWP görüldü. Cerrahi eksizyon planı ile 3. derece AVWP teşhisi kondu. Üretra altında mesane duvarına kadar uzanan 4-5 cm boyutlarında bilobüler kistik kitle izlendi. Makroskopik incelemede 4,5 x 2,8 x 2 cm boyutlarında zaréf doku parçası, mikroskopik incelemede kazeifiye granülatöz enflamasyon saptandı. Tüberküloz şüphesi ile enfeksiyon hastalıkları (ID) polikliniğine sevk edildi. PPD testi 0 mm idi. Aktif tüberküloz şikayeti yoktu. İdrar kaçırma şikayeti ile kliniğimize başvurdu. Vajinal muayenesinde mesane uyarımı ile istemsiz idrar kaçırdığı görüldü. Transvajinal bant (TVT) implantasyonu planlandı.

**Tartışma:** Bu vakanın AVWP'nin ayırıcı tanısı hakkında fikir oluşturmaya yardımcı olacağını düşünüyoruz. Yanlış tanıya yol açmamak için AVWP tanısından emin olunmadan önce ön vajinal duvarın mesane ve üretraya yakınlığı nedeniyle olası diğer genitouriner patolojiler ayırıcı tanıda yer almalıdır.

**Keywords:** subüretral abse, anterior vajinal duvar prolapsusu, kazeifiye granülatöz enflamasyon

### Introduction

Anterior vaginal wall prolapse (AVWP) is a protrusion of the anterior vaginal wall and the bladder. Patients with AVWP may present with pelvic pressure and something bulging out of the vagina, urinary incontinence and dyspareunia which are nonspecific symptoms and can be seen in other genitourinary system pathologies [1, 2, 3, 4]. Anterior vaginal wall bulging can be observed in vaginal leiomyoma [5], a urethral diverticulum [3,6], a Mullerian cyst [7,8], a Gartner's duct cyst [9], a clear cell adenocarcinoma of the urethra [10], an anterior vaginal cyst [11,12] and a vaginal abscess

[13]. Elaborate assessment of the mass (location, consistency, and mobility), histopathological evaluation [12] and imaging modalities like ultrasonography and magnetic resonance imaging (MRI) are essential for the differential diagnosis of these pathologies [7,14]. Suburethral abscesses may also present with overlapping symptoms. Therefore, proper physical examination, ultrasonography, urethrocystoscopy, urodynamic procedure and retrograde urethrocystoscopy are needed to diagnose suburethral abscess [15, 16]. Asymptomatic cases can be treated conservatively, and

in case of symptoms, surgical excision is required [16]. In this study, we reported a rare case of a suburethral abscess containing caseified granulomatous inflammation that was first misdiagnosed as an AVWP.

### Case

A 73-year-old married Turkish G4P4 female who had four vaginal deliveries and had been menopausal for 20 years was admitted to the outpatient clinic with dysuria and urinary incontinence lasting for two weeks and a palpable mass located in the genital area for two years. Her medical history was significant for hypertension, stable on Candesartan, and diabetes. Her past surgical history includes a tonsillectomy and an appendectomy with an operation on her arm and shoulder. She denied the use of alcohol, drugs, and cigarettes. She did not report any known allergies, and her family history was unremarkable.

On her vaginal examination, the vagina and cervix appeared normal, and a grade 3 AVWP, along with a semi-mobile mass extending from the distal urethra to the bladder base under the cystocele pouch was observed. Upon the suspicion of an AVWP, a transvaginal ultrasound (TVUSG) was performed by observing the intraabdominal organs, and it demonstrated no gross pathology in the bilateral adnexa and a normal uterus. A basic metabolic panel, complete blood count, and urinalysis were ordered as part of her workup.

She was diagnosed with a grade 3 AVWP (Fig. 1) with a plan for the surgical excision. The operation was performed by an expert surgeon when the patient was in the Semi-Fowler's position and under spinal anesthesia. The labia minora were retracted aside with the silk sutures. The retractors were placed in the vagina from the anterior and posterior regions. The urethra was held with a clamp from the posterior of the lower end, and the cervical portion of the vagina was held with the other clamp. A bilobular cystic mass was observed under the urethra, extending to the bladder wall with a size of 4-5 cm. The longitudinal incision was made, and the edges of the incision were held with Allis clamps. Then, the cyst was dissected from the vagina towards the bladder serosa. A serosal tear arose in the bladder, and it was sutured primarily. Caseified necrotic collection (Fig. 2) was drained from the cyst. The cyst was dissected protecting the capsule, and was taken to the pathology container. It was approximated from a point proximal to the bladder with primary sutures. The excess part was cut with scissors, and both sides of the vagina were closed with primary sutures. The operation was terminated by introducing the silicone catheter after the bleeding control. The patient was started on laxative 3mg/5mg, cefazoline 1gr, enoxaparin sodium 0,4ml, ornidazole 500mg/3ml, pantoprazole 40mg, and paracetamol 500mg for the postoperative infection prophylaxis until her discharge. She was discharged on the second postoperative day. The silicone catheter was removed on the fourteenth day postoperatively.

The mass was sent to the histopathology. The macroscopic examination showed a membranous

tissue piece of 4.5 x 2.8 x 2 cm, and the microscopic examination revealed a caseified granulomatous inflammation (Fig. 3, 4). Given that her pathology results were consistent with the diagnosis of tuberculosis, we referred her to the infectious diseases (ID) clinic. She had no family or medical history of tuberculosis. She had no weight loss, fever, fatigue, cough, or other significant complaints. Following the blood workup, she was referred to the pulmonology clinic for her PPD test and posteroanterior chest radiograph (PA CXR).

Her up-to-date blood tests were in the normal range. Her PPD test was 0 mm, and PA CXR was incompatible with tuberculosis. Since her benign exam and labs were not suggestive of tuberculosis, she was discharged with a follow-up a month later.

In her follow-up in the ID clinic, a physical examination revealed no palpable submandibular, submental, cervical or axillary lymphadenopathy. She did not report any complaints within this period. Her routine blood workup and PPD test were then ordered again. On the same day, she came to our outpatient clinic for her postoperation follow-up, complaining of urinary incontinence. Her TVUSG was normal.

On her visit to our outpatient clinic, methylene blue was injected into her bladder for a possible vesicovaginal fistula. None of the gauze pieces placed in three different levels of the vagina were stained. The gauze in the distal vagina was stained due to the leakage from the urethra. The bladder stress test was performed, and it was positive. Marshall and Bonney's test was negative. The Q-tip angle was greater than 30°. The stress incontinence was linked possibly to urethral hypermobility (urethral sphincter dysfunction), and she was referred to the urology clinic for further evaluation of possible vesicovaginal fistula.

The urology clinic ordered MR urography (MRU) regarding the vesicovaginal fistula. MRU revealed no finding in favor of the ureteral obstruction and fistula. Then, she was referred to us for evaluation regarding urinary incontinence.

On her visit to the ID clinic, her second PPD test was 0 mm, and lab results were normal. She had no complaints of active tuberculosis. Therefore, a month later, she was called for a follow-up for possible new complaints and her up-to-date lab workup.

In her follow-up to the ID clinic, she described a history of upper respiratory tract infection in the previous month and did not indicate any other febrile period. She had no night sweats and unintentional weight loss. The abdomen was soft. Interferon-Gamma Release Assay (IGRA) and PPD were ordered to eliminate possible tuberculosis.

The next day, she presented to our outpatient clinic with urinary incontinence. On her vaginal examination, involuntary urine leakage with bladder stimulation was observed. We planned the implantation of transvaginal tape (TVT). Prior to her TVT operation, flexible cystourethroscopy was ordered by a urologist. It showed no urethral stenosis. After the cystourethroscopy, the projectile urinary incontinence

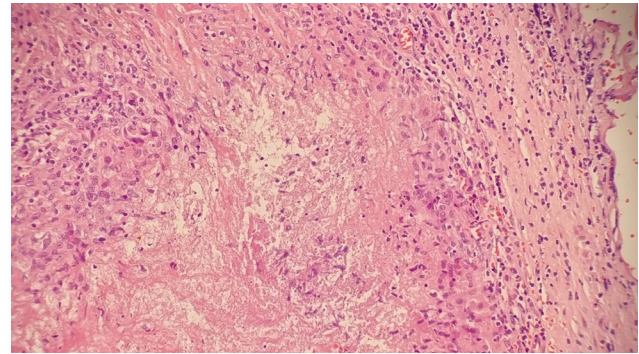
during Valsalva's maneuver was observed on her pelvic examination. The next day, TVT was applied, and a couple of days later, she was discharged with a follow-up. A month later, she visited the ID clinic for her follow-up. There were no complaints of discharge, redness, or swelling in the urinary opening. She had no complaints of fever, chills, shivering, weight loss, or any additional symptoms. She could not have PPD test done last month. IGRA was negative. Her routine lab workup and PPD were ordered. Her lab workup was normal. She was told to come again for a follow-up three days later.



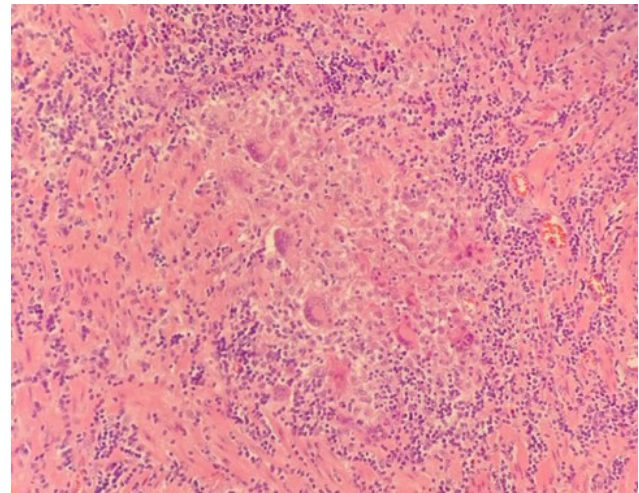
**Fig. 1.** Suburethral cyst mimicking anterior vaginal wall prolapse



**Fig. 2.** Caseified necrotic collection inside the cyst



**Fig. 3.** Granulomatous structure containing caseified necrosis (H-E 200X)



**Fig. 4.** Granulomatous structure consisting of multinucleated giant cells and epithelioid histiocytes (H-E200X)

### Discussion

AVWP is a multifactorial pathology with multiple risk factors such as parity, advanced age, menopause, obesity, hysterectomy, increased intra-abdominal pressure, collagen abnormality, and family history. The incidence of bladder prolapse in women with a uterus and those undergoing hysterectomy was reported as 34.3% and 32.9%, respectively, in the Women's Health Initiative study. Patients with AVWP are primarily asymptomatic. However, those with symptomatic AVWP report feeling pelvic pressure and something bulging out of the vagina. Despite the fact that complaints of a bulge, urinary incontinence, and dyspareunia are associated with the presence of prolapse, the differential diagnosis should include the other possible genitourinary pathologies due to the proximity of the anterior vaginal wall to the bladder and the urethra [1,2,3].

Differential diagnosis should include anterior vaginal wall cysts, urethral diverticulum, Skene's cyst, Gartner duct cyst, endometriosis, vaginal leiomyoma, Mullerian cyst, benign/malign tumors of urethra or bladder because they can mimic the symptoms of the AVWP [2,4]. There are published cases that presented a vaginal leiomyoma [5], a urethral diverticulum [3,6], a Mullerian cyst [7,8], a Gartner's duct cyst [9], a clear cell adenocarcinoma of the urethra [10], an anterior

vaginal cyst [11,12] and a vaginal abscess [13] mimicking a cystocele.

In our case, we did not encounter any other possible pathologies related to the AVWP symptoms during our patient's operation, but interestingly, a suburethral abscess with the characteristics of caseified necrotic collection. The histopathologic analysis identified caseified granulomatous inflammation, and therefore, we thought it was highly suggestive of tuberculosis, although its origin could not be identified.

Suburethral cysts are seldom encountered and arise from embryonic remnants or blockage of the paraurethral glands. The proximal two-thirds and posterior and lateral parts of the urethra are the most common locations of these cysts, with a prevalence of more than 85%. It is diagnosed clinically, and the absence of a direct connection with the urethra should be demonstrated based on the radiological evaluation [15, 16]. Asymptomatic cases can be treated conservatively. When a patient presents with urethral or vaginal blockage, dyspareunia, or pain [17], the abscess drainage and the cyst excision are necessary [16].

We did not encounter a similar case report that presents a suburethral abscess mimicking an AVWP. Thus, we believe this case will help establish an idea about the differential diagnosis of AVWP and underlines the importance of evaluating the other genitourinary conditions in differential diagnosis before ensuring the diagnosis of AVWP to avoid misdiagnosis.

#### Teaching Points:

1. A suburethral abscess containing caseified granulomatous inflammation, thus suspected of tuberculosis, can manifest the symptoms of urinary incontinence, feeling something falling out of the vagina, a palpable mass like an anterior vaginal wall prolapse.

2. Anterior vaginal wall prolapse and some genitourinary pathologies such as vaginal leiomyoma, urethral diverticulum, Mullerian cyst, Gartner's duct cyst, clear cell adenocarcinoma of the urethra, anterior vaginal cyst, vaginal abscess, and suburethral abscess may reveal similar symptoms. Thus, evaluating and excluding the other genitourinary pathologies in the differential diagnosis of anterior vaginal wall prolapse is essential to avoid misdiagnosis.

3. Granulomatous inflammation can be seen in many infectious and non-infectious diseases. Although the caseified granulomatous inflammation initially suggests tuberculosis, it is not a diagnostic finding. It is recommended that the case should be evaluated in terms of the granulomatous diseases, primarily tuberculosis if caseified granulomatous inflammation is observed.

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